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Joav Merrick, M.D.
Alean Al-Krenawi
And
Salman Elbedour
Editors
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Preface

The “global village” has resulted in the need to tackle cross-cultural issues in the health field. Especially the southern region of Israel (the Negev), which provides a unique opportunity to study the interaction between medicine and culture. The Negev population is a multicultural society, with Bedouin Arabs comprising almost a fifth of its population. This imposes tremendous challenges to the health establishment in the region and serves as a “cross-cultural laboratory” for educating health professionals in global health issues. Both the traditional Israeli medical school track, as well as the Medical School for International Medicine at the Ben Gurion University of the Negev, incorporate studies of cross-cultural issues in various forms and to different degrees. Studies suggest that the exposure of students to international medical experiences increases their cross-cultural sensitivity, knowledge and expertise. In this book, you will find research from this region concerned with various aspects of Bedouin health, which the authors hope will give the readers a picture of various health issues from the southern region of Israel.

Chapter I – The “global village” has resulted in the need to tackle cross-cultural issues in the medical school curriculum. The southern region of Israel (the Negev) provides a unique opportunity to study the interaction between medicine and culture. The Negev population is a multicultural society, with Bedouin Arabs comprising almost a fifth of its population. This imposes tremendous challenges to the medical establishment in the region and serves as a “cross-cultural laboratory” for educating medical students in global health issues. Both the traditional Israeli medical school track, as well as the newly established Medical School for International Medicine, incorporate studies of cross-cultural issues in various forms and to different degrees. Studies suggest that the exposure of students to international medical experiences increases their cross-cultural sensitivity and knowledge. The authors feel that in a region characterized by such ethnic diversity, all medical schools should adopt cross-cultural studies as an integral part of their curriculum.

Chapter II – The Bedouins in the south of Israel are in a state of transition and adaptation to non-traditional lifestyle and the abandonment of the nomadic way of life in exchange for permanent housing in small towns and authorized villages. This development has been encouraged by the government that provides infrastructure and incentives. However, about eighty thousand Bedouins do not reside in those settlements. Most of them are scattered in permanent houses, huts or tents in remote rural places. Living outside of town means no electricity, no running water, no sewage system, no paved roads, no mail address and no
phone lines. Climate changes impose additional burdens on this population. The purpose of this paper is to describe the challenges and some of the solutions in providing health care to this population.

Chapter III – The extension of universal health service insurance to national populations is a relatively new phenomenon. The Israeli National Health Insurance Law (NHIL) from 1995 provided universal health services to every resident, but the effect of this law on health and health services among minorities has not been sufficiently examined. The goals of this study were to track some of the first changes engendered by the NHIL among the Negev Bedouin Arabs to examine the effects of universal health care services. Methods included analysis of historical and health policy documents, three field appraisals of health care services (1994, 1995, 1999), a region-wide interview survey of Negev Bedouin (1997) and key informant interviews. For the interview survey, a sample of 515 households was chosen from different Bedouin localities representing major sedentarization stages. Results showed that prior to NHIL, a substantial proportion of the Negev Bedouin were uninsured with limited locally available health service. Since 1995, health services, particularly primary care clinics and health manpower have dramatically expanded. The initial expansion appears to have been a marketing ploy, but real improvements have occurred. There was a high level of health service utilization among the Bedouins in the Negev, especially private medical services, hospitals and night ambulatory medical services. NHIL brought change in the structure of health services in Israel, namely the institution of a national health system based on proportional allocation of resources (based on size and age) and open competition in the provision of quality health care. The expansion of the pool of potential members engendered by the new universal coverage had profound effects on the Health Funds’ attitudes towards Negev Bedouin. In addition, real consumer choice was introduced for the first time. Although all the health care needs of this rapidly growing population have yet to be fully met, the assurances under the Law and the new level of competition promise a higher level of service in the future.

Chapter IV – Some communities have peripheral zones inhabited by persons with a different culture than the majority of the general population, such as the Aboriginals in Australia, the Native Americans in the United States and Canada, the Eskimos in Lapland, and the Bedouins in Israel. These citizens are not receiving the same medical or rehabilitation services as the citizens of the metropolitan areas due to the fact that health and welfare programs are not adapted to their unique needs. At the Soroka University Medical Center in Beer-Sheva, Israel, the health and rehabilitation services have a very large and heterogeneous catch-up population serving most of the south of Israel. The purpose of this study was to look at the utilization and the number of appointments for child rehabilitation services by the Bedouin population compared to the general population in the south of Israel at the Zusman Child Development Center (CDC). The records of appointments to the CDC between the years 1995–1999 inclusive were studied and the authors randomly chose to limit the study to January, April, July, and October of each year, and randomly chose the daily records of nine therapists, three from each discipline (occupational therapy [OT], physical therapy [PT], and speech and language therapy [SLT]). There were 8,504 appointments during these 4 months of the years 1995–1999, 2,255 of which were for Bedouin and 6,249 for Jewish children. Noncompliance with therapy appointments (NCTA) for the same period for both the Bedouins (31%) and Jewish children (26%), with a significant difference between the two populations, was noted. Of all the Jewish childrens’ appointments, the percentage of all three
services was similar: 33% to PT, 38% to OT, and 29% to SLT, but for the Bedouin children, the percentage between the three services was significantly different: 62% to PT, 34% to OT, and 3% to SLT. These results seem to indicate that the Bedouin families prefer the PT and OT over the SLT. Our results enhanced the need for planning a model for supplying health services adapted to clients coming from different cultures. According to this model, the authors need to take into consideration the cultural differences, the accessibility to rehabilitation services, and the economic impact on the family; all in all, to give a better solution to the patient with special needs.

Chapter V – The National Health Insurance Law enacted in 1995 provided basic health insurance for all residents in Israel, but in 1998 the Law of Allocations made the insured pay for medications and therapy. The authors have looked at the influence of co-payment on compliance with therapy appointments at a child development center in Israel. Among the Jewish population, a significant difference in the rate of non-compliance was found, while among the Bedouins, the increase in the rate of non-compliance was more moderate. Co-payment led to a 16% increase in the risk for non-compliance with therapy appointments. A 37% increase in risk for non-compliance with therapy appointments was found for Bedouins, in comparison with the rate of non-compliance with therapy among Jews and the authors must therefore conclude that the legislation had a negative impact on the use of rehabilitation services.

Chapter VI – The Arab family in Israel is still embedded in the traditional society with extended family support systems, but the authors see a population in transition influenced by the surrounding society. This chapter looks at the different religious attitudes toward the exceptional people in our society (i.e., the family reaction to a child born with intellectual or developmental disability), reviews recent studies on the Arab and Bedouin families in Israel, and presents data on the Arab population in residential care centers. Today, out of 63 residential care centers in Israel for persons with intellectual disability, 13 (20.6%) are providing service to the non-Jewish population. The Arab population constitutes 12–13% of the total residential care population, lower than the 19–20% in the total population. In residential care, the Arab population is characterized by younger children with severe and profound intellectual disability. The informal family support system is still a very important factor in the Arab family in Israel, a fact that the authors believe should be strengthened by implementing the British and Danish model of nurse home visitation.

Chapter VII – Change in the attitudes of staff or the public towards people with intellectual disability (ID) can impact their life and health, but that change has not been studied among physicians who belong to an ethnic minority undergoing dramatic social and economic transition. The goal of this chapter was to explore the change of attitudes of Negev Bedouin physicians serving their community and their satisfaction with policy, care, and knowledge in the field of ID. Seventeen community physicians (7 Bedouins and 10 Jewish) were interviewed using a simple questionnaire that consisted of items measuring attitude and satisfaction. The vast majority of the Bedouin and Jewish physicians had positive attitudes toward inclusion of those in the community with ID and were ready to provide the care needed in the community with special assistance. There was a need for further education in ID and more resources. There was a belief that there is discrimination between the Bedouin and Jewish community in the provision of care to people with ID. General dissatisfaction was expressed about the policy, resources, care provision, and expertise offered to Bedouins with
ID. More efforts must be directed to empower the physicians with knowledge, expertise, and resources to handle the care of Bedouins with ID in a culturally appropriate way.

Chapter VIII – Life expectancy for persons with intellectual disability has increased over the past 100 years and today closer to the life expectancy of the general population (except for Down syndrome). In this study the authors looked at trends in the number of Arab persons with intellectual disability in residential care centers in Israel. Annual questionnaires to the medical clinics in all residential care centers for the 1998-2006 period were analysed and it was found that the Arab population had increased from 749 to 921 persons in 13 residential care centers (13.5% of the total residential care population). Of the 921 person in 2006 there were 58 children aged 0-9 years and 260 aged 10-19 years with the majority having severe or profound intellectual disability. The increase in the number over time can been seen as a longer life expectancy in this population also and the lower than expected numbers in residential care can be seen as a result of children staying at home with their families for a longer time than the Jewish population.

Chapter IX – For several years, the National Center for Children’s Health and Safety (Beterem) has worked on many levels to promote safety and prevent injury of the children in Israel. As part of intervention programs in 20 communities around Israel, this chapter describes a 1-year, multidisciplinary, multistrategic childhood safety promotion and injury prevention project. The project took place in the Bedouin city of Rahat in the Southern part of Israel, the Negev, conducted by a local safety coordinator. The main goal was to identify hazards and dangerous obstacles in public places in Rahat, then remove or repair the obstacles found, in order to secure a safe public environment for children. “Obstacle” was defined as any barrier that could endanger the safety of a child. Ten examples are used to illustrate this applied research project, and 80% of the problems were solved within the project period (time to solve between 1 week to 3 months, depending on various factors). The authors recommend the involvement of a safety coordinator from the community to focus on safety hazards for children, the use of a documentation diary to log the time frame, and also the use of pictures to illustrate the hazards and the changes, or to use as arguments in the lobbying process.

Chapter X – This chapter reviews the incidence and character of minor trauma that presented to family practice clinic and associated demographic variables. Design: A retrospective data analysis was conducted using data collected from the CLICKS computerized medical records of primary care consultations at The Clalit Health System’s Shatal Clinic in Beer Sheva, Israel. A systematic sample of every tenth child was taken from the alphabetical listing of all Bedouin children between the ages of zero and fourteen, registered at the clinic (n=156). Results: Of the 156 children sampled, 67 (42.9) had at least one injury and 31 (20.4) children had more than one childhood injury recorded in their medical record. Boys had a higher incidence of two or more childhood injuries compared to female children (23/80 (28.8) vs. 8/72 (11.1), p = .007). Girls had proportionally more injuries in early childhood with mean age at first injury 1.4 years younger for girls (4.0 ± 2.8 vs 5.4 ± 2.5, p=.035). Children of older parents in smaller families had more accidents. No significant association was found between family size or birth order and injury. Conclusions: Unintentional injuries have a huge morbidity and significant mortality worldwide. The populations most vulnerable to the burden of injuries are found in the less developed societies. Current research has targeted at western society and the proven strategies for prevention inappropriate for the mechanisms of injury that are specific to the Bedouin culture. Further research is necessary to identify demographic characteristics and behaviors that are
correlated with injury in Bedouin children. Chart review was not adequate for the study of demographic and SES factors affecting injury.

Chapter XI – The Bedouin population in southern Israel is expanding rapidly due to a high fertility rate and pediatricians who work with this population are aware of the social, environmental, and genetic factors that are influencing the health of the children. One issue in this population is consanguinity marriages, which are related to many inborn disorders. Temporary housing is another issue in this population associated with suboptimal sanitary conditions resulting in infectious diseases. Low income is also an issue influencing nutrition in both adults and children. The change from nomadic life to permanent housing in condensed communities in this population is also affecting human behavior. Pediatricians working in this region play an important role in improving the health of Bedouin children by their daily contact with parents, children and the local social and governmental agencies.

Chapter XII – Infant mortality provides a useful indicator of population health over time and in comparison to other populations. Bedouin Arabs are an at-risk population for adverse health outcomes for various reasons including genetic risk for malformations, high fertility rate with short interpregnancy interval, consanguinous marriages, inadequate prenatal care, and socio-economic and cultural factors. All reported cases of deaths under 1 year in Bedouin and other residents of the Negev in 2012 were reviewed, analyzed and compared to previous years. Infant mortality rates were calculated using population data (live births) from the Ministry of the Interior. Infant mortality in Bedouin Arabs in the Negev is nearly 3 times higher than in the Jewish population of the Negev. The major cause of infant mortality in the Bedouin population is congenital malformations. Trends in infant mortality in the Bedouin population are described. Principles of intervention and prevention unique to this population are discussed.

Chapter XIII – In this chapter the authors examine all cases of infantile spasms (IS) diagnosed at the Soroka University Medical Center, Ben Gurion University over a 16 year period. 31 children, 17 (55%) males. 17 (55%) were Jews and 14 (45%) Bedouins. Four (13%) died. Data was gathered from hospital files, neuropsychiatric unit and Zusman Child Development Center. Demographic and ethnic data, characteristics of the disease type of seizures, EEG pattern imaging studies, type of treatment, psychomotor development, rehabilitation and educational services were analysed. Mean age at diagnosis 7.22 months. Etiology for one third was pre- or perinatal insult, one third postnatal and one third unknown. 26 (84%) were symptomatic and five (16%) cryptogenic. Significant statistical difference was found with more Bedouin children symptomatic with moderate or severe mental retardation, cerebral palsy with severe motor difficulties and recurrence of the disease. Statistically significant correlation existed between poor response to initial treatment and placement in special education, recurrence of disease and cerebral palsy with moderate or severe motor difficulties, the appearance of a different type of epilepsy during follow-up and placement in special education. 18 children (58%) received first treatment with ACTH, 10 (32%) children with IVIG (immunoglobulin iv), 3 (10%) with neither ACTH nor IVIG. Regarding therapy response the authors found no significant difference between Jews and Bedouins.

Chapter XIV – Iron deficiency anemia is prevalent in low socioeconomic communities. The prevalence of anemia in Bedouin children in southern Israel was above 10 per cent in the year 2008. The Ministry of Health recommends iron supplementation to all children, starting from the age of four months. The Clalit Health Services (HMO), which provides primary medical care to most of the children has introduced hemoglobin screening as a health
indicators. Over the period of four years, the prevalence of anemia dropped to 5.13% in family medicine clinics and to 2.85% in pediatric clinics after screening was introduced.

Chapter XV – While the focus on ethnic identity in the Middle East conflict has tended to be on Israeli Jews and Palestinian Arabs, there has been a paucity of research on the effects of this social construct on the marginal groups that are directly or indirectly affected by this political dispute. Methods: A sample of high-school students from five Bedouin schools in the south of Israel (n = 351). Results: Sample members (46.9%) ranked religion as the most important factor in forming their identity. Although they were Israeli citizens, 73% of the participants stated that the term “Israeli” was not an appropriate definition of their identity, and 44.9% stated that the term “Palestinian” was. Moreover, when given a list of six ways of characterizing themselves (i.e., Arab, Israeli Arab, Israeli, Palestinian Arab, Israeli Palestinian, Palestinian), “Palestinian Arab” received the highest endorsement (33.5%), followed respectively by “Israeli Arab” (29.7%), “Arab” (18.7%), Israeli Palestinian (11.7%), and Palestinian (3.5%); only 2.9% characterized themselves as Israelis. Conclusions: This indicates that their Arab/Palestinian ethnic identity is predominant and that an acceptance of their Israeli identity, while secondary, also is widespread. More than two-thirds (68.6%) of the respondents were in favor of establishing a Palestinian state alongside Israel. The implications of these and other findings are discussed.

Chapter XVI – In this chapter the authors compare the metabolic control of type 1 diabetes mellitus among Bedouin and Jewish children through a retrospective study of 60 Bedouins and 60 Jews aged 0-18 years followed at a pediatric diabetes unit. The information was extracted from the clinic records. Results: Differences were found between the groups in the parameters of the socio-economic status of the families. Education, employment rate and income levels were lower among Bedouins compared to Jewish families. In addition, the average number of visits since diagnosis to the diabetes clinic was lower among Bedouin patients relative to Jews (20.7 ± 18.9 vs. 15, p ± 27.2 <0.01). The HbA1c average over the years of follow-up showed that high percentages (88%) of all the patients did not achieve sufficient metabolic control. No significant difference was found between the groups in metabolic control based on the average HbA1c values levels, which were 9.74%±1.94 and -9.65 %± 2.03 for the Bedouin and Jewish patients, respectively (p = 0.86). Multivariate analysis demonstrated a higher risk of insufficient metabolic control (HbA1c level above 7%) among the Bedouin population (AdjOR = 1.7, p = 0.58). Conclusions: Lack of significant difference in metabolic control and the use of health services between Bedouin and Jewish populations, despite differences socio-economic statues. Similar accessibility to health services in the community for the two populations and / or high awareness and motivation of the Bedouin population to treat the disease could explain the similar outcomes.

Chapter XVII – The purpose of this chapter was twofold: 1) to compare whether children from polygamous family structures significantly differ from children from monogamous family structures with regard to the frequency of parent-child conflict and 2) whether children from these two structures employ different patterns of family conflict resolution. To address these questions, a random sample of 212 high school students (60.8% monogamous) completed a self-administered survey. The results of MANOVA showed no significant differences (p > 0.05) between these two structures with regard to the frequency of parent-child conflict. The results also show similar conflict management styles between these two family structures within each of the following five domains (privacy, school and career, money spending, going out and leisure, and physical appearance). This study is unique in that
it is the first empirical research to be conducted in the field of conflict resolution among youth and adolescents in polygamous marital structures and therefore, further investigation is needed to replicate these results utilizing different cross-cultural populations practicing polygamy.

Chapter XVIII – Many studies have over time shown that children growing up in poverty will most likely have long lasting effects on their physical and mental health, effects on medical service utilization and criminal behavior. Poverty is even in developed countries like United States and Israel a major public health problem of a magnitude that is markedly different than for example Scandinavian countries. This paper presents data from the Israel National Insurance Institute research on poverty. The data showed the incidence of poverty at 20% of all families in 2005/6. The number of families living in poverty in 2005/6 was 404,500 with 1,630,100 persons and 775,400 children. In other words 35% of the children in Israel live in poverty. It is concluded that there is a need for further preventive work to alter the effects of poverty on child development and adaptive behaviors, and to find ways to make policy relevant research. Pediatricians and child health care workers should also be trained in community advocacy work in order to work as a coalition in the community towards prevention of poverty and poverty related health problems.

Chapter XIX – Five decades ago the State of Israel mandated resettlement of the Bedouin of the Negev Desert in the south of Israel. The results were manifested in numerous social, economic and political changes. The major intention of the Israeli Government was to “modernize” the population while shifting away from “traditional” behaviors. As a part of this initiative, the State sought to remove the Bedouin from the land and move to organized settlements, land which had directed these behaviors for millennia. This chapter looks critically at the assumptions inherent in this initiative. The authors seek to address how Bedouin Arab society is changing by analyzing contested gender relationships in particular. There is no doubt that “modernization” is occurring as new behaviors are being adapted in the post-nomadic environment. But this comes at a price. As the Bedouin transitional society shifts away from indigenous legal structures and toward greater reliance on the legal culture of the State, conflict is inevitable. The authors show here that such does not reflect a narrative of a “traditional” society refusing to accept “modernity” and development but rather, that of a community in transition undergoing rapid change, as men and women alike seek to negotiate imposed new Westernized systems and foreign values within the broader context of land acquisition and sovereign expansion.

Chapter XX – In this chapter the authors present data from two special education schools among the Arab Bedouin population in the Negev region in southern Israel. Data were collected on 221 children (53.8% female, and 46.2% male) with moderate and severe intellectual and developmental disability (IDD) in order to assess the extent of consanguineous background in these children. Findings showed that 61.5% of all the participants were inbred offspring (children of parents who were biologically related, both first and second cousins). About seventy percent (69.7%) of the participants were diagnosed with moderate IDD, twenty percent severely IDD and ten percent diagnosed with developmental disorders.

Chapter XXI – In this chapter the authors examine the meaning of parenting of a child with intellectual disability in the Bedouin-Arab society of the Negev and in particularly to understand parental perceptions of intellectual disabilities, family functioning, and social support networks. Between 2007-2009, nine couples (18 respondents consisting of nine
mothers and nine fathers) were randomly selected from a survey pool of 300 Bedouin-Arab parents in various Negev communities with one or more children with intellectual disability. Semi-structured interviews of two hours’ duration were conducted in Arabic by two trained social workers who were gender matched with informants. The parents presented four themes (each with corresponding sub-themes): perception of their child’s intellectual disability, the subjective experience of parenting a child with intellectual disability, the perceived influence on the family, and perceived coping strategies and bases of support. The discussion and conclusion consider implications for professional intervention and future research.
Foreword

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This book focuses on Bedouin society and various issues concerning this population. The Bedouins are an indigenous people who have resided in Arab countries along the north of Africa and extending into the Arabian Peninsula from Israel, Jordan and Syria to Saudi Arabia. The Arabic speaking tribes in the Middle East have come to be known as Bedouin-Arabs. This group is one national, linguistic, political, and geographic entity, distinct from other non-Bedouin Arab communities in Israel. Tribal structure is important to this population's self-identity, particularly as a form of social support (1).

The Bedouin-Arab society is undergoing accelerated changes, from a traditional society into a modern society and, as such, has abandoned the nomadic way of life for cities and towns. Today, Bedouin-Arabs, are citizens of states; they carry national identity cards, vote and are no longer differentiated administratively from other citizens or nationals. Younger generations are increasingly literate with growing proportions completing secondary school and going on to universities (2). One might expect that urbanization would raise the rate of employment. This has not occurred on a large scale. The percent participation in the labor force is relatively low, particularly among women but also among men. More than half of this population lives in poverty. This data includes those from recognized Bedouin communities, as well as, non-recognized villages (3).

Indigenous people in traditional societies often underutilize mental health services and may have a long tradition of utilizing non biomedical services (4). Some studies have concluded that modern psychiatry has failed to meet the needs of traditional populations, thus, resulting in under-utilization of modern health care systems (5,6).

Two culturally-specific realities influence many Bedouin-Arabs' experiences with Western forms of helping. The first is the frame of reference through which mental health
interventions are perceived. Psychiatric treatment is relatively new and foreign to this population. Most of the practitioners in this field are Jewish and thus of a culturally different background (1). The second is power differentials that motivate the patient's help seeking behaviour. Any encounter between a non-Bedouin-Arab practitioner and a Bedouin-Arab patient necessarily enters the wider symbolic universe of Middle Eastern politics. The context of power and political relations between a dominant Jewish population and a minority Muslim/Arab community becomes implicit to any helping process (7). Bedouin patients often express their emotional difficulties through metaphors describing their bodily complaints. For example, patients may say ‘Colo Bojja’, translated as ‘pain in all my body’. A failure to consider the patient’s background, religion and belief system can result in misdiagnosis and false assumptions of individual pathology (8).

Bedouin-Arab society is highly gender-segregated and patriarchal. Men lead the household and dominate the polity and economy (9). The man’s control of the family is indisputable, and he is entitled to forbid the women in his family from pursuing a higher education (3). Modernization influences many aspects of Bedouin Society, but has not necessarily improved the Bedouin women’s status (10). A study of Palestinian women in polygamous marriages showed lower self-esteem, less life satisfaction and more somatization in comparison to women in monogamous marriages. They also experienced more obsession-compulsion, interpersonal sensitivity, depression, anxiety, hostility, paranoid ideation and psychotism (11).

To the best of our knowledge, this book is the first to touch upon issues of polygamy, poverty and health in the Bedouin society of the Negev.

References

Introduction
Chapter I

Where east and west meet

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Abstract

The “global village” has resulted in the need to tackle cross-cultural issues in the medical school curriculum. The southern region of Israel (the Negev) provides a unique opportunity to study the interaction between medicine and culture. The Negev population is a multicultural society, with Bedouin Arabs comprising almost a fifth of its population. This imposes tremendous challenges to the medical establishment in the region and serves as a “cross-cultural laboratory” for educating medical students in global health issues. Both the traditional Israeli medical school track, as well as the newly established Medical School for International Medicine, incorporate studies of cross-cultural issues in various forms and to different degrees. Studies suggest that the exposure of students to international medical experiences increases their cross-cultural sensitivity and knowledge. We feel that in a region characterized by such ethnic diversity, all medical schools should adopt cross-cultural studies as an integral part of their curriculum.

Introduction

Fast global transportation, communication, and immigration have brought many physicians to face crosscultural and global health problems they have not been trained to address. Social, economic, political, and technological changes facilitate the spread of infectious diseases between communities. Immigration, armed conflict, draught, and tourism are examples of the forces that lead to the movement of large numbers of people from one place to another, where provision of medical services becomes a crosscultural mission.

Cross-cultural challenges are also encountered within societies with different cultural backgrounds. Import of new technologies and ideas through television and the Internet can challenge a traditional society and impose modifications of medical services. This also happens when physicians educated in “western medicine” encounter patients who believe in traditional or alternative medicine (1).

When a large proportion of a population endures radical changes in values and standards of living over a short period of time, new subcultures evolve. Part of the change is reflected in the attitude of its members towards medicine. This process occurs throughout the world, facilitated by mass media and the spread of information technology, such as television and electronic media. It is not a surprise anymore to observe satellite dishes in remote villages. However, the changes in values and attitudes of people are much slower than the change in lifestyle and standard of living. As a result, medical education requires continuous adaptation to enable graduates to act as competent health providers to patients of increased cultural diversity (2,3).

Southern Israel as an example of cultural diversity

The southern region of Israel (the Negev) provides a unique opportunity to study the interaction between medicine and culture. Geographically, it consists of over 13,000 km² of...
land in the form of an inverted triangle framed by the borders of Jordan and Egypt, with its southernmost tip at Eilat.

The region, formerly a desert, was an important source of grain for the Roman Empire, but after the collapse of the Roman Empire, only Bedouin tribes tended their sheep and goats in the region. At the end of the 19th century, the Turkish Empire constructed the town of Beer-Sheva (currently the capital of the Negev) in its present location. In 1917, the British Army conquered the city and in 1948, the region became part of the state of Israel (4). In addition to Beer-Sheva, the region currently comprises several towns, villages, and other agricultural settlements. For centuries, the area has been home to the Bedouins, who have increasingly given up their nomadic lifestyle and settled in permanent homes. Since the establishment of the state of Israel, Jewish immigrants from all around the world, particularly North Africa, Eastern Europe, and America, have also come to live in the Negev. Additional important immigration groups have come from India and Ethiopia. A small group of “Black Hebrews” from Chicago began to arrive in Israel in the late 1960s and settled in the Negev town of Dimona, living under unique rules of conduct and cultural activities. During the 1990s, a large immigration from Eastern Europe also increased the Negev population. Thus, the Negev region embraces a multicultural society, which requires tremendous challenges to the medical establishment in the region and can serve as a “cross-cultural laboratory” for the education of medical students in global health issues.

A unique model for teaching cross-cultural medicine

A large Bedouin population resides in the Negev region and comprises approximately 18% of the population in the region. In regard to health, the Bedouin population can be characterized by many cross-cultural components. More than half of this population has changed its nomadic lifestyle as shepherds to residents in permanent settlements, though approximately 40% still live in settlements that are not formally recognized by the Israeli government. A dramatic drop in the infant mortality rate in the past two decades has resulted in larger families and a rapid expansion of the size of the Bedouin population (5,6).

Since this was not accompanied by an increase in appropriate occupation opportunities, the rate of unemployment is high and many of the Bedouin families are poor. Although traditional medicine still exists, its popularity is declining as western medicine becomes more available and accessible, especially within the recognized settlements.

Exposure to the western lifestyle is noticeable, especially among the younger generations. More Bedouin youngsters seek university education and are thus exposed to non-Bedouin culture. This is reflected by changes in lifestyle and food consumption, accompanied by a rise in western ailments, such as obesity, diabetes, and cardiovascular disease (7). Although some still choose to retain the more orthodox Arab lifestyle, many parents and children are drifting apart, as the traditional values of the Bedouin family become harder to maintain.

Epidemiological studies suggest higher rates of certain acute and chronic diseases in the Bedouin population compared to Jews (8-10). Certain features of the Bedouin tradition have special implications to their health. Consanguineous marriage is very common and is one of the major reasons for the high rate of genetic disorders, as well as infant mortality and

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morbidity in this population (11). Although all citizens are covered by a national health insurance with free medical services, socioeconomic and cultural factors influence the use of these services (12,13). Some excess of disease in Bedouins is attributed to a knowledge gap in regard to health maintenance and prevention, some to the low standards of living conditions, and some to the traditional acceptance of disease as a faith that is not influenced by one’s behavior (12). High rates of cigarette smoking, obesity, and diabetes in adults (14), and iron deficiency and excess of household injuries in children (15,16), are examples of preventable medical problems that are on the increase in the Bedouin population in southern Israel. Intervention programs that were sensitive to the special needs of the Bedouin population were designed by Bedouin health educators, but achieved only modest implementation as emotional and traditional factors did not succumb easily to the western kind of logic (17).

The background of the medical personnel who work with the Bedouin community is diverse. It includes Arab and Jewish health workers who were educated in Israel, as well as in Eastern and Western Europe. For the non-Arab health workers, barriers exist in the form of language in addition to the unfamiliarity with local tribal tradition of their patients. In addition, many Bedouin patients still seek medical advice from traditional healers or second opinions from Palestinian physicians who usually are not able to communicate with the Israeli health providers.

Medical education

The first medical school at Ben Gurion University (BGU) of the Negev was established in 1974 in an attempt to integrate medical care with medical education, provide better community orientation of graduates, and improve the health care availability in the region (2,3,18). The program is designed as a 6-year curriculum followed by a rotational internship. From its inception, the program emphasized early clinical studies (19). The first teaching module starts in the first year of medical school, where communication with patients is taught and practiced. In addition to the skills of medical interviewing, the students receive the basic knowledge and attitude regarding cross-cultural issues. Respecting values that are different from one’s background and recognizing nonverbal messages are examples of the issues that are discussed. Interaction with the Bedouin culture continues during the clinical years, as a large proportion of the patients at Soroka University Medical Center (the major teaching center of the faculty) are Bedouins, both in inpatient as well as outpatient facilities. This interaction is especially prominent in the delivery rooms and the pediatric wards, where approximately 50% of newborns and hospitalized children are Bedouin.

In 1998, a new medical school was established at BGU in collaboration with Colombia University in New York. This Medical School for International Health (MSIH) is specifically dedicated to the training of physicians in aspects of international health and medicine (IHM). The goal of the new 4-year MD program, taught in English and designated for non-Israeli citizens, is to graduate physicians with special skills in IHM and the ability to prevent, diagnose, and treat illness in cultures other than their own. The curriculum emphasizes the export of modern western medicine to developing countries (20,21), as well as what western medical students can learn from working and living in traditional cultures (22). It is unique in its focus on cross-cultural aspects of medicine and goes beyond the individual orientation of
traditional medical training to focus on the health needs of populations. In addition to the standard education for the MD degree, graduates acquire knowledge about the impact of economic, sociopolitical, cultural, environmental, and policy factors on the health of individuals and populations. An introductory course in IHM is given in the first year of medical school and special seminars in IHM are given throughout the 4 Years (23, 24). Early clinical exposure, adopted from the medical school program for Israelis, includes ample interactions with Bedouin, Ethiopian, and other ethnic cultures in the community as well as institutional settings. In the third year, there is a student workshop in cross-cultural communication that uses small group teaching and specially trained standardized patients (25). In the fourth year, students participate in a 2-month clinical clerkship in IHM (23). While most of these clerkships are held in various third-world countries, some students choose to remain in Israel and participate in a specifically designed rotation in Arabic and Ethiopian communities. In addition to their formal studies, many of the students participate in voluntary activities such as teaching English to Bedouin children and working in foreign workers’ health clinics.

**Bedouins in medical professions**

School attendance is mandatory and free of charge for all Israeli children, and virtually all Bedouin children attend school, but the expenditure of books, school uniforms, etc. are an extra economic burden and the drop-out rate in this population is high beyond the eighth grade, especially for girls. The number of high school graduates who are eligible for university education is low in comparison to the Jewish population and to other Arab and non-Arab minorities. This situation results in a negligible number of Bedouins admitted to Israeli medical schools and forces others to study medicine in East Europe, where the admission criteria are less competitive. There are currently about 80 Bedouin physicians in the Negev region, but less than 10% graduated from Israeli universities.

Bedouin women who wish to acquire education in the medical professions have to overcome even greater barriers. Traditional Bedouin culture does not allow women to “mingle” with strangers without a chaperon. Going to the university involves the omission of this tradition and, in many cases, involves a change in the dress code and social relationships. Bedouin female physicians are scarce. Paramedical professions, such as nursing, are also of special challenge to Bedouin youth. Nursing has low prestige in the Bedouin community and it takes time to change that attitude. Those who graduate from nursing school usually return to their communities and integrate in the ambulatory health service. Their help in teaching medical students and promoting communication between the population and the non-Arab speaking staff in the clinics is invaluable.

Working in the medical profession often involves exposure to privacy issues of patients and to the privacy of their body. Cultural barriers regarding these issues often create obstacles for Bedouin medical professionals, including students. Some Bedouin patients are reluctant to be examined by a Bedouin professional, especially if the latter comes from a “rival tribe”. Some will not disclose important information, as this may result in consequences on the basis of “honor of the family”. Sensitivity to these issues is discussed with the students of the medical schools and methods to overcome them are explored.

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Cultural sensitivity

Integrating cross-cultural aspects of medicine into the already overloaded curriculum of medical education requires a heavy investment by both faculty and students. Only a handful of studies have attempted to perform a systematic evaluation of the benefit of such endeavors (23,24,26). A clinical elective in a developing country preceded by a preparatory course in IHM increased students’ cultural sensitivity, enhanced their communication and clinical skills, and resulted in a strong preference to work with underserved populations and engage in community service activities after graduation (26,27). A survey of student attitude and knowledge of students in the MSIH at BGU showed that the students were able to increase their knowledge of the subject significantly and retain their positive attitudes toward IHM during the course of medical school (23,24). These students had more positive attitudes towards IHM than students on the Israeli medical track as well as other US medical schools.

Conclusion

Cross-cultural medicine is of growing importance and should be taught in all medical schools around the world (28). An increasing number of medical schools have become aware of this potential and have included elements of IHM and cross-cultural issues in their medical curriculum, often in the form of international elective experiences (28-30). Cross-cultural sensitivity is particularly important in regions of the world, such as Israel, where a strong diversity of the population exists. The Bedouin population in southern Israel exemplifies the complexity of the issue and serves the medical school as a model for educating its students in such issues. We believe that medical schools should incorporate certain elements of the MSIH program, such as IHM modules and the cross-cultural workshop. Better acquaintance with minority cultures has the potential to improve medical care and resolve tensions that naturally exist in such diverse populations.

Acknowledgments


References


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Where east and west meet


Challenges in the provision of health to the rural Bedouin population in southern Israel

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Abstract

The Bedouins in the south of Israel are in a state of transition and adaptation to non-traditional lifestyle and the abandonment of the nomadic way of life in exchange for permanent housing in small towns and authorized villages. This development has been encouraged by the government that provides infrastructure and incentives. However, about eighty thousand Bedouins do not reside in those settlements. Most of them are...
scattered in permanent houses, huts or tents in remote rural places. Living outside of town means no electricity, no running water, no sewage system, no paved roads, no mail address and no phone lines. Climate changes impose additional burdens on this population. The purpose of this paper is to describe the challenges and some of the solutions in providing health care to this population.

Introduction

The Bedouins who reside in the Negev, southern Israel, are in a state of adaptation to non-traditional lifestyle. Restrictions in crossing the borders to neighboring countries, a small country and the rapid increase in the density of the Bedouin population forced them to abandon the nomadic way of life for permanent housing in small towns and authorized villages. This was encouraged by the government that provides infrastructure and incentives. However, about eighty thousand Bedouins do not reside in those settlements. Most of them are scattered in permanent houses, huts or tents in remote rural places. Living outside of town means no electricity, no running water, no sewage system, no paved roads, no mail address and no phone lines. Climate changes impose additional burdens on this population. The purpose of this paper is to describe the challenges and some of the solutions in providing health care to this population.

The population

The crude birth rate of the Bedouin population is southern Israel is record high (1) at 44 per 1,000 with the result that the population doubles every 25 years. The complete fertility rate is 7.3. Sixty one percent of the population is below the age of 17 years with the median age of the Bedouins in the Negev at 12.7 years compared with 18.7 and 28.6 to the general Muslim population and the Jewish population, respectively In Israel (2).

In the year 2007 infant mortality rate was 11.5, mostly attributed to problems related to the common practice of consanguinity marriages (3). Immunization coverage in babies and toddlers was about 80% in the rural areas compared with 90% in the permanent settlements. A dramatic decline in vaccine-preventable communicable disease was recorded in this population (4). Polygamy, although outlawed, is not uncommon and tolerated by the authorities as a matter of respects for the Bedouin Muslim faith (5).

Traditionally, women are in charge of the care for their large families and do not generate income by out-of-home employment. As herding is limited and the rate of highly skilled professions are uncommon, the socioeconomic level of the population is low.

Climate and terrain

The Negev, in the southern part of the state of Israel, is a desert. The average yearly precipitation is below 150 millimeters. Draught is common and this year is the fifth in a row.
Temperatures are over 30 degree Celsius during the day in the summer, while nights are chilly and the temperature may drop to zero in winter with the risk of hypothermia in babies.

Most of the Negev terrain is made of limestone. Altitude is between 150 and 1,000 meters above the sea level. Trees are scarce except in the dry riverbeds. There are no freshwater streams or lakes. Waterholes are few and many of them are not properly maintained.

Medical services

Curative care is provided by Health Maintenance Organizations (HMO), while well baby care provided by the Ministry of Health. Ninety per cent of the children are enrolled in these services (6). The two systems are loosely coordinated and for inpatient services there is a tertiary hospital in the city of Beer-Sheva (Soroka University Medical Center), which is reachable for most of the Bedouins who reside in rural areas within an hour by car. Traditional and complementary medicine prevails significantly in Bedouin communities (7). Unfortunately, development, modernization and changes in lifestyle impose their toll on Bedouin health. The prevalence of obesity, cardiovascular disorders and diabetes mellitus is increasing (8,9).

Policy

The year of 1995 marked the most significant change in the health care to the Israeli population, when a national health insurance bill was passed. Many Bedouins who could not afford health insurance became eligible to receive free care by the state, which included free visits to a doctor, subsidized medications and hospitalization free of charge. HMOs who before the bill had been reluctant to provide service in rural areas started to compete, because the reimbursement by the government was attractive, which has resulted in a new trend of increased clinic visits and more frequent attendance (10,11).

Mandatory schooling and public awareness have encouraged young Bedouins to graduate medical schools in Israel or Europe and the lack of physicians is today less of a problem compared to decades ago. A national general insurance plan is providing families with children a monthly income based on the number of children at home. This policy is aimed to enable even the poorest families to buy food, medications and basic necessities.

In order to decrease maternal mortality rate and immediate medical care to newborns, the state is paying "delivery-in-hospital" bonus to women, who give birth in a hospital. This policy is probably the most influential factor in the disappearance of home deliveries in the Bedouin population and in the dramatic drop in neonatal tetanus and other causes of neonatal death (6). Mandatory schooling for all children contributes to the drop of illiteracy in the Bedouin population and children even in the most remote areas are able to reach school. Schools are used to help in the general effort to affect the health of the population. Beyond immunizations in schools, schools are where children are getting health education and they are encouraged to become the vehicles that pass the message to the families.
Mobile units

The HMO Clalit Health Services and the Ministry of Health are operating mobile units, where medical teams are reaching the population at their residencies (12). The mobile unit is staffed by a physician, a nurse and a social worker. Its services include palliative care at patients homes (13). The program is a co-venture of Clalit and the Division of Community Health at the Faculty of Medical Sciences, Ben-Gurion University of the Negev. One of the staff members in the unit is a Bedouin, who facilitates communication with patients and familiar with the area and the rural roads.

The mobile units of the Ministry of Health provide well-baby-child-care services, which include immunizations, care of pregnant women, health education, surveillance and screenings (14).

Water

The population of the Negev depend on a water supply by the authorities. Water for agriculture, homes and livestock is reaching the Negev by water pipes from central Israel. The Bedouins in the rural areas do not have water pipelines that reach homes. One of the most popular solutions to this problem is by using a "mobile well". Many families have succeeded to get a mobile water tank and a tractor. Water is supplied in stations along the water pipeline ant the tractor will bring home to the dwelling the water. Compared to the low quality of water from waterholes, this water is checked regularly by the Ministry of Health and from a health perspective this water supply helps to eliminate and prevent water-born disease.

Pollution

The rural areas in the Negev are the least populated areas in the country, but some of the chemical and mining industries have used this area as the dumping place for toxic chemicals. These industries are a source to air, water and soil pollution with the population who reside in these area at increased medical risks. Monitoring of pollutants from the industry and of the health of the population is mandated by the law. It is under control of the Ministry of Health, which is authorized to penal or close plants that cross the limits of pollutants (15,16).

Energy, transportation and communication

The rural Bedouins who do not reside in authorized settlements or towns are not entitled to receive electricity lines to their homes as well as telephone lines. Governmental money to build paved roads is not diverted to these communities. Technical innovations and the rise in the economic abilities of families have coupled to solve these problems. A family-owned mini-generator has become a common commodity and recently, families have started to get sun-collectors to generate electricity. These innovations have enabled families to have a safer
source of light (compared with open fire), a way to keep food refrigerated and to operate a television set. However, many are still depended on open fire as the major source of energy. Burn accidents, pollution by smoke and hydrocarbon poisoning in children are still medical issues (17).

The camel that was a major help in transportation in the desert lost its glory even in the rural Bedouin communities. Today 4 on 4 transporters and all-terrain-vehicles have become popular. They practically eliminated the morbidity and mortality that was related to the inability of the severely sick to get expedited medical help. The cell-phone revolutionized the communication with the people in the rural communities. Practically, it is in every household. Medical services are exploiting the opportunity. Scheduling, arrangements of home visits, emergency calls and communicating with the medical team – all are facilitated by the use of the cell-phone.

**Education**

Rural Bedouin settlements do not have government-based public buildings. This includes schools, but all the children have to attend schools as schooling is mandatory. Transportation of the children to public schools in Bedouin towns and authorizes villages is organized by the Ministry of Education. School health is provided by the authorities, which include various issues related to healthy life style, nutrition and disease prevention. The idea is that the children will bring the word to their families and start a change based on modern knowledge regarding preventive medicine. For high school children, a special module was developed to convey the medical disadvantaged of consanguinity marriages. It is believed that decreased consanguinity marriages will significantly reduce infant mortality and morbidity in the Bedouin population (18).

The Faculty of Health Sciences at Ben-Gurion University of the Negev is running an extracurricular program for high school students named "Buds of health". Many of the Bedouin children who were enrolled in the program continue their studies in the medical professions and some have graduated medical school.

**Low-tech solutions**

Some families, especially those who are the poorest or who live in the most remote places, need innovative solutions for their medical needs. We choose to describe two of them:

- A patient who was released from the hospital with a tracheostomy. For some technical reasons a foot or hand-operated suction device was not an option, but desperately needed. The solution was a suction device that is based on a T-shaped connector to a water pipe. As the water flew throw the pipe, a negative pressure was building-up in the side-tube that was used as a suction tube.
• A patient, with diabetes mellitus, who needed to keep the insulin bottles in a cold place but did not have a refrigeration device in or by home. For that purpose the traditional way of cooling water in unglazed pottery was used. Microscopic pores in the pot enable a slow, but steady evaporation of water. The evaporation kept the temperature of the water low enough to keep the insulin stable in the immersed bottle.

**Conclusion**

Provision of health to the rural Bedouin population is based primarily on the use of old and new technologies coupled with legislations and policies that facilitate care. Improvement in the health of the Bedouins, who reside in rural areas is already well documented. It is hurdled by the imposed constrains of their socioeconomic level. Improvement in the level of education is believed to lead a continuous improvement in the health of this population.

**References**


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Health Issues
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Chapter III

The influence of Israel Health Insurance Law on the Negev Bedouin population

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Abstract

The extension of universal health service insurance to national populations is a relatively new phenomenon. The Israeli National Health Insurance Law (NHIL) from 1995 provided universal health services to every resident, but the effect of this law on health

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and health services among minorities has not been sufficiently examined. The goals of this study were to track some of the first changes engendered by the NHIL among the Negev Bedouin Arabs to examine the effects of universal health care services. Methods included analysis of historical and health policy documents, three field appraisals of health care services (1994, 1995, 1999), a region-wide interview survey of Negev Bedouin (1997) and key informant interviews. For the interview survey, a sample of 515 households was chosen from different Bedouin localities representing major sedentarization stages. Results showed that prior to NHIL, a substantial proportion of the Negev Bedouin were uninsured with limited locally available health service. Since 1995, health services, particularly primary care clinics and health manpower have dramatically expanded. The initial expansion appears to have been a marketing ploy, but real improvements have occurred. There was a high level of health service utilization among the Bedouins in the Negev, especially private medical services, hospitals and night ambulatory medical services. NHIL brought change in the structure of health services in Israel, namely the institution of a national health system based on proportional allocation of resources (based on size and age) and open competition in the provision of quality health care. The expansion of the pool of potential members engendered by the new universal coverage had profound effects on the Health Funds’ attitudes towards Negev Bedouin. In addition, real consumer choice was introduced for the first time. Although all the health care needs of this rapidly growing population have yet to be fully met, the assurances under the Law and the new level of competition promise a higher level of service in the future.

**Introduction**

The Israeli National Health Insurance Law (NHIL) that came into effect in 1995 provided universal health services to every resident of the State. It fixed an obligatory basket of services that residents receive unconditionally from the health maintenance organizations or “health funds”. Every Israeli is entitled to register in the health fund of his or her choice without any limitation due to age, health condition, ethnicity or socioeconomic status. Health services included in this basket were to be provided according to medical considerations, at reasonable quality, within a reasonable time and at a reasonable distance from the residence of the patient. The Ministry of Health supervises the activity of the health funds with additional financial control by the State comptroller. Health services are funded by an obligatory tax on income, treasury funds and additional payments.

The effects of National Health Insurance Law on health and health services among minorities, especially Israeli Arabs, has not been sufficiently examined or discussed. Multiple studies have investigated the Law’s impact on the Jewish majority, but only a single research (1) has been dedicated to Israeli Arabs. Even this study gave scanty attention to the Arab Bedouin population of the south of Israel. Such neglect is surprising since it has been widely suggested that this community of over 100,000 in the Negev Desert require special attention in terms of health planning, due to its unique demographic and health issues.

The goals of this study were to track some of the first changes among the Negev Bedouin Arabs engendered by the National Health Insurance Law, particularly in the areas of attitudes and availability of health services. In addition to examining the effects of the implementation of the NHIL on the availability of health care in this sector, it scrutinized the awareness of the Law and the utilization of and satisfaction with the local health services, among the Negev Bedouin.
Background

The term Bedouin is derived from the Arabic term *badiah* meaning “desert.” Bedouin Arab nomads have lived in the Negev, the desert south of what is now Israel, at least since the fifth century AD. After a major exodus to other countries during the Israeli War of Independence (1948-49), the number of Negev Bedouin has increased from 12,000 in 1948 to more than 100,000 today, comprising 24% of the Beer Sheva District by the end of 1995 (2,3).

Israeli Bedouin society is in major social, economic, and cultural transition as a result of rapid semi-urbanization and sedentarization (4). The sedentarization process, initiated by the Turkish Empire and subsequently by the British and the Israeli governments have sought to relocate the Bedouins into planned settlements.

The result has been stratified sedentarization forms, from semi-nomadic encampments mainly in the periphery, to spontaneous settlements and planned permanent urban towns and cities. The Bedouin in the Negev live in three types of settlements, as defined by the urbanization scale:

- **Planned permanent settlements** supported by the Government, which receive municipal, health and other modern services. Residents are generally characterized by a high level of sedentarization and tend to work in salaried work, free trades or day labor. Vestiges of nomadic life may remain, such as tents next to fixed permanent dwellings.
- **Spontaneous settlements** in the vicinity of permanent settlements: Bedouins living on the outskirts or close to permanent settlements, where limited services such as health and education are offered. Bedouin in this group may retain aspects of tribal economy behavior, such as raising herds and nomadic agriculture, in addition to cash jobs and may live in clans or sub-clans.
- **Peripheral settlement**: Bedouin geographically distant from any permanent settlement. This life-style is semi-nomadic with living structures including tents or shacks. This group has no access to modern services at its settlement locality and the tribal behavior is the hallmark at this stage.

Today almost 60% of the Negev Bedouins live in planned villages and cities. The rest reside in the shantytown-like spontaneous settlements, with less than ten percent continuing the traditional semi-nomadic life style.

The Negev Bedouin have the lowest overall socioeconomic status of any social or ethnic group in Israel (2). They have half the per capita income, twice as many children and half the living space compared to the average Israeli. Rates of unemployment and welfare support are among the highest in Israel. Bedouin students complete secondary school matriculation exams at less than half the rate of their Jewish neighbors in the Negev or Israeli Arabs in general (2). The low status of women and children, a common characteristic of Middle Eastern tribal traditions, still has a major impact on the lives of these groups. Polygamy is frequent among Bedouins in the Negev (20% of marriages), similar to the rate in the Gulf Arab countries (5).
Health status of Negev Bedouins

With the rapid movement of the Negev Bedouin Arabs to permanent settlements and urbanization, the non-communicable diseases have begun to appear alongside the pre-existing infectious diseases, problems of nutrition, and environmental exposures. The rates of preventable diseases such as anemia, diarrhea and accidents of children are higher than the average for Israelis. The population is also characterized by one of the highest birth rates in the world. The infant mortality rate, though low compared to other countries in the region, is estimated to be 1.5-2 times higher for Bedouins than for Israeli Jews (6). The high frequency of birth defects among Bedouin children is a particularly serious problem among this group (6).

History of health services for the Negev Bedouin

According to Ottoman estimates, the Bedouin population at the end of the 19th Century was in the vicinity of 45,000 inhabitants. Poor health, poverty and communicable disease such as trachoma and tuberculosis were common (7). Visits by physicians were sporadic and infrequent. Beer Sheva hosted a small hospital and a clinic that served Turkish administrators and military personnel, where medical treatment could be obtained in return for a steep fee. Few Bedouin, however, could afford such medical services and most turned to the traditional healer - the darwish (8) or to other indigenous traditional healers for their health care needs. These conditions continued until the First World War.

In 1918 with the completion of the conquest of Palestine by Great Britain, British authorities began operating public health services and Beer Sheva became the hub of health services for the region. Services to the Bedouin remained scarce, a situation that continued well after the establishment of the State of Israel. The Israeli War of Independence (1948-1949) completely disrupted all pre-existing health services and brought most Western-medical activities to a halt. After 1949, an Israeli military government was installed in the Bedouin areas under Israeli control that supplied limited health services to the local population. Services in Beer Sheva were expanded, but transportation and access were often difficult for the Negev Bedouin. In the 1950s, the efforts of the Military Government were supplemented by Jewish voluntary efforts, though finding sufficient physicians, nurses, ambulances, and equipment remained complicated. Maternal and child health services were instituted in 1952, but their penetration into the Negev Bedouin Sector was limited due to lack of resources, particularly in the peripheral areas. On the 1st of December 1966 the military government was abolished entirely.

In December 1961 the Clalit ("General") Health Fund of the Federation of Labor (previously named Kupat Holim Clalit, is the major health organization in Israel (HMO), providing services to over 50% of the population) began providing ambulatory health services to the Bedouin of the Negev. The Fund opened four primary care clinics in Beer Sheva and within the Bedouin areas, supplying services to 10,000 people. In 1972 following an agreement with the Ministry of Health, all curative services for the Bedouin were transferred solely to the Clalit Health Fund and the Ministry of Health's role became focused on supervision and preventive medicine - primarily vaccination, maternal and child health.
The influence of Israel Health Insurance Law on the Negev Bedouin population

State of affairs continued until 1995, when Israel's National Health Insurance Law came into effect, covering all citizens in the State of Israel. At this time, the Clalit Health Fund insured approximately 73% of the Bedouins, while none of the other three health funds had any significant activity in this sector.

Review

The methods utilized in this study included an intensive review and analysis of historical and health policy documents, three field appraisals of health care services (1994, 1995, 1999), a region-wide interview survey of Negev Bedouin (1997) and key informant interviews.

The investigators undertook an intensive historical and health policy review and analysis of the literature regarding the health care of the Negev Bedouin during the 20th Century. All available sources in Arabic, Hebrew, and English were appraised, including archival material, government documents and health fund materials.

The field appraisals of health services available in the Negev Bedouin Sector included photographic and written documentation of the existing health clinics and surveying of their current staff. Data collection, which began in December 1994 on the eve of the passage of the NHIL, included the names, numbers, working hours of physicians, and advertisements of services. The second survey was carried out one year after the Law went into effect in December 1995 and again in December 1999. Further information on insurance and utilization patterns was abstracted from primary sources.

Interview survey

Insights from a previously conducted focus group study among the Negev Bedouin were used to identify key issues and prepare a culturally appropriate questionnaire (9). The survey instrument was pilot tested at two stages during development. Interviews were conducted in person, after informed consent was established.

Due to concerns about the issues of bias and disclosure, it was decided to utilize non-local Arabic speaking interviewers rather than members of the local population or individuals associated with the regional medical system. An independent survey company (El-Maidan) was hired for this purpose. Their staff was in close contact with the research team at each stage of data collection with observations of training and collection methods.

A sample of 515 Bedouin households was selected from different Bedouin localities, with proportional representation determined by the size of the settlement and the stage of sedentarization stages among this group. The research included Bedouin families in planned, permanent settlements, spontaneous settlement in the vicinity of the permanent settlements, and peripheral settlements. In each location, a number of Bedouin families were selected randomly and heads of households were interviewed until a predetermined quota was reached. This number reflected the relative percentage of the Bedouin residents in the settlement as compared to the Bedouin population in the Negev, according to 1995 Census data. Heads of households were defined as men and women above the age of 18 years, who were responsible for one family or household unit. Each head of household was asked about

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all members of the household. The interviewers arrived at the residence of the family, obtained consent and verified the different socio-demographic variables before proceeding with the interview. The procedure had high cultural acceptability with only 2% of those approached refusing to participate.

**Characteristics of the survey sample**

The characteristics of the sample are described in table 1. The sample was demographically representative to the general Bedouin population in terms of age, sex and settlement distribution, when compared to data from the Central Bureau of Statistics. Of the 515 heads of households interviewed, 49 percent were men and 51 percent were women. The average age was 30 years old.

**Table 1. Characteristics of the sample (n=515 head of households)**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Male (49%)</th>
<th>Female (51%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sex</strong></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>Age Distribution of Population</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-65</td>
<td>95%</td>
<td>5%</td>
</tr>
<tr>
<td>65+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>80%</td>
<td>3%</td>
</tr>
<tr>
<td>Divorced</td>
<td>3%</td>
<td></td>
</tr>
<tr>
<td>Widowers</td>
<td>3%</td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>13%</td>
<td></td>
</tr>
<tr>
<td>No answer</td>
<td>1%</td>
<td></td>
</tr>
<tr>
<td>Number Wives (for men in sample)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>One wife</td>
<td>67%</td>
<td></td>
</tr>
<tr>
<td>More than one wife</td>
<td>25%</td>
<td></td>
</tr>
<tr>
<td>No answer</td>
<td>8%</td>
<td></td>
</tr>
<tr>
<td>Number of Children</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 or less children</td>
<td>15%</td>
<td></td>
</tr>
<tr>
<td>3-6 children</td>
<td>35%</td>
<td></td>
</tr>
<tr>
<td>7-10 children</td>
<td>21%</td>
<td></td>
</tr>
<tr>
<td>More than 10 children</td>
<td>16%</td>
<td></td>
</tr>
<tr>
<td>No answer</td>
<td>13%</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No formal education</td>
<td>37%</td>
<td></td>
</tr>
<tr>
<td>Elementary school</td>
<td>21%</td>
<td></td>
</tr>
<tr>
<td>Part of high school</td>
<td>15%</td>
<td></td>
</tr>
<tr>
<td>Graduate high school</td>
<td>16%</td>
<td></td>
</tr>
<tr>
<td>Higher education</td>
<td>11%</td>
<td></td>
</tr>
<tr>
<td>Settlement Pattern</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Permanent settlement</td>
<td>64%</td>
<td></td>
</tr>
<tr>
<td>Spontaneous settlement</td>
<td>18%</td>
<td></td>
</tr>
<tr>
<td>Periphery</td>
<td>18%</td>
<td></td>
</tr>
<tr>
<td>House Construction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concrete building or mixed construction</td>
<td>65%</td>
<td></td>
</tr>
<tr>
<td>Shacks</td>
<td>24%</td>
<td></td>
</tr>
<tr>
<td>Tents</td>
<td>10%</td>
<td></td>
</tr>
<tr>
<td>Self-Definition of Health</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfactory or better</td>
<td>85%</td>
<td></td>
</tr>
<tr>
<td>Not Good</td>
<td>15%</td>
<td></td>
</tr>
</tbody>
</table>
**The influence of Israel Health Insurance Law on the Negev Bedouin population**

**Our findings**

The enactment of the 1995 National Health Insurance Law with its provisions of universal coverage, engendered fundamental changes in health services for the Negev Bedouin Sector. Under the terms of the NHIL, all Negev Bedouin received insurance coverage for the first time, a jump from the 60% rate of voluntary coverage prior to the enactment of the law. After

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1995, the national health budget was split among the four health funds proportionally, according to the number of members registered by each fund and their age group. Thus, for the first time, the Bedouin population, which had grown to encompass 100,000 souls, constituted an attractive human reservoir to bolster membership rosters. They were also seen to represent a substantial and potentially lucrative new source of net income, since they had tended to have relatively low rates of utilization of services.

Prior to 1995, the Clalit Health Fund had been the only ambulatory health provider on a large scale within the Bedouin sector. The few Bedouin who had been insured in the Meuchedet ("United") or Maccabi Health Funds before the passage of NHIL received services in the Jewish towns and cities. As a result of the competitive environment engendered by new law, the Meuchedet and Maccabi funds greatly increased investment in the medical infrastructure, opening competing clinics in Bedouin towns and population centers. The Clalit Health Fund also followed this trend, expanding the size and number of its branches throughout the Negev Bedouin Sector. Overall, the number of health centers in Bedouin communities tripled within two years, with facilities scattered in every city, town and even peripheral areas. Health care resources in this sector increased on nearly every parameter: more Health Funds, more clinics with wider distribution, more staff, more primary care and specialist physicians, more nurses. For example, the Clalit Health Fund increased the numbers of nurses and primary care physicians it employed in this sector by 30% soon after the enactment of the NHIL, with larger expansions by 1999.

Table 2. Trends in the growth of health services (physicians and clinics) in Negev Bedouin Villages for the Years 1994-1995-1999 by Health Funds

<table>
<thead>
<tr>
<th>YEAR</th>
<th>Health Fund</th>
<th>Primary care physicians</th>
<th><em>Specialists</em></th>
<th>Clinics</th>
<th>Primary care physicians</th>
<th><em>Specialists</em></th>
<th>Clinics</th>
<th>Primary care physicians</th>
<th><em>Specialists</em></th>
<th>Clinics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1994</td>
<td>1995</td>
<td>1999</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>&quot;Clalit&quot;</td>
<td>22</td>
<td>17</td>
<td>9</td>
<td>30</td>
<td>28</td>
<td>9</td>
<td>59</td>
<td>62</td>
<td>17</td>
</tr>
<tr>
<td>% growth</td>
<td></td>
<td>(36%)</td>
<td>(64%)</td>
<td></td>
<td>(96%)</td>
<td>(121%)</td>
<td>(88%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;Macabbi&quot;</td>
<td></td>
<td>4</td>
<td>6</td>
<td>3</td>
<td>9</td>
<td>6</td>
<td>4</td>
<td>9</td>
<td>11</td>
<td>4</td>
</tr>
<tr>
<td>% growth</td>
<td></td>
<td>(110%)</td>
<td>(25%)</td>
<td></td>
<td>(83%)</td>
<td>(109%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;Meuchedet&quot;</td>
<td></td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>&quot;Leumit&quot;</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Bedouins Population</td>
<td>87,400</td>
<td>92,900 (6%)</td>
<td>120,000 (29%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*All specialists work part time.

Not all the expansion was positive, however. Scores of opportunists entered the “feeding frenzy” in Bedouin Sector after the passage of the NHIL. This included local physicians, most of them general practitioners with no residency training in primary care/family medicine, who saw an opportunity to earn money by opening clinics running in afterhours or businessmen who tried to engage physicians to work for them in semi-private clinics during their “off-hours”. These clinics were set up in rented apartments with minimal workforces, equipment and extremely limited hours. One ploy was naming a famous or well-known

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The influence of Israel Health Insurance Law on the Negev Bedouin population

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physician as the head of these clinics in order to attract patients, while in reality less qualified, cheaper, physicians provided the medical services. Clinics at the scattered spontaneous settlements were closed on Fridays and most afternoons – times the population preferred.

Some of the health care service expansion was short lived. One view heard in the Negev was that much of the initial expansion in clinics and health manpower after 1995 was only a cynical marketing ploy for attracting patients to various Health Funds right after the implementation of the Law. There is some basis for this theory, since some of the clinics opened in 1995 by one of the Health Funds (Meuchedet) were closed soon thereafter, as were some offered services, such as the Maccabi scheme for mini-bus transportation to their clinics in a few of the major Bedouin towns. In addition, many of the clinics that were originally opened in 1995 by the Clalit and Maccabi Funds were located in temporary buildings, rented apartments, or even isolated rooms with little thought for long-term planning or the appropriateness of facilities for the population. Nonetheless, the overall increase health care services in the Negev Bedouin sector that accompanied the implementation of the Law was not only maintained, but grew by 1999. The Clalit Health Fund expanded from 9 to 17 clinics between 1995 and 1999, and the Leumit (“National”) Health Fund, which had had no representation in the Bedouin Sector prior to the NHIL, entered the fray in 1998, opening two local clinics.

With the changes in the Law, Negev Bedouins were suddenly presented with universal health insurance coverage and with actual consumer freedom of choice for the first time. Their rights to health care could be realized at any of the four Health Funds, often with a variety of locally available primary care and specialist providers. The only area where access remained a significant issue appears to be in the periphery, where transportation issues, particularly in the rainy season, remained daunting. Initially four part-time clinics were set up in such areas, but two of these were closed by 1999.

Significant local turmoil, grand advertisement campaigns and allegations of bribery to local community and tribal leaders accompanied the initial scramble for new subscribers to the Health Funds after the introduction of universal health insurance in 1995. Opportunists, whether agents or employees of the Health Funds, were paid to attract new subscribers and operated vigorously, and sometimes unethically, among the Negev Bedouin.

Parallel to the health insurance management groups’ activities in recruiting new members, the Bedouins themselves quickly began to understand the advantages underlying the health insurance act, based as it on population numbers. Heads of tribes or sub-tribes, who wanted to promote themselves and their status, turned directly to the health funds management, promising to transfer their entire tribes of hundreds or even thousands of people to a specific Health Fund, in return for monetary or service bonuses for themselves or their families. In many cases, health funds management succumbed to these demands and opened mobile clinics within the residential domain of specific tribes. In other cases, which were never formally documented, under-the-table moneys are assumed to have been paid to tribal heads in return for registering their people in a health fund. Some tribal heads even increased their activity and transferred their tribes each year – as permitted by law – from health fund to health fund, while they raised their bonus prices with each transferal.

Transfers between Health Funds by existing members were common. Seventeen percent of the heads of households in our sample took advantage of their privilege to change a Health Fund membership between 1995-1997 when general transfer rate among the rest of the population was around four percent. Most of the transfers were from the Clalit Health Fund to

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the Meuchedet and Maccabi Health Funds. In the 1997 survey, the Clalit Health Fund insured 73.8% of the subjects, while the Meuchedet Health Fund, which had no representation in this sector prior to 1995, had jumped to 7%. In comparison, 6.4% were insured by Maccabi Health Fund in 1997, compared to 5.4% prior to the Law’s passage.

The most common reasons given for transferring between funds were related to the range and quality of services provided, the level of the staff and their attentiveness to their Bedouin clientele. Complaints regarding the long waiting periods and the long lines were reported by 38.7% of the Bedouins who changed a health fund. Others reasons for transfer were due to transportation difficulties (18.3%), unsatisfactory hygienic conditions in the clinic (14%), the lack of attention from the staff (5.4%), or problems with the medical staff (7.5%). Only 1.1% of the transferring Bedouins defined language as the cause to change a health fund.

The Bedouins who participated in the sample were asked several questions regarding their rights to health care and health insurance, the implementation of these rights and whether there had been changes in their health condition after the implementation of the National Health Insurance Law.

In general there was widespread knowledge of the NHIL, with only 3.7% of respondents reporting that they had not heard of the Law. The actual details of the NHIL were less clear to interviewees, however. Only 24% of the heads of households answered that all the citizens in the country are insured under the law and only 7% knew that individual payments for the National Health Tax are deducted from their paychecks.

Knowledge of rights under the Law was also vague. Only 5% were sure that the Law ensured treatment in any case, though 42% were aware of citizens’ right to receive medical treatment with no connection to the tax payment. Fifty-four percent of the Bedouin heads of households thought that the NHIL covers all health services, while 30.9% thought that it covers only part of them, 15% of those interviewed did not know what the law covers. Fully 40% did not know the procedure of transferring health fund membership.

The Negev Bedouin in the survey viewed the NHIL positively. Five percent of the Bedouin families believed that the law was favorable for all the citizens in Israel, while 4% felt that the Law primarily served the economically weak sectors of the society. The effects of the NHIL were also felt to be positive by most heads of households: 63% indicated an improvement in medical services provided to the Bedouin after the passage of the Law in 1995, while 25% thought that the standard of medical services given to the Bedouins has not changed and 11 believed that the standard of medical services has actually worsened.

Utilization of health services

The survey of heads of household provided a “snap-shot” of the health care utilization, access, and satisfaction issues among the Negev Bedouin during January-February 1997. As seen in Table 3, the results indicate a high level of health service utilization among the Bedouins in the Negev, especially for private care and hospital-based services. The vast majority (81%) of the families had a member, who visited a primary care practitioner in a Health Fund Clinic during the two months prior to the survey. Nearly one-quarter (32%) of the Bedouin families sampled used private medical services, while 44% of the families had a member who required hospital-based care. During the same two-month period, 32% of the families in the Negev had consultations with specialists and 8% having more than three such
consultations. Mother and child preventive health clinics were visited by 36% of the Bedouin families in the Negev during January-February 1997.

The use of private physicians by lower income population can be explained by the short clinic hours in the funds' clinics, obliged the working population to use after hours private services. The willingness to pay out of pocket money for private services among the Bedouins were similar to the willingness of the general Jewish community to do so, probably due to the importance of health issues in the culture of the two communities.

Table 3. Number of visits to health care providers in the two months prior to the interview by a family member (N=515)

<table>
<thead>
<tr>
<th></th>
<th>Number Of Visits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Never</td>
</tr>
<tr>
<td>Primary Care Physicians</td>
<td>18.8%</td>
</tr>
<tr>
<td>Specialist Physicians</td>
<td>67.8</td>
</tr>
<tr>
<td>Private Physicians*</td>
<td>77.3</td>
</tr>
<tr>
<td>Hospital-based Clinics</td>
<td>55.7</td>
</tr>
<tr>
<td>Mother and Child Services</td>
<td>63.7</td>
</tr>
<tr>
<td>Traditional Healers</td>
<td>94.0</td>
</tr>
</tbody>
</table>

* Private physicians: 1. general practitioners operating their own clinics within the Bedouins settlements, 2. Health funds' physicians providing services after clinic hours in their private/home clinics, 3. Arab Palestinian physicians in the Judea, Samaria and Gaza providing services at a lower rate.

Traditional medicine was still utilized by Negev Bedouin, although, at a much lower rate than in the past. Only 6% of the Bedouin families turned to traditional healers to receive treatment during this two-month period. The age and sex distribution of visits were fairly evenly spread except in a few cases. Nearly half of those Bedouin who visited traditional healers (48% of 31) were women aged 18-60 years. Similarly, women aged 18-60 years dominated visits to primary care Health Fund Clinics and specialists, utilizing 45% of the 418 consultations and 49% of 228 consultations, respectively.

Access: Transportation

For the Negev Bedouin, transportation issues were central to their access to health services. There was generally no public transportation or taxi service within or between Bedouin settlements. Settlements are often located with a wide geographic distribution both between settlements and between domiciles (tents, shacks, or houses). Thus without family assistance, it is often difficult for women and children to get to the health clinics. As shown in Table 4, most Bedouin in the survey sample went by foot to the primary care or maternal and child health clinics, while public transportation and private cars and trucks were the primary means when attending private physicians and the hospital. This likely was due to both the geographic location of services – primary care and maternal and child health are nearer to domiciles, as well as the drafting of greater family or clan resources when special consultations were required – as in the case of hospitalization or private services. In 1995, the
Maccabi Health Fund attempted to provide mini-bus transportation for members of their Fund to and from their health centers, but this service was discontinued after one year. The Clalit Health Fund attempted a different solution. They introduced telemedicine between their clinics in the Bedouin villages and a network of specialists at the regional hospital.

The differences in the access for health services between primary care and specialists was dominant. In one hand the high utilization of primary care bridge the lack of transportation and enabled them to get primary services located within walking distance, on the other hand, Bedouin often said that the lack of public transportation prevented them mainly of using specialists as needed, due to the limitation of the specialists clinics and the location of most specialists services in the city of Beer Sheva. So the access to health services was low for specialists and private physicians and high for primary care in the public clinics.

<table>
<thead>
<tr>
<th>Table 4. Means of transportation to Health Care Facilities among those utilizing the services by percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>By Foot</strong></td>
</tr>
<tr>
<td>Primary Care Physicians</td>
</tr>
<tr>
<td>Specialist Physicians</td>
</tr>
<tr>
<td>Private Physicians</td>
</tr>
<tr>
<td>Hospital-based Clinics</td>
</tr>
<tr>
<td>Mother &amp; Child Services</td>
</tr>
<tr>
<td>Traditional Healers</td>
</tr>
</tbody>
</table>

Satisfaction with health services

The survey of heads of households demonstrated great variation in patient satisfaction between the different health services in Negev Bedouin Sector. Satisfaction was particularly low for primary care services (72%), while hospitals (87.7%), private physicians (100%), specialists (93.4%) and traditional healers (74.2%) fared somewhat better.

Discussion

The National Health Insurance Law created a national health system based on proportional allocation of resources and open competition dedicated to the provision of quality health care. The expansion of the pool of potential members engendered by the universal coverage aspects of the law had profound effects on the Health Funds’ attitudes towards Negev Bedouin. The changes in the structure of health services insurance mechanism in Israel has resulted most significantly in three advances for this sector:

1. Universal coverage for the large proportion of previously uninsured
2. Increased investment in the health care infrastructure and expansion of services
3. Real consumer freedom of choice to choose between funds
The influence of Israel Health Insurance Law on the Negev Bedouin population

Overall this has brought about significant expansion of health services for the Bedouin, and presumably, improvements in service and quality. Nonetheless, not all the health service needs of this rapidly growing population have been met. Many researchers point out the inadequate allocation of health-related resources and manpower in both the permanently settled centers and in the unplanned encampments (4,10-12). In their opinion, a tremendous gap exists between actual and desired performance (in clinics working hours, location, health education and prevention programs, transportation, health personnel etc). This is even truer for the small nomadic Bedouin community, which does not enjoy the benefit of services provided by municipal or civil institutions.

The frequent transfer of Bedouin members between different health funds has impeded the creation of a permanent infrastructure for care and the extended medical services have achieved only part of their goal. Through examination of the movement between health funds, it is evident that only 4% of Israeli Jews switched health funds within the framework of the 1995 Health Insurance Act, while the movement among the Bedouin sector has reached 7%, twice that of the Jewish sector (13).

A further problem exists, one that paradoxically is related to the universality and equality aspects of the 1995 National Health Insurance Law. The movement towards uniformity in health services across ethnic groups and geographic regions in Israel was intensified with the passage of the Law. This Law guarantees an equal "basket" of health services to all citizens of the State of Israel, but provides universal coverage without any special provisos or preparations for groups with special needs. Overnight, all Bedouin became eligible for curative health care services, the details of which were unspecified in the law. Planning for the special needs of the Bedouin minority was not done prior to the passage of the law, nor was any surveillance or evaluation mechanisms, such as computer systems, put in place to gauge the short or long-term consequences on this population. Even the most basic measures were not done, such as training medical staff to provide culturally compatible health services.

Such lack of consideration for the needs of minorities has been characteristic of other universal health care legislation, such as enacted in Great Britain or Australia. Presumably considerations of equality override any particularistic needs. The general tendency in countries with national health insurance is to make services essentially the same throughout. There are exceptions, but they are limited. New Zealand, a country that, like Israel, has a relatively large indigenous population in a relatively small geographic area, maintained some special services for the Maori, but this was primarily done in 1940s with regard to special campaigns, such as combating tuberculosis. Interestingly, one of the major Western countries without national health insurance (the United States) is the one where a targeted program has been created (14,15).

More limited universal health care laws have been enacted in Israel before, but they only pertained to maternal and child health preventive care service. In 1954, the Knesset (the Israeli Parliament) passed a national insurance law that mandated prenatal services for all pregnant women and well-child preventive health services for all children. This law had enormous impact among Israeli Arabs, including the Negev Bedouin. Whereas in 1954 only 5% of women in the Arab sector had hospital deliveries, this increased to 80% by 1965 and 100% today (16,17).

The survey indicated that although there was wide knowledge of the existence of the National Health Insurance Law, there were significant gaps regarding its content and implications. This was particularly true regarding membership rights in the Health Funds, the
privilege of transferring between funds. This could indicate a problem in the information dissemination among the Bedouins in the Negev. Issues of literacy and language are key, such as the tendency of the health funds to publish some materials in Hebrew only.

With very few exceptions, health and health policy studies of the Negev Bedouin have paid little or no attention to their preferences, beliefs, and satisfaction (18,19). No comprehensive study has yet been undertaken to examine the Bedouins' satisfaction with the health service. Due to the lack of prior data, comparisons are difficult. However, a study conducted in 1997 by the Brookdale Institute (1) found higher levels of satisfaction among Israeli Jews and Arabs, than those seen in this survey. The Joint-Brookdale Institute study (1) discerned no significant differences in the level of satisfaction rate with health funds services between Jews and Arabs. This study also found extensive use of private medical services in the minority sector, particularly in the hours after the health funds' clinics close. The Brookdale survey interviewed few Negev Bedouin due to the sampling method and it largely represents those Muslim, Christian Arab, and Druse who live in the Center and North of Israel. In our study, only 72% of Negev Bedouin were satisfied with Health fund services, while the Brookdale survey found satisfaction among Israeli Arabs and Jews for Health funds of 89% and 83%, respectively (1).

The Brookdale Institute survey also found that Israeli Jews and Arabs were less convinced that health service provision had improved after the implementation of the NHIL than the Negev Bedouin who were part of our survey. Israeli Jews and Arabs were also not as sure that this Law had had a positive effect on the equality of treatment as compared to the Negev Bedouin Arabs. Such results may reflect two changes: 1) actual improvement of health services and 2) differences in expectations regarding future improvements in services.

Overall, the NHIL must be viewed as an important step towards the advancement of health services in the Bedouin Arab Sector and toward the reduction in the real gaps in services between Israeli Jewish and Arab populations. However, the improvements in the Negev Bedouin Sector may have been the largest, since correspondingly, the room for improvement was greatest there. Not only were more Bedouin uninsured than any other sector, but also health facilities were the most geographically distant from their target group.

Among the Bedouin population in the Negev, there was intense utilization of hospital services (45%), primary services (81%) for every person in the family during the two months prior to sampling. Women aged 18-60 represent the largest percentage of health services users. This figure could be explained by the Bedouin woman's low social status and sick behavior that characterizes such status.

The use of traditional medical service is decreasing (6%), and could indicate the reduction of the role of this service among the Bedouins in the Negev. This may be due to a combination of the effects of modernization, increased sedentarization, and greater access to Western-medical care.

Some of these findings raise fundamental issues regarding ethical dimensions of the passage of universal coverage. Were the interests of the minority safeguarded under the NHIL? Is a minority, particularly one with little experience in the healthcare marketplace, really equipped to make “mature and educated” decisions when many choices are presented through the filter of modern marketing camouflage? At what stage should the minority be involved in making wide range health policy changes and what preparation is needed prior to allowing choice?
Recommendations

The universal health care that was heralded in by the National Health Insurance Law has had significant positive impact on the health services for individuals in this sector. Nonetheless, this community deserves attention of researchers and health planners, because of the demographic and health problems that continue to contribute to higher morbidity and excess neonatal mortality, compared with the Jewish and Northern Israeli Arab community. In order to improve the health condition of the Bedouin population in the Negev, health policy planners must consider the impact of NHIL on this sector and must tailor health services to the special needs and the dynamic social transition of this population. For example, a positive first step would be encouraging the Health Ministry to adjust the distribution of health services in the Bedouin sector in the Negev to the geographic, demographic and cultural realities specifically present in the Negev.

Finally, there is a need to form integrated multi-disciplinary research teams including medical, management, social science, and economic experts, in order to study the effect of the urbanization process on the Bedouins’ health conditions well as the compatibility of the medical services with the Bedouin population’s cultural needs.

Acknowledgments

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Rehabilitation
Chapter IV

Developmental rehabilitation service utilization

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\textsuperscript{3}National Institute of Child Health and Human Development, Jerusalem
\textsuperscript{4}Office of the Medical Director, Health Services, Division for Intellectual and Developmental Disabilities, Ministry of Social Affairs and Social Services, Jerusalem
\textsuperscript{5}Division of Pediatrics, Hadassah Hebrew University Medical Center, Mt Scopus Campus, Jerusalem, Israel
\textsuperscript{6}Kentucky Children’s Hospital, University of Kentucky College of Medicine, Lexington, US

Abstract

Some communities have peripheral zones inhabited by persons with a different culture than the majority of the general population, such as the Aboriginals in Australia, the Native Americans in the United States and Canada, the Eskimos in Lapland, and the Bedouins in Israel. These citizens are not receiving the same medical or rehabilitation services as the citizens of the metropolitan areas due to the fact that health and welfare programs are not adapted to their unique needs.

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At the Soroka University Medical Center in Beer-Sheva, Israel, the health and rehabilitation services have a very large and heterogeneous catch-up population serving most of the south of Israel. The purpose of this study was to look at the utilization and the number of appointments for child rehabilitation services by the Bedouin population compared to the general population in the south of Israel at the Zusman Child Development Center (CDC). The records of appointments to the CDC between the years 1995–1999 inclusive were studied and we randomly chose to limit the study to January, April, July, and October of each year, and randomly chose the daily records of nine therapists, three from each discipline (occupational therapy [OT], physical therapy [PT], and speech and language therapy [SLT]). There were 8,504 appointments during these 4 months of the years 1995–1999, 2,255 of which were for Bedouin and 6,249 for Jewish children. Noncompliance with therapy appointments (NCTA) for the same period for both the Bedouins (31%) and Jewish children (26%), with a significant difference between the two populations, was noted. Of all the Jewish childrens’ appointments, the percentage of all three services was similar: 33% to PT, 38% to OT, and 29% to SLT, but for the Bedouin children, the percentage between the three services was significantly different: 62% to PT, 34% to OT, and 3% to SLT. These results seem to indicate that the Bedouin families prefer the PT and OT over the SLT. Our results enhanced the need for planning a model for supplying health services adapted to clients coming from different cultures. According to this model, we need to take into consideration the cultural differences, the accessibility to rehabilitation services, and the economical impact on the family; all in all, to give a better solution to the patient with special needs.

Introduction

The health services provided to insured citizens — in countries like Scandinavia, Australia, New Zealand, Canada, and the U.S. — are among the most progressive in the world. There are also many laws defining the rights of the handicapped or disabled with the obligations of the government. Such rights emerged from the concept that all citizens, including the disabled, deserve welfare from the government and society as a whole has responsibility.

There are some communities in the peripheral zones of several places who have a different culture from the majority of the population, such as the Aboriginals in Australia, the Native Americans in the U.S. and Canada, the Eskimos in Lapland, and the Bedouins in Israel. These citizens are not receiving the same medical or rehabilitation services as the citizens of the metropolitan areas due to the fact that health and welfare programs are not adapted to their unique needs (1-3).

Apparently, everyone approaches the health services when in need of them, but according to Helman (4), people use these services only when they are within reach, within their financial capacity, and within cultural acceptance.

At the Soroka University Medical Center in Beer-Sheva, Israel, the health and rehabilitation services have a very large and heterogeneous catch-up population serving most of the south of Israel. The citizens come from many ethnic, cultural, and religious groups. The two main groups are Jews, who are the majority in Israel, and the Bedouins, who are about 20% of the citizens in the south region (5). Most of the Jews using the rehabilitation services come from the cities and major villages in the south, while in some communities, the citizens use local facilities and the connection with the rehabilitation center is for instruction and follow-up of children with multiple and complex disabilities.
The Bedouins of the Negev are in transition from a Nomadic life to more permanent settlements. They are an ethnic, religious, and cultural minority with many socioeconomical problems. Their language is Arabic, and usually only the men are able to speak Hebrew. Many of the men are unemployed and their families live on social security income. The medical and rehabilitation services offered by the health authorities is not fully used due to language, cultural, and economic difficulties, but also due to the geographical scattering (5-7).

The meeting between the Jewish therapist and the Bedouin patient is a meeting between two different cultures who appraise the value of health and rehabilitation in different ways. This clash of cultures is also well known in other western countries, where health services providers stem from the medium-high socioeconomic group — educated in western medicine based on scientific logic and assumptions that must be examined by firm and objective criteria — who meet patients from totally different cultures (8,9).

At the Soroka University Medical Center, there are 12,000 newborns every year with close to 50% Bedouins, even though they only constitute 20% of the population in the south. More than 80% of the children with any developmental problem are referred to the CDC. About 5% (350 every year) are diagnosed with moderate or severe disabilities. About 10% have a mild disability with motor, communication, or learning difficulties.

Every year, a total of about 750 new children are referred to the CDC for assessment and treatment by the medical and paramedical staff. About 50% need treatment, 30% need follow-up, and 20% are discharged without need for further intervention. After diagnosis, the therapist and the parents plan an integrative program with special neurological and developmental components suitable for the child, the family, and the rehabilitation services in the local community where the child lives. The rehabilitation therapy is given two to four times a month. The frequency of treatments and follow-up depends on the severity of the disability, the capacity of the family to come to the therapist, and the possibilities for improvement.

The therapist plans the treatment at home and during the session, the parents receive instructions connected to the development of the child with a view to capacities and limitations.

The purpose of this study was to look at the utilization and the number of appointments for rehabilitation services by the Bedouin population compared to the Jewish population in the south of Israel.

Our study

The degree of utilization of services was evaluated by two parameters: 1) Comparison of the ratio of appointments between the Bedouin and Jewish population to the three rehabilitation services in the CDC: occupational therapy (OT), physiotherapy (PT), and speech and language therapy (SLT) and 2) Comparison of the rate of “not attending” predetermined appointments or noncompliance with therapy appointments (NCTA) between the two populations.

The pediatric population of the southern part of Israel receives medical care and developmental follow-up and therapy at the regional area hospital, the Soroka University Medical Center in Beer-Sheva. The study is based on cluster samples. We reviewed the

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records of appointments to the CDC, medical, psychosocial, and allied professions staff between the years 1995–1999 inclusive. We randomly chose to limit the study to January, April, July, and October of each year, and we randomly chose the daily records of nine therapists, three from each discipline (OT, PT, and SLT).

There were 8,504 appointments during these 4 months of the years 1995–1999, 2,255 of which were for Bedouin and 6,249 for Jewish children. The dependent variable was the percentage of NCTA from the two populations.

The raw data were analyzed using SPSS (version 10) and nonparamedic comparisons ($\chi^2$) of variables between the two populations; statistical significance was determined by a $p < 0.05$.

Our findings

In Table 1, the total number of appointments for the sample during the five years is shown together with the NCTA for the same period for both the Bedouin and Jewish children with a significant difference between the two populations.

<table>
<thead>
<tr>
<th></th>
<th>Jews</th>
<th>Bedouins</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of appointments</td>
<td>6,249</td>
<td>2,255</td>
</tr>
<tr>
<td>NCTA</td>
<td>1,624</td>
<td>702</td>
</tr>
<tr>
<td>Percentage of NCTA</td>
<td>26%</td>
<td>31%</td>
</tr>
</tbody>
</table>

In Table 2, the ratio between the appointments of Bedouins and Jews is presented for the three different rehabilitation services (OT, PT, and SLT), the percentage of appointments of Bedouin and Jewish children to the three different rehabilitation services is shown.

<table>
<thead>
<tr>
<th>Appointments</th>
<th>Appointments</th>
<th>Ratio Jews to Bedouins</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jews</td>
<td>Bedouin</td>
<td></td>
</tr>
<tr>
<td>PT</td>
<td>2,016</td>
<td>1,410</td>
</tr>
<tr>
<td>OT</td>
<td>2,326</td>
<td>769</td>
</tr>
<tr>
<td>PT</td>
<td>2,016</td>
<td>1,410</td>
</tr>
<tr>
<td>SLT</td>
<td>1,817</td>
<td>76</td>
</tr>
</tbody>
</table>

The data showed a significant statistical difference between appointments of Jewish children compared to Bedouin children regarding PT to OT, regarding PT to SLT, and

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Developmental rehabilitation service utilization

regarding OT to SLT. Of all the Jewish childrens’ appointments, the percentage of all three services was similar: 33% to PT, 38% to OT, and 29% to SLT, but for the Bedouin children, the percentage between the three services was significantly different: 62% to PT, 34% to OT, and 3% to SLT. These results seem to indicate that the Bedouin families prefer the PT and OT over the SLT. These preferences are expressed both in the numbers of appointments given to the Bedouins to PT as for OT and SLT (1,410, 769, 76, respectively, as shown in table 2) and in the ratio of appointments between Jews and Bedouins to each of the three services: PT compared to OT and compared to SLT (1.4-, 3-, and 23.4-fold, respectively).

Discussion

The first preliminary assumption that the total NCTA rates to the rehabilitation services would be higher in the Bedouins comparing to the Jews proved to be correct. The NCTA rates were significantly higher compared to the NCTA rates in Jewish children over all 5 years.

The rehabilitation services at the CDC are based on western values and not adapted to the cultural values and life style of the Bedouins. They are also less available to the Bedouins living at a distance from the medical center. These factors could explain why the Bedouins use the rehabilitation services to a much lesser extent than the Jews (5,10).

These findings strengthen the claim by Saha et al (8) and Flores (9) that the use of health services is influenced by the adaptation of the treatment to the unique needs of the patient. According to this perception, utilization by the individual is dependant on the user’s view about health, morbidity, and the treatment he or she gets. Culture and lifestyle are the main factors influencing these perceptions (11). These results are similar to those found by Galil et al (5), where the compliance to rehabilitation therapy was lower in the Bedouin than the Jewish population. It was also found in that study that the Bedouins believe in fate as a very potential factor in the birth of a child with development problems. They have less trust in the capacity of the western rehabilitation system to help their disabled child. The cultural influence on the use of rehabilitation services depended not only on the cultural differences, but also on the perception of the importance of the rehabilitation therapy to make a difference for the disabled child.

These results are also in agreement with the findings of Jones et al (12) and Strasser (1) concerning the influence of accessibility on the use of health services. The further the patients live from the medical center, the greater the indirect expenses and the dropout from treatment compared to the patient living closer to the urban medical center.

The second assumption we made, that the rates of appointments will be higher in the Jews, also proved to be correct. Analyzing the data in table 2, the difference between the low number of Bedouin appointments to SLT services (N = 76) compared to the high number of Jewish appointments (N = 1,817) can clearly be seen.

When comparing the appointment rate between Bedouins and Jews to the three rehabilitation services, we found a significant difference (p < 0.01) between the appointment rate of Jews vs. Bedouins comparing PT/OT, PT/SLT, and OT/SLT and the number of Bedouin appointments to P/T (1,410) was higher than their appointments to SLT appointments (76). We can explain the small amount of appointments to SLT vs. PT by the cultural influence on the use of rehabilitation services. It seems that the lesser use of SLT
services at the CDC could be due to the fact that the Hebrew language is the main therapy tool of this sector. The Hebrew language is not adapted to the cultural world of the Bedouin child and not responsive to his needs. The emphasis of SLT treatment is how to deal with problems arising from daily needs of using language and communicating skills, which is influenced by cultural values. The great difficulty to promote the Bedouin child without a common language is another reason for the low number of appointments (8).

A possible explanation for the major Bedouin use of PT is the great importance in the Bedouin culture to the issue of movement and walking. The parenting culture encourages the upright position from the age of four months. The explanation given by the parents is that a baby crawling in the tent or shed is more vulnerable to be damaged by open fire or harmful insects.

The differences exposed within the use of various rehabilitation services at the CDC enforced the statement by Helman (4) about the influence of culture on individual perception of offered therapy and the claim of Jones et al (12) about the influence of accessibility on the use of health services. These factors cause frustration in both sides, disrupting the therapeutic bonds and not allowing the patient to continue with long-term treatment and follow-up.

**Conclusion**

In this research, we found a lesser use of developmental rehabilitation services in southern Israel by the Bedouins, which can be explained by a different culture and lesser accessibility to rehabilitating services. Physicians and allied professionals familiar with factors affecting use of rehabilitation services by different populations will be better able to diagnose, display appropriate attitudes, and improve treatment to the patient, so that compliance and persistence of therapy will improve.

During the last few years, a cultural pointed therapy had been developed. According to this attitude, the staff members are getting acquainted with the social, economical, and cultural aspects of how health and illness are perceived by the patient within his cultural framework and not the cultural framework of health providers (11). The cultural pointed therapy is not in place of the traditional therapy, but a supplemental therapy.

Our results enhanced the need for planning a model for supplying health services adapted to clients coming from different cultures. According to this model, we need to take into consideration the cultural differences, the accessibility to rehabilitation services, and the economical impact on the family; all in all, to give a better solution to the patient with special needs.

**Acknowledgments**

References

Rehabilitation services for children with developmental disabilities and co-payment

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Abstract

The National Health Insurance Law enacted in 1995 provided basic health insurance for all residents in Israel, but in 1998 the Law of Allocations made the insured pay for medications and therapy. We have looked at the influence of co-payment on compliance with therapy appointments at a child development center in Israel. Among the Jewish
population, a significant difference in the rate of non-compliance was found, while among the Bedouins, the increase in the rate of non-compliance was more moderate. Co-payment led to a 16% increase in the risk for non-compliance with therapy appointments. A 37% increase in risk for non-compliance with therapy appointments was found for Bedouins, in comparison with the rate of non-compliance with therapy among Jews and we must therefore conclude that the legislation had a negative impact on the use of rehabilitation services.

Introduction

In 1995, the National Health Insurance Law was enacted in order to provide basic health insurance for all residents of the State of Israel with a defined health package, binding all public health service providers in Israel. By 1998, the Law of Allocations was passed and one of the significant changes enacted in that bill was the additional payment the insured was obliged to pay for medications and therapy included in the basic service package.

Several studies (1,2) looked at the participation of patients in the added financing of care (co-payment) and found that paying for therapy or medications caused the patient to think in terms of cost effectiveness and may reduce the utilization of these services and low-income families tended to keep fewer appointments.

The Negev in the south of Israel represents the largest part of Israel (about 60% of the land), but with only half a million people (about 10% of the Israeli population). The Bedouin population in southern Israel (about 150,000 persons) has difficulty making use of medical and rehabilitation services due to limitations of language, cultural differences, economic difficulties and problems of accessibility (3,4). With the enactment of the National Health Insurance legislation in 1995 the health budget was divided according to a capitation formula, meaning that the government pays the provider for its insured patients according to the number of the patients and the age. This law in fact made the large Arab families very “attractive” to all health service providers, improved the primary medical care and the infant welfare therapy among the Arab population (4). In order to receive advanced medical services or ambulatory services, such as developmental assessment and rehabilitation therapy, the Bedouins must come to the Soroka University Medical Center in Beer-Sheva located far from where they live. The need for co-payment, the distance from the center and cultural differences have raised the possibility of higher non-compliance among the Bedouin population compared to the Jewish population. We therefore conducted a study to examine whether the health insurance legislation (those sections concerning co-payment) had influenced the compliance with therapy appointments of two populations, the Jews (the majority group) and the Bedouins (the minority group), at the rehabilitation services provided by the Zussman Child Development Center (ZCDC) at the Soroka University Medical Center in Beer-Sheva (5).

Experiences from our study

Our study (5) included 6,249 summons of Jews and 2,255 summons of Bedouins from southern Israel scheduled for appointments at the center from January 1995 to December

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1999. The therapy appointments were counted from the daily records of therapists in three rehabilitation fields (as the appointments for these three professions were similar): Occupational therapy, physiotherapy and speech therapy. A total of 8,504 appointments for rehabilitation therapy were counted for both populations of which two thirds were Jews and one third Bedouins. The rate of non-compliance with therapy appointments was significantly higher (p<0.001) among the Bedouins than among the Jews, during the five study years.

Differences were found between non-compliance with therapy appointments during the years 1998-1999, when co-payment was required for rehabilitation therapy and the years 1995-1997, when co-payment was not required. Among the Jewish population, a significant difference was found between the two periods (p<0.001). Among the Bedouins, the increase in the rate of non-compliance was more moderate and showed a significant trend (p<0.06).

We also used a logistic regression model to demonstrate the adjusted odds ratio and relative risk for each of the factors influencing noncompliance with rehabilitation therapy. The data showed that after excluding the potential influence of ethnicity and the type of rehabilitation service (physiotherapy, occupational therapy and speech therapy) co-payment led to a 16% increase in the risk for non-compliance with therapy appointments during the years 1998-1999, when co-payment was required, in comparison with the years 1995-1997, when co-payment was not required (p<0.005). This model also showed that after excluding the potential impact of co-payment and the type of rehabilitation service, the patients’ ethnicity lead to a 37% increase in risk for non-compliance with therapy appointments for Bedouins, in comparison with the rate of non-compliance with therapy among Jews (p<0.001).

**Discussion**

As a result in the change of the law people in Israel have since 1998 been required to participate (co-payment) in the cost of medication and therapy provided by the basic service package, which has caused parents to think in terms of cost effectiveness, leading them to make less use of rehabilitation services, since it is not in the category of “life-saving” measures (6). This process is especially likely to negatively influence the Bedouins living far from the rehabilitation center and considered to be culturally different from the Jewish population. Our study (5) demonstrated that during the five year period (1995-1999) the Bedouin rates of compliance with therapy appointments were significantly lower (p < 0.001) than those of the Jewish population. The reason being that people will use health services only, when the services are adjusted to their needs (7,8). These needs are influenced by the individual perception of the meaning of sickness and health, the value of the therapy offered and the effect of the therapy on the patient. Culture, lifestyle and availability of therapy are all factors that strongly influence these perceptions. Compliance with rehabilitation therapy among Bedouins was lower than that of the Jewish population (6), which we observed arise partially from the belief in destiny, as an important factor in the birth of a child and in his or her future life and partially from lack of confidence in the ability of the rehabilitation system to help their handicapped child. Therefore, culture has a major impact on the use of rehabilitation services and the perception of the parent concerning the importance of the rehabilitation therapy in raising a handicapped child.
We found (5) that since 1998, there had been an increase in the rates of non-compliance with therapy among the Jewish population (p < 0.01), while the effect on the Bedouin population was much smaller, with only a borderline significance (p < 0.06). This was a surprising finding, because we would have expected that the compliance of the Bedouin population would have been lower than the Jewish population. We believe that the cultural factor seemed to have a greater impact on the Bedouin than the cost factor, since Bedouins used Western oriented rehabilitation services less than Jews, independently of the cost (6). It may be that those parents, who decided to make use of the rehabilitation services, in spite of the difficulties that arose from cultural differences, were not deterred by the cost. According to the National Health Insurance legislation, families entitled to Social Welfare Benefits are exempt from co-payment for health services. Many Bedouin families in the Negev live on social welfare and therefore exempt from co-payment for rehabilitation therapy (6).

We also found (5) that the ethnicity of the patients (in high correlation with culture and accessibility) had a greater impact on non-compliance with therapy appointments (OR=1.37) than the need to pay a fee for service (acceptance of responsibility forms; OR=1.16).

We conclude that the structure of the rehabilitation services provided to the peripheral population in Israel should be modified, where cultural aspects and customers arriving from different communities should be taken into account.

Acknowledgments


References

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Disability
Chapter VI

Coping with intellectual and developmental disability

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Abstract

The Arab family in Israel is still embedded in the traditional society with extended family support systems, but we see a population in transition influenced by the surrounding society. This chapter looks at the different religious attitudes toward the exceptional people in our society (i.e., the family reaction to a child born with intellectual or developmental disability), reviews recent studies on the Arab and Bedouin families in Israel, and presents data on the Arab population in residential care centers.

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Today, out of 63 residential care centers in Israel for persons with intellectual disability, 13 (20.6%) are providing service to the non-Jewish population. The Arab population constitutes 12–13% of the total residential care population, lower than the 19–20% in the total population. In residential care, the Arab population is characterized by younger children with severe and profound intellectual disability. The informal family support system is still a very important factor in the Arab family in Israel, a fact that we believe should be strengthened by implementing the British and Danish model of nurse home visitation.

**Introduction**

Israeli Arab society is essentially a traditional society. As such, Israeli Arab society possesses a clear and well-defined system of mores and customs. This system directs and regulates personal and intergroup behavior and relations within society.

In practice, one can distinguish set behavior patterns and even on frequent occasions predict how the individual will behave in a given situation. We are confronting a society where the individual in a significant manner is “directed by factors”, whose origins owe more to tradition and values than to environmental conditions, such as poverty or educational neglect, or from conditions of abundance characteristic of a modern society.

The Arabs in Israel constitute close to 20% of the general population (1). They are considered a traditional population, undergoing rapid processes of change, transition, and modernization. These processes find expression in a rise of the educational level for men and women, improvement in the level of health services, an improvement in the general standard, and constant exposure and ties with the modern Jewish population in Israel.

The Arabs in Israel are subdivided into three ethnic subgroups, in accordance with religious affiliation: Muslims 77%; Christians 14%, and Druze 9% (1). This division is of particular significance to our subject as religious beliefs are of considerable importance in shaping approaches towards exceptions.

This chapter looks at the changes in recent years in the Arab community in Israel towards children with intellectual and developmental disability through research conducted.

**Attitudes towards the exceptional**

Professional literature dealing with the subject of stances towards the impaired and exceptional emphasizes the idea that people with physical impairments belong to a social status approximating the status of minority groups (2). Social discrimination towards them exists and finds expression in negative positions and in an unwillingness to accept them as equals (2).

The cultural variable is of special importance in Israeli society, both because Israel is a society of immigrants, which absorbs Jewish immigration from various cultures, and because it embraces minority groups of various nationalities and religions. The majority groups in Israel are characterized by a pluralism of the values, which are influenced by the culture of the various countries of origin. However, one can assume that the common structure of these values is the traditional Jewish approach, which regards impairment as a punishment leading.
towards purification and preparation for the world to come and as an attempt to examine the faith of that person (2).

As was noted, existing alongside Jewish Society, non-Jewish minority groups also exist who are still influenced to a large extent by the norms, principles, and cultural values that characterize Arab tradition (3). The manner in which Arab society in Israel addresses the impaired is also not uniform. There are those who would view impairment as a punishment from heaven for a particular transgression, while others would view it as an arbitrary result of divine will, and some would connect it with “the evil eye”, the results of an essentially inexplicable external factor. The Islamic religion views people who are weak both physically and mentally, who do not contribute to society the way a healthy person would, as impaired and therefore one should not place the same demands on them as on healthy individuals. Therefore Islamic religion enjoins an attitude of mercy towards the impaired. It is plausible to assume that the sometimes fatalist approach coupled with popular norms prevalent amongst Israeli Arabs creates a negative attitude towards the impaired (2), which in fact is not founded in Islam.

We encounter a similar approach in Christianity according to which impairment is determined by God, but it is visited as a punishment for transgressions and guilt (4). They view the impaired as the personification of Jesus, who by his suffering assumed on his shoulders the sins and travails of mankind.

Impairment can be viewed as a test to which the impaired and those surrounding him are subjected. In Christian belief, man is called on to withstand negative forces, which attempt to seduce him with disbelief, acquisitiveness, envy, and physical addiction. Man is expected to withstand such temptations. If he should fail to withstand them, he may be punished, and these punishments can find expression in human suffering, illness, and impairment. During the course of history throughout the Christian World, we encounter various approaches to impairment, including positions of pity and mercy contrasted with positions of rejection and lack of acceptance of the impaired (4).

Druze religious beliefs emphasize life after death and the transmigration of souls. According to this belief, life on earth is but a transient status for a person and in his future incarnation he can be in any totally different status or condition and can enjoy a better life. On the other hand, any person can be an invalid or infirm, even if in his previous incarnation he was an important and successful individual. This religious belief is apparently tied with the more positive positions, which the Druze express towards their impaired children. The Druze faith is a branch of Islam, which has a strong neo-Platonic component. The essential tenets of the Druze are kept secret.

Nonetheless, it is known that the Druze faith emphasizes the concept of new life after death. In this world, people pray and expect to be born again after their death into a better status and enjoy better health. The belief in the transmigration of souls reinforces an optimistic approach to life and a positive approach towards their impaired children.

In summation, one can state that all three religions to which Arabs in Israel belong believe that impairment is subject to God and therefore one should accept this verdict and the person who suffers from the impairment. Religious faith is not the sole factor determining approaches towards the impaired. Other factors exerting a reciprocal relation with religion are the level of education and the intensity of modernization processes, which the individual in Arab society is experiencing.
Parental reaction towards the exceptional

The Israeli Arab family would seem to fit the universal model for parental reaction to the birth of a child with a disability (5-7) with the crisis taking the following forms:

- The first and the most difficult stage is the crisis that follows a diagnosis of intellectual disability made immediately after birth or in the neonatal period, while the parents are in a state of acute sensitivity. The moment they are apprised that their child is disabled, all their hopes are dashed and their reactions can be traumatic. At this stage, first and foremost, the parents require the attentive ear of a professional person who will be capable of absorbing the initial expressions of disappointment and bitterness. This stage can be called the change crisis, the period where the whole world of the parents turns upside down.

- The second stage is described as an ethical or ideological crisis, where the parents fear being seen with their disabled child and confronting both family and strangers with the fact. They feel pangs of guilt, personal failure, and apprehension for the future of the child, who will be incapable of independence.

- The third stage is the reality crisis. The parents encounter day-to-day problems implicit in the care for the disabled child, difficulties in locating special care, education frameworks, and the struggle to cope with the medical problems, investigations, and treatments. At this stage, parents need practical assistance to deal with real problems such as housework, help with child care, and finding a suitable daily routine.

Recent years have seen a research interest in long-term coping with the stressful situation of having a child with intellectual disability (8). In this study (8) from the United States, the personal burden of both younger and older caregivers was examined and it was found that younger caregivers (meaning young parents with young children) reported significantly more unmet service needs, were more apt to mobilize their families to receive help, while older caregivers were more likely to seek spiritual support and had a significantly less personal burden.

Stress, social support and well-being

A study from the University of Haifa (9) looked at the influence of the social support system of 100 Israeli Arab mothers with intellectually disabled children. In the Nazareth area, 51 mothers were served by the welfare services, while 49 rarely received formal service; 40 mothers lived in an urban area, while 60 lived in rural areas. Of the 100 mothers, 51 agreed to participate in a personal interview (in Arabic by a social worker) in their home, which collected demographic data, the emotional stress perception scale, the structure of psychological stress and well being in the general population, and the quantitative social support scale developed by the authors (9).
The demographic characteristics of the groups (receiving formal support, not receiving, urban and rural) were not significantly different. Marital and economic stress were associated with the amount of social support the mother received, so that mothers with higher informal support had lower marital and economic pressure, whereas formal support had no significant association with the level of stress. It was also found that the marital and parental stress of the mothers who got formal support was higher than that of mothers not asking for help. Concerning well being, the mothers with a broad informal social support reported a greater sense of well being and there was no difference in well being between the mothers using formal support or the ones who rarely used that service.

A significant difference was found in the use of formal services according to the education level and type of residence indicating that urban mothers with lower education used formal services more than rural mothers with higher education.

This study disproved the hypothesis that mothers who use formal support or government services will have a lower level of stress, but instead found that Arab mothers of children with intellectual disability in northern Israel have better use of their informal support system to reduce marital stress, parental stress, economic stress, and have a better well being (9). This study confirms the experience of home visitation from the United Kingdom, Denmark and the United States (10), where a nurse health visitor will come home as soon as pregnancy is established and follow the child for the first year or more in order to support the natural environment of the family and help the mother establish her informal network, parental education, and a bridge to the service system.

Bedouin population in South Israel

The Bedouin population, a minority within the Arab minority, currently numbers 170,000 persons, with 110,000 in the Negev, 10,000 in the central region, and 50,000 in the north of Israel. Most of the Bedouin tribes in the Negev come from the Hejaz, a region in the north of the Arabian peninsula. At present, there are more than 30 elementary schools, 3 high schools, and 3 vocational schools for the Bedouin community in the Negev. All the Bedouin high schools and 60% of the elementary schools in the Negev are located in the seven Bedouin towns. There are clinics in all seven Bedouin towns in the Negev with medical staff including Jews and Arabs. Most of the Bedouin living outside the towns are able to reach the clinics and several mobile clinics provide services in more outlying areas.

The Zusman Child Development Center (CDC) of the Pediatric Division at the Soroka University Medical Center in Beer-Sheva provides health and rehabilitation services to a very large and heterogeneous catch-up population serving most of the south of Israel. The Soroka University Medical Center has 13,000 newborns every year with close to 60% Bedouins, even though they only constitute 20% of the population in the south. Most children with any developmental problem in the south region are referred to the CDC (11,12).

Every year, a total of about 750 new children are referred to the CDC for assessment and treatment by the medical and paramedical staff. About 50% need treatment, 30% need follow-up, and 20% are discharged without need for further intervention. After diagnosis, the therapist and the parents plan an integrative program with special neurological and developmental components suitable for the child, the family, and the rehabilitation services in
the local community where the child lives. The rehabilitation therapy is given two to four times a month. The frequency of treatments and follow-up depends on the severity of the disability, the capacity of the family to come to the therapist, and the possibilities for improvement (11,12). The therapist plans the treatment at home and, during the session, the parents receive instructions connected to the development of the child with a view to capacities and limitations.

One study (11) looked at the compliance with home rehabilitation therapy among 193 families with children with special needs. Lower education level, lower economic level, and being Bedouin corresponded with lower parental compliance. When an intervention program with telephone contact, translation facilities, and detailed explanations was implemented, the compliance rate rose to 76%.

Another study from the same center (12) looked at the utilization and the number of appointments for rehabilitation services by the Bedouin population compared to the Jewish population in the south of Israel. The records of appointments to the CDC between the years 1995–1999 inclusive were studied and the daily records of nine therapists were randomly chosen, three from each discipline (occupational therapy [OT], physical therapy [PT], and speech and language therapy [SLT]) and for four particular months (January, April, July, and October). There were 8,504 appointments during these 4 months of the years 1995–1999, 2,255 of which were for Bedouin and 6,249 for Jewish children. Noncompliance with therapy appointments (NCTA) for the same period for both the Bedouins (31%) and Jewish children (26%), with a significant difference between the two populations, was noted. Of all the Jewish childrens’ appointments, the percentage of all three services was similar: 33% to PT, 38% to OT, and 29% to SLT, but for the Bedouin children the percentage between the three services was significantly different: 62% to PT, 34% to OT, and 3% to SLT. These results seem to indicate that the Bedouin families prefer the PT and OT over the SLT. The results of this study again showed the need for planning a model for supplying health services adapted to clients who come from different cultures. According to this model, we need to take in consideration the cultural differences, the accessibility to rehabilitation services, and the economical impact on the family.

**Two case studies**

**Case study 1**

Nearly 7-year-old male in a Bedouin family. The father born in 1965, the mother in 1969. He has three healthy brothers and sisters. The father is married to another woman with a healthy son. Both parents without any education. At age two years diagnosed with Duchenne Muscular Dystrophy (DMD). The diagnosis was made while he was under ambulatory investigation for failure to thrive and afterwards referred to the CDC for further follow-up and rehabilitation.

After the marriage to the second women (before the diagnosis of DMD was made), the father started to live with the second woman without connection to the first wife and her children. The first wife and the children live about 5 km away from the medical center. She is living on welfare without economic support from the father. He has also not given any
emotional support and very rarely he will escort the mother and child to the routine and special examination, including muscle biopsy. Due to this social situation, the condition of the child deteriorated more rapidly and, as an example, orthopedic surgery to elongate the Achilles tendon was postponed several times because the mother could not come alone with the child.

Although the social worker at the CDC tried to intervene and involve the social welfare workers, all efforts failed. Many services to which the child and mother are entitled could not be given to them because the agreement and participation of the father was needed. The child is now 6.5 years old and has never been enrolled in any educational program.

Case study 2

Two-year-old male who was born after a normal pregnancy, but even though Down syndrome was diagnosed during pregnancy, the parents decided to continue with the pregnancy. The father was born in 1978, the mother in 1979, both with 12 years of education. The mother is the only wife and they have an older child. This index child was born at term. He was clinically with Down syndrome, suffered from hypoglycemia and polychythemia with congenital heart defect (PDA and PFO). At age 5 days discharged home with developmental and rehabilitation follow-up at the CDC.

At about 1 year, readmitted to the medical center due to failure to thrive, distended abdomen, hepatosplenomegaly, and suspected colitis. Tricuspid regurgitation and pulmonary hypertension were found. Since then (1.5 years), he has stayed hospitalized due to the need for parenteral nutrition and several failed attempts to give oral or tube nutrition.

All this time, at least one and generally both parents are with him. The parents have brought an outside consultant for a second opinion, checked the possibility of transfer to another medical center, but decided to let him stay close to their home. We are not able to determine when, if ever, he can be discharged back home.

Residential care for persons with intellectual disability in the Arab sector

The first residential care center for children with intellectual disability was established in Jerusalem in 1931, and at the time of the establishment of the modern State of Israel in 1948 there was a total of 4 residential care centers providing service to 150 children (13). The first residential care center for Arabs in Israel was Perak Shalabi in Baka El-Gharbiya established in 1972. Today, out of 63 residential care centers in Israel for persons with intellectual disability, 13 (20.6%) are providing service to the non-Jewish population with the biggest in Kfar Kana (180 residents), established in 1977 (14).

For this chapter, we looked at the data presently available on the Arab population in residential care in Israel (14). In table 1, data are presented on the Arab population in residential care compared with the total population in care. It can be seen that the proportion since 1998 has been constantly 12–13%, which is a little lower than the percentage (19.1%) of Arabs in the total population of Israel (15). This lower percentage could be seen as an
effect of Arab families keeping their children at home, instead of placement in residential care. In table 2, the age distribution from residential care centers in 2006 is shown compared with the total population in care and table 3 has the level of intellectual disability. Again there are differences between the two populations. It can be seen that the Arab population in residential care is characterized as younger and close to 75% with severe or profound intellectual disability. There are very few older Arab persons in residential care. These findings could be interpreted as a result of the burden to the family of a severe or profound child with associated medical problems who then prefers placement in residential care, while the older person with moderate or mild intellectual disability stays with the family at home. A finding we also observed in another study (16) of older persons living at home in Jerusalem, where placement was preferred when the medical burden became too great for the family.

Table 1. Number of Arab persons with intellectual disability in residential care centers in Israel, sex distribution and percentage of the total population in care

<table>
<thead>
<tr>
<th>Year</th>
<th>Arabs with ID in residential care centers in 2006</th>
<th>TOTAL</th>
<th>Male</th>
<th>Female</th>
<th>Total pop</th>
<th>% of total pop</th>
</tr>
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<tr>
<td>1998</td>
<td>749</td>
<td>410</td>
<td>339</td>
<td>6,022</td>
<td>12.44</td>
<td></td>
</tr>
<tr>
<td>1999</td>
<td>775</td>
<td>426</td>
<td>349</td>
<td>6,122</td>
<td>12.66</td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td>795</td>
<td>438</td>
<td>357</td>
<td>6,213</td>
<td>12.80</td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td>820</td>
<td>455</td>
<td>365</td>
<td>6,370</td>
<td>12.87</td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>840</td>
<td>479</td>
<td>361</td>
<td>6,352</td>
<td>13.22</td>
<td></td>
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<tr>
<td>2003</td>
<td>878</td>
<td>495</td>
<td>383</td>
<td>6,500</td>
<td>13.51</td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>884</td>
<td>507</td>
<td>377</td>
<td>6,610</td>
<td>13.37</td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>901</td>
<td>518</td>
<td>383</td>
<td>6,749</td>
<td>13.35</td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>921</td>
<td>534</td>
<td>387</td>
<td>6,840</td>
<td>13.46</td>
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</tbody>
</table>

Table 2. Age distribution of Arab persons with intellectual disability in residential care centers in Israel in 2006 compared with total population in care also in 2006

<table>
<thead>
<tr>
<th>Persons with ID in residential care centers in 2006</th>
<th>0-9 yrs</th>
<th>10-19</th>
<th>20-39</th>
<th>40-49</th>
<th>50-59</th>
<th>60+</th>
<th>Total</th>
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<tbody>
<tr>
<td>Number of Arabs</td>
<td>58</td>
<td>260</td>
<td>481</td>
<td>73</td>
<td>36</td>
<td>13</td>
<td>921</td>
</tr>
<tr>
<td>Percent</td>
<td>6.30</td>
<td>28.23</td>
<td>52.22</td>
<td>7.93</td>
<td>3.91</td>
<td>1.41</td>
<td>100.00</td>
</tr>
<tr>
<td>Total pop in care</td>
<td>151</td>
<td>755</td>
<td>2,851</td>
<td>1,1421</td>
<td>1,172</td>
<td>490</td>
<td>6,840</td>
</tr>
<tr>
<td>Percent</td>
<td>2.21</td>
<td>11.04</td>
<td>41.68</td>
<td>20.78</td>
<td>17.13</td>
<td>7.16</td>
<td>100.00</td>
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</table>

Table 3. Level of intellectual disability of Arab persons with intellectual disability in residential care centers in Israel in 2006 compared with total population in care

<table>
<thead>
<tr>
<th>Persons with ID in residential care centers in 2006</th>
<th>Mild</th>
<th>Moderate</th>
<th>Severe</th>
<th>Profound</th>
<th>Other</th>
<th>Total</th>
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<tbody>
<tr>
<td>Number of Arabs</td>
<td>50</td>
<td>234</td>
<td>466</td>
<td>117</td>
<td>0</td>
<td>921</td>
</tr>
<tr>
<td>Percent</td>
<td>5.43</td>
<td>25.41</td>
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</tr>
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<td>Total pop in care</td>
<td>820</td>
<td>2,867</td>
<td>2,222</td>
<td>908</td>
<td>23</td>
<td>6,840</td>
</tr>
<tr>
<td>Percent</td>
<td>11.99</td>
<td>41.91</td>
<td>32.49</td>
<td>13.27</td>
<td>0.34</td>
<td>100.00</td>
</tr>
</tbody>
</table>
Conclusion

In recent years, a change has taken place among Arab families in Israel with intellectually disabled children towards the same norms and values as the Jewish population, where deinstitutionalization and normalization have taken place. The informal family support system is still a very important factor in the Arab family, a fact that we believe should be strengthened by implementing the British and Danish model of nurse home visitation.

Acknowledgments


References

Attitudes towards the medical care for persons with intellectual disability

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Abstract

Change in the attitudes of staff or the public towards people with intellectual disability (ID) can impact their life and health, but that change has not been studied among physicians who belong to an ethnic minority undergoing dramatic social and economic transition. The goal of this chapter was to explore the change of attitudes of Negev Bedouin physicians serving their community and their satisfaction with policy, care, and knowledge in the field of ID. Seventeen community physicians (7 Bedouins and 10 Jewish) were interviewed using a simple questionnaire that consisted of items measuring attitude and satisfaction. The vast majority of the Bedouin and Jewish physicians had positive attitudes toward inclusion of those in the community with ID and were ready to

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provide the care needed in the community with special assistance. There was a need for further education in ID and more resources. There was a belief that there is discrimination between the Bedouin and Jewish community in the provision of care to people with ID. General dissatisfaction was expressed about the policy, resources, care provision, and expertise offered to Bedouins with ID. More efforts must be directed to empower the physicians with knowledge, expertise, and resources to handle the care of Bedouins with ID in a culturally appropriate way.

**Introduction**

Bedouin physicians have started sharing the health care of the Negev Bedouin community. Many of these physicians graduated abroad at western or eastern faculties of health in order to continue their specialization in Israeli medical centers. According to local service provider information (1), most of them (21 out of 25) were employed as family physicians, general practitioners, or pediatricians and were mainly involved in the care of the Bedouin community (2 in the unplanned settlements and 19 in the planned Bedouin towns) at the Clalit Health Service (HMO) clinics, at their own private clinics, and clinics for maternal and child care. Bedouin physicians have been exposed to the western value system and Internet at work, using e-mail and on-line databases and journals.

Even though the Bedouin community and the Arab community in general in Israel (2) are under transition towards a western culture, the community is still characterized by polygamy, consanguineous marriages, extended family loyalty, and persisting tribal life elements that include low socioeconomic status of women, children, disadvantaged mentally ill, and the disabled (3). This community is mainly characterized by poverty, unemployment, school drop-out, lack of social resources, high fertility rate, and increased infant mortality (4).

In the 1990s, more than 300 Bedouins with intellectual disability (ID) were registered at the social welfare authorities in the Negev, with most of them in the community due to a traditional family system and fear of stigma, but also because of the lack of residential care facilities in the vicinity (5). The number of persons with ID would be expected to increase due to the high fertility rate, the higher rate of consanguinity, and genetic diseases among the Negev Bedouins.

The attitude of general practitioners towards caring for persons with ID has been investigated in Wales (6) with a postal questionnaire and response from 126 GPs, who generally agreed that GPs should be responsible for the medical care of people with ID, but they tended to oppose the provision of regular structured health promotion, such as annual health check-up, assessing hearing or eyesight. Another study from Australia (7) looked at the attitude among GPs to address nine specified health care issues (regular hearing and vision assessment; regular dental care; review of medication; thyroid testing in Down syndrome; health screens like pap smear, mammography, or blood pressure; nutritional advice; lifestyle advice; psychiatric disorders; and a comprehensive annual health review). This questionnaire was mailed to a random sample of all Australian GPs and 529 responded. They showed a more positive attitude concerning the role and responsibilities of the GP in providing health care to people with ID than previous studies. It seemed that the questions generated an awareness and intention to increase these issues concerning their patients.
The attitudes of Arab social work staff toward integration of people with ID in the community has been investigated (8), but attitudes among physicians or Negev Bedouin physicians have so far not been studied.

In our pilot study, we focused on the attitudes of Bedouins physicians compared to Jewish counterparts, looked at their satisfaction with the services provided to the Bedouins compared to those provided to the Jewish community in the Negev, and explored the quality of attitudes and the satisfaction of Bedouin physicians toward the care provided by them and others to Bedouin persons with ID compared to that provided to the Jewish patients with ID in the Negev.

Our study

A simple questionnaire was developed about attitudes and satisfaction of the care provided to persons with ID, demographic data, and information on place of study, education, specialization, and expertise in the field of ID. The questions were based on core concepts of normalization and recommendations of scientific associations suggesting integration of people with ID in the community, while providing them with high quality primary care supported by specialist care.

We found it important to include the issues of empowerment and preservation of the rights of those with ID in the attitude section of the questionnaire. Issues of satisfaction of the physician cover many concerns regarding insufficient expertise, lack of resources at the primary care setting, and the inappropriateness of some care aspects such as consultation and diagnostic tools.

We used a snowballing technique to survey our sample, but when e-mail was not possible, face-to-face interviews were used. A pretest was conducted to test the questionnaire with an interview of eight physicians, four Bedouins and four Jewish. Some changes were made in the process. We used a questionnaire in Hebrew as suggested by the pilot group.

Completed forms were returned in less than 1 week, without a need for reminders. The questionnaires were returned by mail, fax, or e-mail and the data were analyzed by SPSS version 11.

Our findings

The questionnaire including 22 items on attitudes and satisfaction of the care of Bedouins with ID was sent by e-mail to 24 Bedouin and Jewish physicians providing care at the Clalit Health Service (HMO) clinics and to 4 health policy makers and HMO administrators. In cases of delay or nonresponse, a face-to-face meeting with the physician was a second option and there was a very high response rate (17/24).

All Bedouin and Jewish physicians interviewed agreed that most people with ID should be included in the community, while only 82% expressed their agreement to give medical care at the community clinics. All physicians agreed that people with ID deserve universal health care equal to the general population with the addition that they have to receive special care for their unique needs and health problems.

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The majority of the participating physicians in the study (88%) wanted care providers and the Ministry of Health to provide more time and resources to persons with ID. They also felt that new technologies and drugs developed specifically to meet the needs of people with ID should be provided to this population. The majority (94%) also had a positive attitude toward accountability of the care and service provided and felt that people with ID could express their needs, expectations, attitudes, and satisfaction with the care provided to them. Informed consent is an essential and eminent component in the care process for persons with ID according to the attitude of majority of the study participants (84%).

Another large percentage (94%) of the physicians expressed the need for special qualification in ID sharing the care for this population at community settings. All participants agreed that each physician should be qualified to optimally communicate, verify the complaints, and to refer any person with ID to other special care providers. All physicians felt that a positive attitude towards persons with ID should be elementary in order to improve the care, satisfaction, and strengthen the care provider-client contact.

Of the participants, 76% considered the care for persons with ID in the Bedouin community to be worse than that offered to Jewish persons with ID and 88% of the interviewed physicians found that the law assuring equal rights for both populations was not implemented. The majority of participants (76%) said that the gap between the care for Bedouins and Jews originated from budgetary, national, and political reasons, and 82% of the physicians were not satisfied with the care offered to Bedouins with ID compared to Jews, including different aspects of care such as diagnostic services (76%), while most of them expressed displeasure with the health policy for the Bedouins with ID compared to Jews (76%). As they were convinced that the budgets were not enough to meet the needs of people with ID, physicians expressed their discontent with this budget deficit (70%). They openly expressed their disappointment with the insufficient knowledge and expertise of physicians in the field of ID (76%) and the deficit in the consultation offered to parents with children with ID (70%). Only half of the physicians were happy with their own expertise in order to handle the care for persons with ID. Nationality was correlated with satisfaction about knowledge and expertise of the physician, where Jewish physicians were more satisfied with their own knowledge and expertise while caring for people with ID in both sectors, but it could be related to the older age of Jewish doctors. Older physicians were also more satisfied than the younger physicians in regards to diagnostic services, budget, and resources available for persons with ID. Most of the young doctors were Bedouins.

Where the physician had studied was correlated with a positive attitude toward inclusion of persons with ID in the community, as studying abroad tended to shift these attitudes to be positive irrespective of being Bedouin, female, older, or the physician’s specialty. Studying abroad correlated negatively with the level of satisfaction about their own knowledge and expertise in the field of ID. Pediatricians expressed more satisfaction with their own knowledge and expertise.

In their responses, physicians demanded that more professional health attention should be given to people with ID. They also asked for more help and guidance by qualified physicians in ID medicine in order to share the burden of primary care for this population. Physicians in primary care agreed to provide health care in community clinics, but they were critical regarding accountability for health care and less satisfied with their knowledge and expertise. Primary care physicians were less satisfied with their own performance as service providers for persons with ID and expressed the importance of counseling families and parents.
Responders who believed in discrepancies between the care for Bedouins with ID and Jews with ID were less satisfied with the policy implementation among Bedouins and Jews. The dissatisfaction with the health care was general and included different aspects of the care.

**Discussion**

Health policy makers (9) have recently held discussions on developing community welfare systems to serve the Negev Bedouins and mentioned the possibility that this process could be easier, since Bedouins have not been exposed to the institutional model of care to a large extent. Providing an effective health service to Bedouins with ID should take into consideration the difficult reality of Bedouin life and family, the lack of resources, the status of the child in the tribal system, and the patriarchal type of the Bedouin family.

Physicians are not the only professionals involved with the Bedouin population. Nurses, administrators, allied health professionals, and social workers are also eminent parts of such a transition from mostly informal care to formal modern western type of care (10). Recent work from the United Arab Emirates (11) provided evidence about the possible involvement of culture and socioeconomic factors in the development of psychiatric problems among children with ID and another study from Israel showed differences in the patterns of utilization of rehabilitation services, most probably affected by social, economic, and cultural factors (10). The interwoven factors coming from informal support systems, transition features of society, and marital and economic stress were clearly demonstrated in a recent study of stress, social support, and the well being of Arab mothers of children with ID (12), but research on the contribution of change of attitudes of health professionals and the impact on the person with ID in the “embedded Arab family in the traditional society with extended family support systems under transition” is still pending.

The attitude of the Negev Bedouin physician had not been explored in general before and not at all toward the issue of care of the intellectually disabled[8]. Our small study confirmed that Bedouin physicians, as was seen among Arab social workers in Northern Israel (8), have changed their traditional attitudes toward people with ID and these positive attitudes will be very important to provide the needed culturally appropriate care to persons with ID in the Bedouin sector in the Negev. This is important, because the positive attitude toward persons with ID may improve their care, satisfaction, and quality of life. Early exposure and exposure during educational activity or work can positively affect the attitudes of persons toward people with ID (13,14), but the persistence of these positive attitudes remains controversial (15).

Our study found the need for further education of primary health care workers in the field of ID, which they share with many professionals around the world who lack the needed expertise and assistance from specialists, but who otherwise are ready to provide care for these people in the community (16,17). Our study, in a very clear message, provided the evidence that the physicians’ attitudes and satisfaction regarding the care for the intellectually disabled are interrelated regardless of ethnicity, exposure to different culture, specialty, or education.
Conclusion

Bedouin doctors are ready to provide care for the intellectually disabled in the community, but think that they need more budgets, expertise, and help from other health specialists to make the care effective and comprehensive. They believe that even though the law assures equal rights for the disabled in Israel, there are many political, national, and economic issues that should be resolved in order to make the service for the Bedouins comparable to that provided to the Jewish community.

They share the positive attitudes toward people with ID with their Jewish colleagues and, unfortunately, also the low satisfaction with the care provided. They are more in need than their Jewish counterparts for education in the field of ID because of the minimal exposure to this issue during their studies and their low satisfaction with expertise in ID.

The was agreement between Jewish and Bedouin physicians that the budget and barriers are still blocking the provision of appropriate care compared those in the Jewish population with ID, which signalizes a need to involve them in the process of planning, providing, and evaluating the services for the Bedouins with ID.

Acknowledgments


References


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Chapter VIII

Trends in the number of Arabs with intellectual disability in residential care in Israel 1998-2006

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4Yaski Medical Center, Clalit Health Services, Department of Family Medicine, Faculty of Health Sciences, Ben Gurion University of the Negev, Beer-Sheva, Israel

Abstract

Life expectancy for persons with intellectual disability has increased over the past 100 years and today closer to the life expectancy of the general population (except for Down syndrome). In this study we looked at trends in the number of Arab persons with intellectual disability in residential care centers in Israel. Annual questionnaires to the medical clinics in all residential care centers for the 1998-2006 period were analysed and it was found that the Arab population had increased from 749 to 921 persons in 13 residential care centers (13.5% of the total residential care population). Of the 921 persons in 2006 there were 58 children aged 0-9 years and 260 aged 10-19 years with the majority having severe or profound intellectual disability. The increase in the number over time can been seen as a longer life expectancy in this population also and the lower than
expected numbers in residential care can be seen as a result of children staying at home with their families for a longer time than the Jewish population.

**Introduction**

In Israel the first separate residential centers for non-Jews (Moslem, Christian and Druze) persons with ID (intellectual disability) were established in the beginning of the 1970s. Today there are 15 residential care centers for non-Jews out of 63 in Israel (23.8%) with a total population of about 1,000 persons (14% of the population of persons with ID in residential centers). The centers for non-Jews are either private or public (non-for-profit), but overall administered by the Ministry of Social Affairs, who provides the placement, budget and supervision.

"Arabs of Israel", "Arab population of Israel", or "Arab inhabitants" are terms used in Israel to refer to the non-Jewish Arabs that are citizens and/or residents of the State of Israel. The Israeli Central Bureau of Statistics also include Arab permanent residents of Israel, who do not hold Israeli citizenship in its census figures. The number of Arab citizens in Israel in the year 2006 was 1,413,500 people or 19.8% of the Israeli population (Israel Central Bureau of Statistics).

For this chapter we have found it of interest to study the trends in the population of Arab persons with intellectual disability in residential care in Israel and also look at the number of children and adolescents in residential care.

**Residential care**

From 1948, when the modern State of Israel was established, until 1962 the Ministry of Welfare was responsible for the care of persons with intellectual disability. In 1962 the Division for Mental Retardation (DMR) was established under the Ministry of Labour and Social Affairs (MOLSA) with the responsibility for the assessment, treatment and rehabilitation of persons with ID.

By 2007 the total population in Israel was 7,208,500 persons (1), while the DMR is in contact with around 24,000 persons (all ages). Residential care is provided to about 7,000 persons in 63 residential centers all over the country, another 2,000 persons are provided residential care in hostels or group homes in the community in about another 50 locations, while the rest are served with day-care kindergarten, day-treatment centers, sheltered workshops or integrated care in the community, while living at home with their families (2).

In 1997-1998 a questionnaire was developed for annual survey of medical clinic activity for all residential care centers for people with ID in Israel (3). The questionnaire or survey instrument has the following sections: information on the age, gender and level of intellectual disability of persons served at the residential care center in question, status of the population served (educational, treatment, rehabilitation, nursing and challenging behavior), profile (various aspects of the nursing load like number of persons with gastric tubes, catheters, gastrostomy, dialysis, oncology, epilepsy, diabetes, hypertension, blindness etc), nursing, medical and allied professional staff, number of annual examinations, preventive medicine...
aspects, medications, number of annual cases of infectious disease, annual unintentional injury, number of deaths, number of hospitalizations, internal residential center hospitalization, ambulatory out-patient utilization, utilization of outside laboratory examinations and dental care. The questionnaires for 1998-2006 were studied as to the number of Arab persons with intellectual disability in the 13 residential care centers during this period.

**Findings**

The data extracted from the 1998-2006 questionnaires is shown in table 1. A steady increase in numbers can be seen over time, most likely a result of longer life expectancy for this population also. 12-13% of the total residential care population is lower than the percentage of the general population (about 20%), which could be a result of Arab families caring for their children with ID at home in not in residential care.

The age distribution is seen in table 2 and here it can be seen that 58 Arab children aged 0-9 years and 260 adolescents aged 10-19 years were in residential care in 2006, which is significantly higher numbers than this age groups for the total residential care population.

**Table 1. Number of Arab persons with intellectual disability in residential care centers in Israel, sex distribution and percentage of the total population in care**

<table>
<thead>
<tr>
<th>Year</th>
<th>TOTAL</th>
<th>Male</th>
<th>Female</th>
<th>Total pop</th>
<th>% Arabs of total pop</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td>749</td>
<td>410</td>
<td>339</td>
<td>6,022</td>
<td>12.44</td>
</tr>
<tr>
<td>1999</td>
<td>775</td>
<td>426</td>
<td>349</td>
<td>6,122</td>
<td>12.66</td>
</tr>
<tr>
<td>2000</td>
<td>795</td>
<td>438</td>
<td>357</td>
<td>6,213</td>
<td>12.80</td>
</tr>
<tr>
<td>2001</td>
<td>820</td>
<td>455</td>
<td>365</td>
<td>6,370</td>
<td>12.87</td>
</tr>
<tr>
<td>2002</td>
<td>840</td>
<td>479</td>
<td>361</td>
<td>6,352</td>
<td>13.22</td>
</tr>
<tr>
<td>2003</td>
<td>878</td>
<td>495</td>
<td>383</td>
<td>6,500</td>
<td>13.51</td>
</tr>
<tr>
<td>2004</td>
<td>884</td>
<td>507</td>
<td>377</td>
<td>6,610</td>
<td>13.37</td>
</tr>
<tr>
<td>2005</td>
<td>901</td>
<td>518</td>
<td>383</td>
<td>6,749</td>
<td>13.35</td>
</tr>
<tr>
<td>2006</td>
<td>921</td>
<td>534</td>
<td>387</td>
<td>6,840</td>
<td>13.46</td>
</tr>
</tbody>
</table>

**Table 2. Age distribution of Arab persons with intellectual disability in residential care centers in Israel in 2006 compared with total population in care also in 2006**

<table>
<thead>
<tr>
<th>Age</th>
<th>0-9 yrs</th>
<th>10-19</th>
<th>20-39</th>
<th>40-49</th>
<th>50-59</th>
<th>60+</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arabs in 2006</td>
<td>58</td>
<td>260</td>
<td>481</td>
<td>73</td>
<td>36</td>
<td>13</td>
<td>921</td>
</tr>
<tr>
<td>%</td>
<td>6.30</td>
<td>28.23</td>
<td>52.22</td>
<td>7.93</td>
<td>3.91</td>
<td>1.41</td>
<td>100.00</td>
</tr>
<tr>
<td>Total pop in care</td>
<td>151</td>
<td>755</td>
<td>2,851</td>
<td>1,1421</td>
<td>1,172</td>
<td>490</td>
<td>6,840</td>
</tr>
<tr>
<td>%</td>
<td>2.21</td>
<td>11.04</td>
<td>41.68</td>
<td>20.78</td>
<td>17.13</td>
<td>7.16</td>
<td>100.00</td>
</tr>
</tbody>
</table>
Table 3 shows the level of intellectual disability of Arab persons in residential care compared with total population in care. It can be seen that about 70% were with severe and profound ID, which again is significant higher than the general residential care population (46%).

In table 4 we looked at the data on children and adolescents according to level of intellectual disability and here again it can be seen that most of them were with severe and profound intellectual disability.

### Table 3. Level of intellectual disability of Arab persons with intellectual disability in residential care centers in Israel in 2006 compared with total population in care

<table>
<thead>
<tr>
<th></th>
<th>Mild</th>
<th>Moderate</th>
<th>Severe</th>
<th>Profound</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arabs in 2006</td>
<td>50</td>
<td>234</td>
<td>466</td>
<td>171</td>
<td>0</td>
<td>921</td>
</tr>
<tr>
<td>%</td>
<td>5.43</td>
<td>25.41</td>
<td>50.60</td>
<td>18.56</td>
<td>0</td>
<td>100.00</td>
</tr>
<tr>
<td>Total pop in care</td>
<td>820</td>
<td>2,867</td>
<td>2,222</td>
<td>908</td>
<td>23</td>
<td>6,840</td>
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<tr>
<td>%</td>
<td>11.99</td>
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<td>32.49</td>
<td>13.27</td>
<td>0.34</td>
<td>100.00</td>
</tr>
</tbody>
</table>

### Table 4. Children and adolescents according to level of intellectual disability in 2006

<table>
<thead>
<tr>
<th>Age</th>
<th>Mild</th>
<th>Moderate</th>
<th>Severe</th>
<th>Profound</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-9</td>
<td>1</td>
<td>7</td>
<td>36</td>
<td>14</td>
<td>58</td>
</tr>
<tr>
<td>10-19</td>
<td>14</td>
<td>60</td>
<td>129</td>
<td>57</td>
<td>260</td>
</tr>
</tbody>
</table>

**Discussion**

It seems that the tradition of asylum for people with intellectual disability (ID) was introduced by the Arabs in Baghdad, Fez and Cairo in the eight century and in Damascus and Aleppo in 1270 (4). This concept was exported to Europe with the establishment of the Bethlem Hospital (Bedlam) in London in 1247 (4), which is still in operation today (http://en.wikipedia.org/wiki/Bethlem_Royal_Hospital).

From being “mad houses” these institutions over time became educational centers, but many were still horrible places up to the time after the Second World War. In the 1960s due to the efforts of president John F Kennedy in the United States and in the 1970s due to the normalization movement from Denmark and Sweden a new trend took place with closure of large institutions and placement in smaller unit or hostels and independent living and self-advocacy (4). Israel never really had large institutions, but rather smaller residential care centers with an average of about 100 persons per institution (range 22-398) (3).

In this paper we looked at the Arab population in residential care centers in Israel over time and found that the proportion of Arabs in residential care was smaller than their proportion in the general Israeli population (13% versus 20%), which can be taken as an indication that the Arab family keep their child longer at home before placement.
From the data it can also be seen that the Arab population in residential care is a more severe group with about 70% with severe or profound intellectual disability, which can be taken as an indication that the person with mild and moderate intellectual disability is kept at home with the family.

There are some limitations to our study. One is that there are Arab citizens living within Jewish residential care centers in small numbers, but the same is also the case for a few of the Arab centers, so our estimate is that they cancel out each other. Under all circumstances we have looked at the same institutions over time.

**Acknowledgments**


**References**

Injuries
Chapter IX

Childhood injury prevention

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Abstract

For several years, the National Center for Children’s Health and Safety (Beterem) has worked on many levels to promote safety and prevent injury of the children in Israel. As part of intervention programs in 20 communities around Israel, this chapter describes a 1-year, multidisciplinary, multistrategic childhood safety promotion and injury prevention project. The project took place in the Bedouin city of Rahat in the Southern part of Israel,
the Negev, conducted by a local safety coordinator. The main goal was to identify hazards and dangerous obstacles in public places in Rahat, then remove or repair the obstacles found, in order to secure a safe public environment for children. “Obstacle” was defined as any barrier that could endanger the safety of a child.

Ten examples are used to illustrate this applied research project, and 80% of the problems were solved within the project period (time to solve between 1 week to 3 months, depending on various factors). We recommend the involvement of a safety coordinator from the community to focus on safety hazards for children, the use of a documentation diary to log the time frame, and also the use of pictures to illustrate the hazards and the changes, or to use as arguments in the lobbying process.

Introduction

The National Center for Children’s Health and Safety in Israel (Beterem) is committed to the vision of “making the world a safer place for children”. Beterem’s foremost mission is to enhance child safety and diminish the injury rates in Israel. Beterem is involved in many intervention projects around the country together with various partners and collaborators, with a special focus on villages and cities with limited resources. At the moment, more than 20 communities are supported by Beterem and this chapter will present the assessment and intervention in the Bedouin city of Rahat in the south of Israel.

Bedouin community in Israel

The Bedouins of the Negev are in transition from a nomadic life to more permanent settlements. They are an ethnic, religious, and cultural minority with many socioeconomic problems. Their language is Arabic and usually only the men are able to speak Hebrew. Many of the men are unemployed and their families live on social security income. The utilization of medical services offered by the health authorities is not fully used due to language, cultural, and economic difficulties, but also due to geographic scattering (1).

The term Bedouin is derived from the Arabic term badiah meaning “desert” and Bedouin Arab nomads have lived in the Negev since the 5th century AD at least. After a major exodus to other countries during the Israel War of Independence (1947–49), the number of Negev Bedouins has increased from 12,000 in 1948 to more than 100,000 today, comprising 24% of the Beer Sheva District by the end of 1995 (2,3).

Israeli Bedouin society is in major social, economic, and cultural transition as a result of rapid semiurbanization and sedentarization (4). The sedentarization process, initiated by the Turkish Empire and subsequently by the British and the Israeli governments, has sought to relocate the Bedouins into planned settlements. The result has been stratified sedentarization forms, from semi-nomadic encampments mainly in the periphery, to spontaneous settlements and planned permanent urban towns and cities. The Bedouins in the Negev live in three types of settlements, as defined by the urbanization scale:

- Planned permanent settlements: Supported by the government, which receive municipal, health, and other modern services. Residents are generally characterized

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by a high level of sedentarization and tend to work in salaried professions, free trades, or day labor. Vestiges of nomadic life may remain, such as tents next to fixed permanent dwellings.

- Spontaneous settlements in the vicinity of permanent settlements: Bedouins living on the outskirts or close to permanent settlements where limited services, such as health and education, are offered. Bedouins in this group may retain aspects of tribal economy behavior, such as raising herds and nomadic agriculture, in addition to cash jobs and may live in clans or subclans.

- Peripheral settlement: Bedouins geographically distant from any permanent settlement. This life style is semi-nomadic with living structures including tents or shacks. This group has no access to modern services at its settlement locality and the tribal behavior is the hallmark at this stage.

Today, almost 60% of the Negev Bedouins live in planned villages and cities. The rest reside in the shantytown-like spontaneous settlements, with less than 10% continuing the traditional semi-nomadic life style. The Negev Bedouins have the lowest overall socioeconomic status of any social or ethnic group in Israel (2). They have half the per capita income, twice as many children, and half the living space compared to the average Israeli. Rates of unemployment and welfare support are among the highest in Israel. Bedouin students complete secondary school matriculation exams at less than half the rate of their Jewish neighbors in the Negev or Israeli Arabs in general (2). The low status of women and children, a common characteristic of Middle Eastern tribal traditions, still has a major impact on the lives of these groups.

Rahat is the largest Bedouin settlement in the northern Negev. At the end of 2002, there were 19,900 children in Rahat. The percentage of children (61.3%) out of the whole population is more than double that of other cities in Israel.

**Childhood injury**

Unintentional injury is the number one cause of death in the 1- to 35-year life span (5). Each year, many children lose their lives due to causes that were preventable with reasonable resources (6). In Israel, as well as in other countries, accidental injuries are considered a major public health concern that affect morbidity, hospitalization, and mortality of children at all ages, both sexes, Jews and non-Jews. Furthermore, accidents are a main factor in disability and loss of potential life years. One of the important intervention strategies for injury prevention is environmental modification and changes; for example, removing hazards in the home and neighborhood to create a safer environment. Creating a safer environment is considered to be more efficient than explanatory intervention through health education alone (7).

The Bedouin children in the Negev are at a much higher risk for unintentional injuries. This can be explained by many factors, mainly due to an unsafe environment with no playgrounds, very low socioeconomic status, large families often with 10–14 children, and cultural differences. Despite the dismal picture, accidental injuries in Bedouin children can be prevented and are not inevitable.
Our intervention

This intervention study took place in the Bedouin city of Rahat in the Negev region of Israel. The main goal was to identify hazards and dangerous obstacles in public places in Rahat, then remove or repair the obstacles found, in order to secure a safe public environment for children. “Obstacle” was defined as any barrier that could endanger the safety of a child. The prevention program was based on a local coalition headed by the mayor. Coalition members represented the health sector, law enforcement, fire department, education, politicians, and welfare and social workers. High-school students were trained in childhood injury prevention and their tasks included the detection of safety obstacles in public places and their removal.

The ways of detecting the obstacles and the ways of managing or removing them changed according to reality and the responsibility of different authorities regarding the obstacle. The management of obstacles usually was done by turning to the authorities who were responsible for the area. When the obstacle was under the responsibility of the sanitation department of the municipality, an immediate report was given. When the obstacle was under the responsibility of different contractors of the city (pavement contractors, sewage contractors, etc.), the management became complicated and required more serious intervention. Furthermore, there were obstacles near living residences in a public area, but of private responsibility, so the report was given to the owner of the residence.

The assessment, intervention, and prevention program was performed by a local “Beterem” coordinator living in the community of Rahat. She started out as a volunteer guide on child safety at the local child development center and in an urban renewal project with the Municipal Department of Social Affairs. She was instructed by a steering and research committee of professionals for this intervention program.

The goal of the intervention program was the removal of at least 30% of environmental obstacles/hazards. The intervention program targets were evaluation of the intervention program execution and evaluation of the program achievements.

The evaluation method was performed according to the reports of the coordinator regarding the ways, processes, and problems encountered when handling the obstacles during the whole year of the program.

The purpose of assessing the results was 1) to evaluate if the program succeeded in removing the obstacles and if it achieved its goals and 2) to persuade policy makers to keep supporting the project. Evaluation of the results was based on the reports and documentation, and on filming the obstacle pre- and postmanagement. Any obstacle repaired or removed from the children’s living environment was defined as a case of success. Evaluation was done also by the “quality” method. Every obstacle was documented and checked on its own by content analysis. During the year of intervention, phone surveillance was conducted by the research committee with the coordinator in Rahat, after the detection of obstacles, to discuss the way of managing them and the difficulties encountered, if any, with the authority in charge.

All environmental hazards near living residences and public places in Rahat were documented. Safety hazards inside houses or in private territories were not included. The hazards documented were permanent environmental hazards endangering everybody.

The hazard sampling was performed in three ways:
Childhood injury prevention

- touring through the neighborhoods and searches for hazards, arriving to a place accidentally and noticing
- existing hazards, and through lectures and
- talks with mothers at the local child development center.

Findings

Table 1 presents the hazards found in Rahat according to description of the hazard, location, and the way of management. According to the table, one can learn about the way of handling every one of the hazards. The results in table 1 show that out of 10 hazards, 8 were removed in the study period.

Table 1. Safety hazards for children in the Bedouin City of Rahat

<table>
<thead>
<tr>
<th>Description of the hazard</th>
<th>Location</th>
<th>Duration to solution</th>
<th>Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sewer draining into a barrel in a playground</td>
<td>Neighborhood</td>
<td>1 month</td>
<td>An appeal to the owners, who removed the barrel and added a sewer hose to the central sewage</td>
</tr>
<tr>
<td>An old refrigerator standing on the sidewalk</td>
<td>Neighborhood</td>
<td>2 weeks</td>
<td>An appeal to the owners to throw the refrigerator away. The owners claimed the municipality should remove it. An appeal to the sanitation department brought a solution</td>
</tr>
<tr>
<td>A defunct wall</td>
<td>Neighborhood</td>
<td>1.5 months</td>
<td>The coordinator turned to the owners, who knew her from the child development center. They claimed to lack money to fix the wall, but instead removed the wall and planted trees as a fence</td>
</tr>
<tr>
<td>A diesel oil container open in a neighborhood</td>
<td>Neighborhood</td>
<td>2 months</td>
<td>The container belonged to a grocery owner. Cars used it often. The smell spread throughout the neighborhood with a high risk of explosion. Two children were hospitalized after drinking from it and then delivery of oil stopped, but the container still remained.</td>
</tr>
<tr>
<td>A barrel closing a hole in the middle of the street</td>
<td>Entrance to the Rahat market</td>
<td>3 months</td>
<td>First reference was to the nearest store. Afterwards referred to the sanitation department, who claimed they could not manage it. Then a letter to the mayor with a picture. Removal succeeded only after a seminar with the CEO of Beterem, who spoke with the mayor</td>
</tr>
</tbody>
</table>
Table 1. (Continued)

<table>
<thead>
<tr>
<th>Description of the hazard</th>
<th>Location</th>
<th>Duration to solution</th>
<th>Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>A hole in the middle of an urban sidewalk</td>
<td>Neighborhood</td>
<td>1 month</td>
<td>The coordinator appealed to the municipality to find out who is responsible for the sidewalks in that neighborhood. She contacted the private contractor, but the matter was only fixed after a hard talk and fear of publication of negligence</td>
</tr>
<tr>
<td>Iron sticks inserted in the ground in an open territory on the way to school</td>
<td>Neighborhood</td>
<td>1 week</td>
<td>The iron sticks were used for election flags. The territory serves children on their way to school. Appeal was made to the one in charge of propaganda and the iron sticks were removed and fenced in</td>
</tr>
<tr>
<td>Stray dogs around the city</td>
<td>Neighborhood</td>
<td>1 week</td>
<td>A report to the municipality veterinarian. A nurse from the child development center and a child on his way back from school were bitten. The child was vaccinated against rabies and the vet killed the dogs</td>
</tr>
<tr>
<td>Exposure to dangerous</td>
<td>Neighborhood</td>
<td>Not yet ended</td>
<td>A garage owner kept dangerous materials and tools in his yard. His own children and others were walking around the hazard. The coordinator tried persuading him to lock them away. She felt she did not succeed, since he claimed it is his job and that is the way he works. The coordinator will appeal to him again</td>
</tr>
<tr>
<td>A bridge without a fence or divider (in winter there is a stream that one can drown in); sometimes children even swim there in the winter</td>
<td>Industrial area</td>
<td>Not yet ended</td>
<td>An appeal was made to the municipality. It is a territory that is thought to be outside the city area, but children who live close by go through there. The municipality said it was not their business. The municipality contractor arrived, but said it was not his responsibility. The subject is still being handled by the coordinator, who is trying to find out who is responsible for managing the hazard</td>
</tr>
</tbody>
</table>
Discussion

This 1-year study describes the method of locating hazards and removing or repairing them. The research findings showed the ways of detecting and managing these hazards, the process, and the difficulties in the handling. Our findings showed that the intervention program achieved the goal to remove at least a third of the hazards found. Of the hazards, 80% were successfully removed, while the management of the two remaining hazards began, but did not end, in the defined period for assessment.

The successful management required a number of factors: a personal involvement and sense of responsibility of a coordinator accompanied by a group of active volunteers, high community empowerment and involvement, and professional, strong national support. The project succeeded only because it had a personal value for the coordinator herself. The coordinator had dealt with health education in the area for seven years and knew the residents well and saw things as a resident, a neighbor, and as a mother. She is known from the child development center and is familiar with the community’s language, rules, and culture.

She used several ways to handle the issues at hand, like:

- Referral to several authorities. The coordinator kept on with the work, even when she was denied by some, in order to find the responsible authority. When she encountered an inappropriate factor, she applied to another until she detected the responsible authority. The ability to overcome “sealed ears” was needed in order not to leave the hazard unattended for a long time.
- The power of warning and persuasion by imposing liability for a disaster if the hazard would not be corrected. (“When the child becomes hurt, you will have to prove that it is not your fault.”)
- Sensitivity towards the responsible authority by imposing liability and also emphasizing the sensitivity of the matter from the responsible side. (“If your nephew or child were hurt, how would you feel?”)
- High personal involvement, as in one event when she gave the owners her own private hose. This action shows personal willingness, responsibility, and involvement.
- Alertness to responsibility “attack”, where all the relevant factors required as evidence were presented at the right place and at the right time to the responsible authority; whether by writing letters, presenting documents or photographs, and persuasion through the child development center staff.
- Short handling time (1, 2 weeks) in order to bring the responsible authority to start taking care of the issue quickly. The responsible authority often turned out to be an intellectual who understood the danger imminent to the children with the coordinator only enlightening them.

The seminar arranged in the community had a high level of attendance from the national Beterem organization, which helped to emphasize the work of the coordinator. The officials of the Beterem organization spoke with the mayor, sanitation executive, and others to obtain cooperation with the coordinator and stress the public interest of the issue at hand.
The intervention program achieved the goal to remove at least a third of the hazards found (in fact, 80%). Furthermore, agents were trained to handle the hazards themselves without the intervention of the coordinator, so in essence an educational element was added to the project.

The safety changes were executed resulting in the sanitation and engineering departments now being able to handle these issues also and, today, pictures of hazards are used by the municipal authorities as documentation. There is now a close cooperation with the sanitation department in the municipality as opposed to the past. Hence, there are new agents for change acting on behalf of child safety and injury prevention. The unsuccessful management of the last two issues was due to the time frame of the project, but we believe that these hazards will be solved by the continuation of the work of the coordinator.

Difficulties reflected in the way of management were the feeling of inability to persuade people about the danger, not finding the responsible authority for the hazard, indifference of the responsible authority about their responsibility, misapprehension of the subject and the problem that children might get harmed, and problems on the cultural level.

There are a few limitations to this applied research, like a small sample of hazards, so it is difficult to draw statistical conclusions about the quantity of management and also the cultural aspect, which could make replication of this program elsewhere different.

**Conclusion**

This study focused on public environmental hazards to child safety over a 1-year period by the involvement of a local safety coordinator in a Bedouin community in Israel. Most of the hazards (80%) detected and treated by the coordinator were solved, while the remaining are in the process of being solved. The exposure of the coordinator to the hazards was high for several reasons: she worked in the department of promoting safety in the community, her accumulated knowledge in safety brought her to look for hazards and watch them being managed as a natural part of her job, but also because she was part of the community herself.

It is recommended that an activity journal/diary and pictures (“a picture is worth a thousand words”) be used to document the date of the hazard detection and the actions that were taken to solve the obstacle.

**Acknowledgments**


References


Chapter X

Injuries among Israeli Bedouin children presenting to the primary care clinic

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Abstract

This chapter reviews the incidence and character of minor trauma that presented to family practice clinic and associated demographic variables. Design: A retrospective data analysis was conducted using data collected from the CLICKS computerized medical records of primary care consultations at The Clalit Health System’s Shatal Clinic in Beer Sheva, Israel. A systematic sample of every tenth child was taken from the alphabetical listing of all Bedouin children between the ages of zero and fourteen, registered at the clinic (n=156). Results: Of the 156 children sampled, 67 (42.9) had at least one injury and 31 (20.4) children had more than one childhood injury recorded in their medical record. Boys had a higher incidence of two or more childhood injuries compared to female children (23/80 (28.8) vs. 8/72 (11.1), p = .007). Girls had proportionally more injuries in early childhood with mean age at first injury 1.4 years younger for girls (4.0 ± 2.8 vs 5.4 ± 2.5, p=.035). Children of older parents in smaller families had more accidents. No significant association was found between family size or birth order and injury. Conclusions: Unintentional injuries have a huge morbidity and significant mortality worldwide. The populations most vulnerable to the burden of injuries are found in the less developed societies. Current research has targeted at western society and the proven strategies for prevention inappropriate for the mechanisms of injury that are specific to the Bedouin culture. Further research is necessary to identify demographic characteristics and behaviors that are correlated with injury in Bedouin children. Chart review was not adequate for the study of demographic and SES factors affecting injury.

Introduction

Unintentional injuries are a leading cause of death in children between the ages of 1-14 years, observed worldwide in developed nations (1,2), however, mortality is only the tip of the iceberg (3). Emergency room visits are 233 times more common than injury related deaths (1). Numerous studies have shown that children from lower socioeconomic and minority backgrounds are at higher risk for unintentional injuries and their sequela (3). A Canadian study by Joffe et al (1) showed that 77% of all unintentional injuries admitted to the Pediatric Intensive Care Unit were potentially preventable, meaning that they resulted from a mechanism of injury, where a proven strategy could have significantly reduced injury. In 1983, the American Academy of Pediatrics introduced the Injury Prevention Program (TIPP), which outlined age appropriate safety awareness assessment and counseling with the goal of increasing parental safety practices. While these measures have been proven effective in dozens of studies in the US and Canada, they are culturally inappropriate for the dangers that threaten children in lesser developed societies.

It is well documented that communities in transition are at greater risk for all sorts of morbidities. Wirsing (4) wrote that “traditional societies have long-lasting and stable relationships with their surroundings… As soon as such societies have extensive and continuous contact with industrialized societies…their adaptation is disrupted and their health jeopardized.” Across the Arab world, from the Atlantic to the Iberian Peninsula, the Bedouin - literally meaning "desert dweller" in Arabic - have lived as nomadic tribes since at least the fifth century CE. Over the past 50 years, these tribes have seen their world transformed as modernity engulfed even the world's most isolated communities.
In the Southern region of Israel, in the Negev desert, a community that was nearly 45,000 people at the turn of the 20th century shrunk to 12,000 in 1948 after the Israeli War of Independence, which led many to seek shelter in neighboring countries. Today, the Bedouin population has grown to well over 100,000 and exists as a sizable cultural and religious minority among the Negev’s largely Jewish population (5). Their health needs have been largely overlooked in the planning of health care delivery by the state as a whole. However, they have drawn interest from the local academic community as they represent a unique opportunity to study a lesser developed community on a course toward modernity.

The transition from nomadic life to permanent concrete housing exposes the families to new and unfamiliar dangers. In addition, Bedouin children still are exposed to familiar dangers of the traditional lifestyle such as burns. Bedouin are a cultural minority within the Arab population of Israel but still little research exists that specifically targets Bedouin.

There is very limited data in the primary care setting to describe the kinds of injuries that Bedouin children experience and none to date that has considered socioeconomic and other demographic data as risk factors for injury among this population. More research on injuries has been done in the setting of the emergency department and while this yields a good review of the more serious injuries incurred, the iceberg metaphor applies here as well. A large scale prospective study by Gofin et al (3) examined the nationwide differences between Arab and Jewish children presenting to the Emergency Department (ED) for unintentional injuries. Although Jewish children presented to the ED 1.5 times more often than Arab children, Arab children had an OR for hospitalization of 1.15, when compared to Jewish children. Arab children also had a mortality rate that was 3.2 times higher. It seems that there are numerous minor injuries that are treated in the primary care setting for every injury that requires an ED visit. Additionally, while treatment of many injuries occurs in the ED, the best opportunity for prevention strategy development and implementation lies in the primary care setting.

The goals of this chapter were to estimate the incidence and characterize the injuries in the pediatric Bedouin population that presented to a Beer Sheva area family practice clinic. Family demographic data was examined to attempt to identify characteristics that may be associated with higher incidence of injury.

**Our study**

Israel has six districts divided into 15 sub-districts. The Southern district is divided into two sub-districts, Beer Sheva and Ashkelon. The Beer Sheva sub-district encompasses 12,945 km² and extends from the southern border of the West Bank (Judea and Samaria) to the tip of Eilat. The Beer Sheva sub-district geographically encompasses 58.5% of the State of Israel, but includes less than 10% of the population. The population of the Beer Sheva sub-district, according to a 2005 Central Bureau of Statistics report was 550,200. There are seven municipalities in the Beer Sheva sub-district, 11 local authorities and eight regional authorities, five of which are Bedouin. The exact size of the Bedouin population is difficult to calculate because nearly 60% of the population is believed to live in unrecognized settlements. Various 2002 and 2003 Israeli government publications estimated the Bedouin population to be somewhere between 130,000-150,000 residents (6). Thus, the Bedouin population is about 30% of the general population.
Assumptions about possible risk groups

In Israel, 17.0 percent of the families are “large families” with four or more children. However, among the Bedouin municipalities and regional authorities including Rahat, Tel Sheva, Segev Shalom, Arara BaNegev, Laqia, and Hura, the percent approaches and in some cases exceeds 60.0 percent (7). Given that a number of studies both in Israel and abroad have shown that parental supervision influences injury rates, perhaps children from larger families would have less supervision and therefore more injuries. It is believed and estimated that 20 percent of Bedouin marriages are polygamous, however, since polygamy is not legal in Israel, it is very difficult to determine exactly which marriages are polygamous. In some cases, the husband will undergo a perfunctory divorce with the first wife in order to add the second. Several North American studies have shown that single parent families have higher rates of injury. Perhaps Bedouin polygamous families, where the husband may be inconsistently present, also have these correlations with non-two-parent families leading to more injuries among the children. In Israel, all citizens are guaranteed health care in accordance with the 1995 Health Insurance Law. Provision of service is delegated by the government to four health funds. In the Beer Sheva sub-district, 68% of the general population belongs to the Clalit Health Fund. In Bedouin areas of the sub-district, the membership in Clalit approaches 90 percent (except in Arad where it is only 37 percent) (8). The Shatal Clinic is one of the primary care clinics that provide services as part of the Clalit Health Services in the area surrounding Beer Sheva, Israel. The population of this clinic is unique in that the clinic is located in the center of the city of Beer Sheva, but the majority of the registered patients are Bedouin that come from the surrounding unrecognized settlements. In February 2007, among the population under the age of 14, there were approximately 1,700 children registered to the clinic, 1,565 of whom were Bedouin.

Data analysis

A retrospective data analysis was conducted using data collected from the CLICKS computerized medical records of primary care consultations at the Clalit Health Fund Shatal Clinic in Beer Sheva, Israel. A systematic sample of every tenth child was taken from the alphabetical listing of all Bedouin children between the ages of 0-14 years, registered at the Shatal Clinic. The medical and demographic records for all selected children were then retrieved from the database and individually reviewed. For each of the selected cases, the medical chart was retrieved and the description of all prior injuries entered in its entirety to Excel worksheet. Demographic data including the date of birth, parents’ and siblings’ dates of birth, and birth order were retrieved from the administrative database. The data was later recoded for analysis with SPSS 14 software.

Findings

The mean age of all children sampled was 8.2 ± 2.1 years on February 1st, 2007. Male children represented 83 (53.2%) of the sample. The mean age of the mothers at the delivery of...
Injuries among Israeli Bedouin children presenting to the primary care clinic

The oldest sibling was 23.4 ± 4.4 years. On February 1st, 2007 the mean age of the mothers was 36.5 ± 6.9 years. The mean age of the fathers at the birth of the oldest sibling was 26.2 ± 7.1 years. On February 1st, 2007 the mean age of the fathers was 39.3 ± 8.4 years. For 53 (34.0%) children from the sample, no ID data was available for the father. Large families predominated in the sample with 102 (68.2%) families having more than four children and 45 (30.4%) families having eight or more children. The mean difference in age between the oldest sibling and the index child was 4.6 ± 3.8 years. The average difference in age between siblings was calculated by dividing the age difference between the oldest sibling and the index child by the birth order of the index child. In this sample the mean was 1.1 ± .68. years (see table 1). Of the 156 children sampled, 67 (42.9%) had at least one injury recorded in their clinic record. Other than older age of child and mother, no variables were found significant for having one injury recorded. (see table 2).

Overall, 31 (20.4%) children had more than one childhood injury recorded in their medical record. The maximum number of childhood injuries in the sample was five. Interestingly, the age of the mother at the birth of her first child was greater in the children who have two or more injuries (25.8 ± 5.1 vs. 22.8 ± 4.1, p < .01). There was no statistically significant difference noted for two or more injuries based on father’s age, family size, birth order, or age difference between index case and oldest child (see table 3).

Male children had a higher incidence of two or more childhood injuries as compared to female children (23/80 (28.8%) vs. 8/72 (11.1%), p = .007) (see table 4). They were, however, older on average than females at age of first recorded injury (5.4 ± 2.5 vs. 4.0 ± 2.8, p < .05) (see table 5). Though of borderline statistical significance, girls had a higher incidence of injury by age 6 compared to boys (9/16 (56.3) vs. 4/15 (26.7), p.095). In the oldest age group, boys age 11-14 years were more likely to have an injury and more likely to have more than 1 injury (see table 6-7).

### Table 1. Demographics of all children by injury

<table>
<thead>
<tr>
<th>P</th>
<th>NO INJURY</th>
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<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean ± SD</td>
<td>Mean ± SD</td>
<td>Mean ± SD</td>
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<tr>
<td>&lt;.01</td>
<td>7.3 ± 4.3</td>
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<td>1.0</td>
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<td>3.6 ± 2.2</td>
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<td>.6</td>
<td>1.2 ± .74</td>
<td>1.1 ± .61</td>
<td>1.1 ± .68</td>
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### Table 2. Characteristics of all children by injury history

<table>
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<td>46 (63.0)</td>
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<td>.2</td>
<td>29 (64.4)</td>
<td>16 (35.6)</td>
<td>45 (31.5)</td>
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### Table 3. Demographics of children with multiple injuries

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<td>Mean ± SD</td>
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Table 4. Characteristics of children with multiple injuries

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<td>Females</td>
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<td>57 (71.3)</td>
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<td>9 (19.6)</td>
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<td>75 (78.9)</td>
<td>37 (80.4)</td>
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<td>28 (21.2)</td>
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<td>17 (85.0)</td>
<td>104 (78.8)</td>
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<td>7 (15.9)</td>
<td>23 (22.8)</td>
<td>45</td>
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<td>37 (84.1)</td>
<td>78 (77.2)</td>
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<td>18 (18.0)</td>
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<td>33 (73.3)</td>
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<td>3 (9.4)</td>
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<td>17 (28.3)</td>
<td>43 (71.7)</td>
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<td>3 (9.4)</td>
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<td></td>
<td>17 (28.3)</td>
<td>43 (71.7)</td>
<td></td>
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<td></td>
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<td>3 (9.4)</td>
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<td>43 (71.7)</td>
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Table 5. Injury history by gender

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<td>N</td>
<td>Mean ± SD</td>
<td>n</td>
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<td>.56 ± 0.9</td>
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<td>.92 ± 1.2</td>
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Table 6. History of at least one injury by gender

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<th>Boys</th>
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<td>16</td>
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<td>4 (26.7)</td>
<td>15 Children age 4-6</td>
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<tr>
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<td>&lt;.001</td>
<td>13 (61.9)</td>
<td>8 (38.1)</td>
<td>21 Children age 7-10</td>
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<tr>
<td>&lt;.001</td>
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<td>8 (22.9)</td>
<td>27 (77.1)</td>
<td>35 Children age 11-14</td>
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Table 7. History of two or more injuries by gender

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<th>Girls</th>
<th>Boys</th>
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<td>0</td>
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<td>16 Children age 4-6</td>
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<td>5 (26.3)</td>
<td>19 Children age 7-10</td>
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<td>&lt;.001</td>
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<td>19 (54.3)</td>
<td>16 (45.7)</td>
<td>35 Children age 11-14</td>
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Table 8. Demographics of all children by family size

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<th>HISTORY OF 2 OR MORE INJURIES</th>
<th>ALL CHILDREN</th>
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<td>5 or more children 4 or less children</td>
<td>5 or more children 4 or less children</td>
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<td>Mean ± SD n</td>
<td>Mean ± SD n</td>
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<td>8.8 ± 3.8 82</td>
<td>5.3 ± 4.2 33</td>
<td>10.5 ± 2.6 18</td>
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<td>&lt;.001</td>
<td>36.9 ± 4.9 78</td>
<td>32.2 ± 8.3 32</td>
<td>40.0 ± 4.9 18</td>
</tr>
<tr>
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<td>22.2 ± 3.6 78</td>
<td>24.3 ± 5.0 32</td>
<td>24.3 ± 3.5 18</td>
</tr>
<tr>
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<td>39.4 ± 7.3 16</td>
<td>40.9 ± 11.2 10</td>
<td>40.2 ± 6.2 71</td>
</tr>
<tr>
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<td>25.3 ± 6.2 60</td>
<td>27.8 ± 9.6 19</td>
<td>24.4 ± 6.2 11</td>
</tr>
<tr>
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<td>5.9 ± 3.9 82</td>
<td>2.6 ± 2.3 33</td>
<td>5.1 ± 3.9 18</td>
</tr>
<tr>
<td>&lt;.001</td>
<td>4.4 ± 2.1 82</td>
<td>2.2 ± 1.0 33</td>
<td>3.9 ± 2.3 18</td>
</tr>
<tr>
<td>.14</td>
<td>.5 ± 0.48 82</td>
<td>.21 ± 0.41 33</td>
<td>.23 ± .6 18</td>
</tr>
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<td>.63 10.5 ± 3.2 17</td>
<td>8.1 ± 2.8 9</td>
<td>.7 .70 ± .91</td>
</tr>
<tr>
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<td>.63 10.5 ± 3.2 17</td>
<td>8.1 ± 2.8 9</td>
<td>.7 .70 ± .91</td>
</tr>
</tbody>
</table>

*Equal variance assumed in accordance with the results Levene’s test.
When examining the demographic data of small Bedouin families (four or fewer children) as compared to larger Bedouin families, the children in the smaller families were first injured over a year earlier than their counterparts in the large families (3.9 ± 2.1 vs. 5.2 ± 2.8, p=.05). Despite the younger age at injury, the number of injuries in children from the smaller families was not significantly different (0.89 ± 1.4 vs. 0.70 ± 0.91, p = .32) (see table 8). When we compare mothers of small families, those whose children had one or fewer injuries were a mean age of 24.3 ± 5.0 at the birth of their first child as compared with mothers whose child had 2 or more injuries (28.1 ± 6.5). When children are selected for a positive history of injury, children from small families reported more injuries than children from larger families (2.2 ± 1.4 vs. 1.5 ± .75, p < .01). They were also younger at age of first injury (3.9 ± 2.1 vs. 5.2 ± 2.9, p = .05) (see table 8).

Younger children had burns more commonly than other age groups (mean age 3.8 ± 3.5 years). Falls resulting in lacerations, contusions and fractures were seen as children got older (7.2 ± 3.0). Children with burns, with one exception, were all under the age of five and 13 of the 18 burns reviewed involved injuries to the extremities. There was no indication in the charts, in nearly all cases, if the burns were from fire or scald. One child had an electrical burn. There were relatively few fractures reported - 4 from over 100 injury reports reviewed. There were 7 children who had injuries from stepping on either broken glass or a nail. Additionally, one child had a raisin lodged in his nose for over a month and another child had contusions after falling from a donkey (see table 9-11).

### Table 9. Type of injury

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<th>Age</th>
<th>Injury #5</th>
<th>Injury #4</th>
<th>Injury #3</th>
<th>Injury #2</th>
<th>Injury #1</th>
<th>Total</th>
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<td>1 (0.6)</td>
<td>4 (2.6)</td>
<td>11 (7.1)</td>
<td>29 (18.6)</td>
<td>67 (42.9)</td>
<td>Total</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Age</th>
<th>Type of Injury</th>
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<tr>
<td>3.8 ± 3.5</td>
<td>1 (100)</td>
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<tr>
<td>6.1 ± 2.7</td>
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</tr>
<tr>
<td>6.4 ± 3.1</td>
<td>0 (0)</td>
</tr>
<tr>
<td>7.0 ± 0.0</td>
<td>0 (0)</td>
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<td>5.1 ± 3.5</td>
<td>3 (75.0)</td>
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<tr>
<td>7.1 ± 2.5</td>
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</table>

<table>
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<th>1 (9.1)</th>
<th>2 (6.9)</th>
<th>4 (6.0)</th>
<th>5 (7.5)</th>
<th>Other</th>
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<td>9 ± 0.0</td>
<td>8 ± 3.4</td>
<td>7.5 ± 2.7</td>
<td>6.9 ± 3.1</td>
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### Table 10. Mechanism of injury

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<th>Injury #3</th>
<th>Injury #2</th>
<th>Mechanism of Injury</th>
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<tr>
<td>5.8 ± 3.0</td>
<td>1 (100)</td>
<td>4 (100)</td>
<td>11 (100)</td>
<td>29 (100)</td>
<td>67 (100)</td>
</tr>
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</table>

<table>
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<tr>
<th>Age</th>
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<th>6 (56.0)</th>
<th>17 (70)</th>
<th>32 (43)</th>
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<tbody>
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<td>0 (0)</td>
<td>1 (5.9)</td>
<td>5 (15.1)</td>
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<td>11 (64.7)</td>
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<th>0 (0)</th>
<th>1 (5.9)</th>
<th>3 (9.4)</th>
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<td>9 ± 0.0</td>
<td>8 ± 3.4</td>
<td>7.5 ± 2.7</td>
<td>6.9 ± 3.1</td>
<td>4.8 ± 2.7</td>
<td>Age</td>
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</table>

Complimentary Contributor Copy
Table 11. Location of injury

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<tr>
<th>Burns</th>
<th>Injury #1</th>
<th>Injury #2</th>
<th>Injury #3</th>
<th>Injury #4</th>
<th>Injury #5</th>
<th>Total</th>
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</thead>
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<td>1 (100)</td>
<td>18 (100)</td>
<td>3 (100)</td>
<td>6 (100)</td>
<td>63 (94.0) Location of Injury</td>
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<td>3 (100)</td>
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</tr>
<tr>
<td>Upper Limbs</td>
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<td>2 (22.2)</td>
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<td>17 (27.0)</td>
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<tr>
<td>Lower Limbs</td>
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<td>3 (10.0)</td>
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<td>25 (39.7)</td>
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<td>4 (4.8)</td>
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<tr>
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<td>0 0</td>
<td>3 (11.5)</td>
<td>6 (9.5)</td>
<td>6 (9.5)</td>
<td>6 (9.5)</td>
</tr>
<tr>
<td>Whole Body</td>
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<td>0 0</td>
<td>1 (1.6)</td>
<td>1 (1.6)</td>
<td>1 (1.6)</td>
</tr>
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<td>Age</td>
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<td>8 ± 3.4</td>
<td>7.5 ± 2.7</td>
<td>6.9 ± 3.1</td>
<td>4.8 ± 2.7</td>
</tr>
</tbody>
</table>

Discussion

The Bedouin population of southern Israel is an example of a traditional society thrust into modernity over the past 50 years. While citizenship in a developed nation gives them access to the vast resources of modern medicine, they are still challenged to cope both with dangers of traditional life as well as the unforeseen and unpredictable threats of a rapidly changing society. Though the Bedouin community represents nearly 30 percent of the southern Israeli population, there is still limited data about their specific health needs.

Incidence and clinic utilization

As reported by Gofin et al (3), Arab children are more likely than Jewish children to have visited another source of care prior to presenting to the ED after accidental injuries. This suggests that they presented to the primary care physician prior to being referred to the ED. If this is accurate, then the lifetime injury incidence of 43.2 percent might represent about 70 percent of all childhood injuries. This actually seems quite low. It seems that having childhood injuries is a right of passage. It is estimated by some sources that 1 in 4 children seek medical attention annually for injury. So by age 14, all children would have sought medical care for injury several times. Perhaps the population of Shatal Clinic underutilizes the clinic for injuries. A distinct characteristic of this population is that they live relatively distant from the clinic. They also have relatively low SES compared to Israelis as a whole and many families do not own a car. This would make it difficult to run to the clinic for every minor injury. If a family did feel that an injury was severe enough to need urgent attention, they might be more likely to choose to go directly to the ED. Further research should target home injuries that do not present to the clinic and also compare clinic and ED records.

Parent age, family size and injury history

While it was hypothesized that children from larger families would have more injuries, the opposite was found. Though not statistically significant overall, a trend can be seen that, in
fact, children from larger families had fewer injuries. Among children from families with more than eight children, only 15.9 percent had more than one injury as compared to 26.7 percent among families with fewer than four children. It could be possible that experience teaches the mothers to prevent injury but then you would expect more injuries in lower birth order children. Or it could be that older siblings provide additional supervision. But additionally possible is that large families have, on average, less education and fewer resources. Therefore, the hardship of traveling to the clinic restricts their visits to only truly necessary trips and in that case, it may then warrant a direct trip to ED.

Family size also correlated with age at which parents started families. Older parents with smaller families had children with more injuries. Perhaps this represents an outgrowth of our theory on utilization of the clinic: parents who are older when they start families, because they are more educated, and thus also have higher SES, and better access to transportation, and therefore bring in their children more often. Alternatively, it could be that if the parents are educated, they work and leave their children in the care of less capable supervision. Or, yet another possibility is that they were older when they started families because they were less marriageable because of some disability which delayed their childbearing and also undermines their parenting. Further research should be targeted at identifying the role of education of the parents in injury rates. It might also be enlightening to consider who is supervising children at the time of injury.

Gender

In this study, boys were shown overall to have more injuries than girls. These findings correspond with the results of several other studies of Israeli Arab children showing rates 2 and 3 times higher for boys as well as many international studies that show that boys have higher rates of injuries than girls (3,9,10).

However, the predominance of burns in girls, nearly all of whom were under age five years was documented by others (10). It is surprising given the well documented higher rates of injuries in boys. In the study by Morrongiello et al (11) it was shown that girls were more often injured while at play in “non play” areas such as the kitchen. The study also showed that boys were more often injured while misbehaving. Mothers that monitored children more closely, leaving them unattended for less time, had children with fewer injuries. The study also showed that parents adapted the level of supervision they gave to the perceived acceptability of their children’s behavior. Perhaps this explains why girls would have more burns. They are in the kitchen modeling their mother’s behavior or keeping her company and a short lapse of attention leads to them toppling over hot liquid or falling into the fire. Further research through interviews about the exact events surrounding burns could further elucidate this issue.

Injury distribution

The most common injuries in this sample were contusions 47/112, lacerations 25/112 and burns 18/112. Unfortunately, mechanism was only documented in 50 percent of the injuries. Falls constituted 29/56 documented mechanisms and burns 18/56. As with other Israeli
studies (3,12-16), burns were found in the youngest age group. However in older children, they were rare in our sample. A 2003 study by Broides and Assaf (9) conducted in a Dimona health center presented the types of injuries that Bedouin children confronted in the home and the course of hospitalization that followed. They showed burns to be the most prevalent home accident. They also showed that the risk for burns was correlated with younger age. The recommendation was made to target prevention programs at maternal knowledge and safety measures.

Research methodology

The decision to do a chart review was based on the constraints of the time available for the project. Prior to the initiation of the data collection, the plan was to generate a report using the CLICKS data that listed all children under the age of 14 years who presented with an injury between January 1st, 2003 and December 31st, 2006. However, after attempting several times to generate the report, it seemed that the system was not capable of producing this data set. This could be because, on chart review, it became apparent that coding for injury was not always accurate. An American study (17) comparing accuracy of identification of injuries in the medical history showed that 78% of injuries could be found in the medical record as compared to 52% which were recalled by maternal interview. Perhaps due to the litigious culture of American health care, it could be that American medical records contain more details about the events. In this study it was nearly impossible in many cases to determine the events surrounding the injury. The decision to do a lifetime injury analysis was based on the small sample of children who have injuries every year. In 2006, only 16 children presented with injuries.

In the initial study design, it was assumed that more information about socioeconomic status was contained in the medical record. In the end, it was not possible to consider income or education of the parents using this study design. The initial study included residence location and type, based on the design Zimmerman et al (18) used in a study on repeat Pediatric ED visits in New Brunswick, NJ, where street addresses were used to access SES. In this population, nearly all lived in unrecognized villages. Therefore, for most patients, their address was simply the nearest recognized settlement.

The initial study design addressed polygamy. In one-third of the records, no information was available about the child’s father. The assumed explanation is that the children are only registered to the father from the mother that is the “legal wife”. If this were true, then no effect was seen on the rate of injury in children from these multi-parent families. However, omission of the father could also be just a clerical issue and therefore no real significance can be placed in the lack of significant differences in the injury rates.

Conclusion

Unintentional injuries have a huge morbidity and significant mortality world wide. The populations most at vulnerable to the burden of injuries are found in the less developed societies. Current research has been targeted at western society and the proven strategies for
prevention are inappropriate for the mechanisms of injury that are specific to the Bedouin culture (19,20). Further research is necessary to identify demographic characteristics and behaviors that are correlated with injury in Bedouin children. Chart review was not adequate for the study of demographic and SES factors affecting injury.

**Acknowledgments**


**References**


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Chapter XI

The pediatrician and challenges of care for Bedouin children in southern Israel

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Abstract

The Bedouin population in southern Israel is expanding rapidly due to a high fertility rate and pediatricians who work with this population are aware of the social, environmental, and genetic factors that are influencing the health of the children. One issue in this population is consanguinity marriages, which are related to many inborn disorders. Temporary housing is another issue in this population associated with suboptimal sanitary conditions resulting in infectious diseases. Low income is also an issue influencing nutrition in both adults and children. The change from nomadic life to permanent housing in condensed communities in this population is also affecting human behavior. Pediatricians working in this region play an important role in improving the
health of Bedouin children by their daily contact with parents, children and the local social and governmental agencies.

**Introduction**

The Negev, desert region in southern Israel, is populated by a rapidly growing population of the Bedouin community. Record-high maternal fertility rate, polygamy, traditional preferences and marriage of women at a relatively young age contribute to a social structure of large families. Improvement in health care and a drop in infant mortality rate has added to the expansion of the pediatric population. According to official statistics, half of the Bedouin population is below the age of 13 years (1). For various reasons, mainly limited space, the Bedouins have changed their traditional nomadic life-style to a way of life in permanent settlements, but some of these communities are not supported with the basic infrastructures. Permanent housing has also resulted in a change of occupation and most families abandoned herding in favor of other sources of income.

This paper summarizes the views of primary community pediatricians, working with the Bedouin population for many years, regarding challenges to public health and the provision of health care to Bedouin children. It aims to highlight major preventive and curative issues encountered in pediatric clinics in the Bedouin communities. Some of the references in this article are based on studies on all the Israeli Arab population, which the Bedouins are part of.

**Environment**

Bedouin children who reside in tents or temporary shelters made of tin are exposed more drastically to the elements. Very hot summer temperatures combined with dry climate add to the risk of dehydration in small babies and especially in those with diarrheal diseases. It is well demonstrated by a relatively high hospitalization rate of Bedouin children due to dehydration in the summer months.

At winter time when temperature drops to sub-zero levels, babies are at risk of hypothermia. In settlements without safe running water or modern sewage system, waterborne infections are a threat in the form of gastrointestinal infections and infestations. Improvements in the standards of housing and infrastructures, such as electricity and water are expected to alleviate these risks.

Some environmental health hazards to Bedouin children are related to life in non-urban surroundings. Scorpion stings and some plant poisoning are unique to Bedouin children. Educating parents and families on precautions and first aid in case of injury are desired tasks by the pediatrician and health nurse. Traditional cooking and warming by open fire carry the risk of burns and smoke inhalation and lung disease in the form of asthma, as observed in the number of cases and admissions to the pediatric emergency room in Beer-Sheva.
Education

Higher education is accessed by a relatively small proportion of Bedouins. Too many, especially girls, do not graduate high school. Lack of education influence parental profession, income and housing conditions. Bedouin children, who grow up in poor neighborhoods, with limited public playground facilities, are at risk from out-of-home injuries. Parental lower level of education is probably affecting their knowledge and understanding of medical conditions that mandate immediate referral of sick babies to a medical facility (2,3). Such delay might have negative consequences on child health.

Injuries

Bedouin children are inflicted by disproportionate high rates of non-intentional injuries (4). Burns from open fires, hot liquids and falls from sub-standard or not yet finished, but already inhabited buildings are all too common in this population (4-7). Injuries related to road accidents and incomplete adherence to the use of car safety seats and belts do prevail. Ingestion of chemicals that are not kept well locked or in containers that were previously used for storing food contributes to poisoning by kerosene and pesticides (8). Education of children at schools, parents and local leaders in community centers is important in raising the public awareness and preventive measures needed to contain injuries (9,10).

Genetic disorders

Consanguinity marriages are consumated in the tradition of Bedouin society (11,12). About half of the infant mortality rate in Bedouins is related to metabolic and structural inherited defects (13-15). Even when these defects are not fatal, they may carry long-term developmental disabilities. The efforts to reduce genetic disorders should be aimed at the young generation and their parents in various ways. It should include the provision of accurate information on the potential harm of consanguinity marriage and the use of pre-marital and post marital genetic counseling (16,17). Trained educators from the Bedouin community seems to have a more influential effect (18).

Health habits and customs

The most notorious health habit that affects Bedouin children is the high prevalence of cigarette smoking by Bedouin males (19). In the pediatric population in contributes to the exacerbation of asthma. In the long run it influences the rate of cigarette smoking by children and adolescents and the later consequential health problems.

Many Bedouin families have an easy access to milk and dairy products that are not pasteurized and not under the control of the health authorities. Brucellosis is therefore an
endemic and not uncommon disease in Bedouin children (20). Caregivers should continue to be on alert for the possibility of brucellosis in these communities.

Traditional dressing, especially in women, involves limited exposure to direct sunlight and therefore vitamin deficiency. Vitamin D deficiency can be a risk for adolescent female health and their future offspring (21).

Because of early age of marriage of Bedouin females, a relatively high rate of Bedouin babies are born to mothers who are younger than 20 years of age. These babies and their mothers should be regarded as a special high risk group concerned health issues.

Modern medicine is granted to the whole Bedouin population by the State of Israel since the year 1995, when a national health insurance bill was passed. However, traditional medicine is still practiced and some of these practices may delay the introduction of families to modern medicine. On the other hand there is an increased trend in overusage of conventional medical interventions.

The traditional custom that mandate Bedouin women to be chaperoned by a closed-family male relative is sometimes the reason or explanation for delayed arrival of sick children to a physician or the hospital (22). A delay in access to modern medical facility can contribute to severe morbidity and higher mortality rate of Bedouin children (23).

#### Nutrition

The nutrition of Bedouin children is a combination of traditional and industrial processed food (24). From the public health point of view this can be present in many forms. The availability of infant baby formulas and the wish to portray modernism may cause a drop in breast feeding, which is not desirable. Increased consumption of fast food and soft drinks is already causing increased rates of obesity in school-aged children and its related health problems, like diabetes. Intervention to keep good nutritional habits should therefore be aimed at all age groups (25).

Many of the Bedouin families are of low socioeconomic level. Economic factors influence their nutrition in terms of the variety and quality of food. Iron deficiency anemia and deficiency of other micronutrients are common (26). However, due to focused efforts by primary health care professionals working with this population and iron supplementation, the prevalence of iron deficiency anemia dropped from 8.7% to 2.8%, which is now comparable to the prevalence in the general population. Stunting is more common in the Bedouin community and poor nutrition is considered as the primary culprit.

Nutritional interventions in Bedouin communities include universal supplementation with vitamin D, iron and micronutrients in the first years of life (27,28). Of some concern is the current recommendation, made by the Ministry of Health, to stop universal vitamin A supplementation. Physicians who take care on Bedouin babies should consider continuing vitamin A supplementation to Bedouin babies in families with poor vitamin A consumption. Some successful projects have succeeded in changing the content of preschoolers’ meal-box content from fast and sweet food to fruits vegetables and legumes.
Medical and allied health professionals

Communication is prudent in achieving the goals of medicine. Many of the medical and allied health professionals who work in Bedouin communities do not master Arabic and have limited knowledge of the Bedouin's tradition and way of life. In the past two decades we have seen more young Bedouins graduate in medicine and allied professions. Some physicians, pharmacists and speech therapists have graduated in Arab countries, such as Jordan and afterwards passed examinations to work in Israel. High school Bedouin students are involved in a special program at the Faculty of Health Sciences at the Ben-Gurion University to prepare them to study health professions in the future. This trend carry the promise that health care for Bedouin children will improve in the future.

Preventive health services

Preventive health service for children in Israel is segregated from the curative service. The first is provided by the Ministry of Health in the form of maternal, well-baby and child clinics and school health service. The latter is provided by health maintenance organizations (HMOs). This segregation means that the service is provided by different personnel in different sites. Sharing of data and communication between the two is cumbersome and incomplete. The two agencies of care are investing resources in monitoring the health needs of the Bedouin population, emphasizing the young age and maternal health (29). The success of both is seen in a decline of premature babies, a decline in the rate of anemia and record high rate of immunizations. The mission of the health services is to keep the success rate, while targeting the risk population. This aim is facilitated by the establishment of maternal and child health stations in unrecognized Bedouin villages (30).

Rehabilitation and special education

These services to Bedouin children are in increasing demand as the growth of the population is faster than the growth of the services (31-33). Accessibility is a problem as some of the services are outside of the communities, thus necessitates traveling to the medical centers in the city. Shortage in Arab speaking personnel adds to the shortage of facilities. Recently, a school of special education was opened in one town, where children from many neighborhoods are services.

Adolescent and behavioral medicine

These services are constrained to the whole Israeli population. However, it seems that for the Bedouin youth there are more barriers. Beyond limited services and Arabic-speaking personnel, there are cultural hurdles such as the openness to discuss personal private issue with strangers or even within the family. It is desired that more Bedouins will graduate to
become social workers, psychotherapists and psychiatrists and eventually return to serve their communities. Increased numbers of Bedouins, especially women, are studying at the Ben-Gurion University in Beer-Sheva and therefore the future potential personnel to carry that mission.

**Exposure to violence**

With the establishment of the state of Israel, the extreme and rapid social change that the Bedouin community experienced over the last decades, forced the Bedouin community to become members of a modern society (34, 35). Non-violent changes can have the same level of impact as social disasters, if the effects are broad based and ongoing (36, 37).

Children's exposure to violence is very destructive (38) and it leads to adverse development outcomes and affects academic achievements, self-esteem, and dropout rates. It impairs social, cognitive and emotional capacities, which in turn leads to delay in development of peer relations and school adjustment (39). Exposure to violence reinforces the victim's tendency to solve conflict by using violence (40)

Bedouin children are exposed to violence both at home (41), at school (42) and in their neighborhood (43). One reason for the difficulty in dealing with these behaviors is that many acts of punishments and some of restraint methods are considered legitimate by many Bedouins, parents as well as teachers (44,45). This exposure is extremely high compared to other groups, including other Arab communities in Israel (45). According to a paper published in 1997(13), Bedouin children were exposed to violence not just more frequently, but also to more severe violence. At schools, abusive behavior by teachers occurs often and female students are experiencing higher level of punitive teacher behavior than males. Secondary school children experience higher levels of violent behavior from teachers, than elementary school children (42).

**Summary**

Over time the health services and the health of Bedouin children are improving. There are still many challenges in the provision of health services to Bedouin children. Community pediatricians are in the frontline, since they have to deal with ailments as well as to educate parents and children on how to improve their health. Together with other agencies, pediatricians should use their influence on advocacy and social involvement that aim at a better health outcome for this population.

**References**


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The pediatrician and challenges of care for Bedouin children in southern Israel


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Infant mortality

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Abstract

Infant mortality provides a useful indicator of population health over time and in comparison to other populations. Bedouin Arabs are an at-risk population for adverse health outcomes for various reasons including genetic risk for malformations, high fertility rate with short interpregnancy interval, consanguinous marriages, inadequate prenatal care, and socio-economic and cultural factors. All reported cases of deaths under 1 year in Bedouin and other residents of the Negev in 2012 were reviewed, analyzed and compared to previous years. Infant mortality rates were calculated using population data (live births) from the Ministry of the Interior. Infant mortality in Bedouin Arabs in the Negev is nearly 3 times higher than in the Jewish population of the Negev. The major cause of infant mortality in the Bedouin population is congenital malformations. Trends in infant mortality in the Bedouin population are described. Principles of intervention and prevention unique to this population are discussed.

Introduction

The Bedouin population of the Negev is undergoing a transition from a traditional, nomadic lifestyle to a semi-urbanized way of life (1). This transition has been accompanied by important changes in socio-economic and cultural factors. These factors have significant
effects on the health of all segments of the population. For this reason, the monitoring of health trends over time and planning interventions to reduce morbidity, mortality, and increasing preventive measures are cornerstones of public health initiatives in at-risk populations. Infant mortality is an important and established measure of societal health, especially for comparison to other populations and over time. In addition, analysis of trends in infant mortality can assist decision-makers in allocation of health resources and in planning interventions based on principles of prevention, education, and health promotion. This chapter will summarize recent trends in infant mortality in the Bedouin Arabs of the Negev, describe interventions that the Israeli Ministry of Health has implemented, and suggest future directions for research, surveillance, and further reduction in infant mortality in this vulnerable population.

Unique features of the population

Bedouins comprise about 31% of the total population of the Negev, an arid and semi-arid region of 13,000 km² in southern Israel. The population has increased from about 10,000 in 1948 to close to 200,000 in 2012. In the 1960s, the state of Israel developed a plan to settle the Bedouins in seven towns, but only about half of the population agreed to move. The towns are characterized by poverty, high unemployment, and poor public services (2). The other half remain in unrecognized settlements which lack basic infrastructure including clean water, electricity, sewage disposal, and public transportation. Despite the changes in the urbanized segment of the population, Bedouins largely remain a traditional society organized into tribes in which men are responsible for decision-making. There are high rates of consanguinity (60%), often between first cousins (3), and polygamy (25%). Women are often undereducated (4) and do not work outside of the home. In some families, women are restricted from leaving the home without a male chaperone, which may interfere with timely utilization of health services. Many Bedouin women suffer from nutritional deficiencies, putting them at risk for delivering prematurely and for certain congenital malformations (5). In addition, Bedouin children suffer from nutritional deficiencies, especially anemia (6), which together with crowded living conditions is a risk factor for contracting infectious diseases (7). Bedouins have a high fertility rate and nearly half of the births in the Negev are in this population despite comprising 30% of the population. Women tend to give birth frequently and the inter-pregnancy interval is short (8), which can lead to preterm delivery, low birth weight (9), an increased risk for congenital malformations (10), and infant mortality (11). The median age of the population is 14.6 years.

The features mentioned above have a significant impact on infant mortality. As of 2010, all Bedouins are entitled to free prenatal care and postnatal care provided in maternal-child health centers (MCHC), of which there are 37 in the region, the majority of which are located within or in close proximity to the Bedouin settlements, recognized and unrecognized. Services provided include 13 childhood immunizations according to the program for all residents of Israel, developmental screening, hearing and vision evaluations and anticipatory guidance. While vaccination coverage tends to be high (12), other components of infant health care are under-utilized. Specifically, many women lack prenatal care or arrive late or infrequently for follow-up. This results in delayed diagnosis and treatment of obstetric and

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pediatric conditions until late in the pregnancy or after birth. As a traditional society, Bedouins tend to reject abortions and amniocentesis, especially as the pregnancy progresses (13). Although genetic testing is recommended for all Bedouins, many are unwilling to perform the tests (14), several of which are provided free of charge. The combination of consanguineous marriages, lack of genetic testing, and language barriers can result in lethal genetic conditions being diagnosed only after birth. In addition, the geographic dispersal and lack of transportation prolong the time from onset of contractions to birth which can have deleterious effects on the newborn. After the birth, delayed presentation to medical care can be a risk for mortality for infectious and metabolic diseases, as well as increasing the likelihood of unexplained death.

Infant mortality

Infant mortality rate (IMR), defined as the number of deaths of children before their first birthday divided by the number of live births, is an important indicator of health. In addition to directly reducing potential for a society's physical, social, and human capital, and each family's emotional stress of losing a child, changes in infant mortality can serve as a marker of effectiveness of health services, of educational interventions, or even the influence of environmental hazards such as air pollution.

Data sources

By law, family members of any deceased person must obtain a burial permit from the district health office of the Ministry of Health. Whenever the district health office receives notice of the death of a child under age five (60 months), information from the death certificate is recorded in an electronic database. Basic demographic information is obtained, and in the event of death outside of the hospital, a public health physician asks the family about the circumstances of the death. For deaths occurring at night or outside of the district, the information is received by mail. For every case, an effort is made to obtain complete medical records including prenatal follow-up, birth history, postnatal follow-up, primary care, subspecialty, emergency room visits, hospital admissions, and autopsy reports if available. This information is stored electronically and analyzed at frequent intervals by physicians at the district health office. For completeness, in-hospital deaths are cross-checked with a database maintained by Soroka University Medical Center (SUMC), the major tertiary care hospital in southern Israel.

In the case of death outside the hospital, a full investigation is conducted by nurses and doctors from the MCHC closest to the residence of the disease. The investigation ideally consists of a home visit, although sometimes interviews are conducted by telephone or at the MCHC for logistic reasons. The timing of the interview varies but ideally occurs 4-8 weeks after the death of the infant. A detailed 8-page form is used to assure the consistency and completeness of the data obtained. The entire prenatal and postnatal history of the child is elicited, with special emphasis on social and economic factors which may have contributed to the child's death. In addition, direct questions regarding the availability of transportation,
access, and utilization of care. The infant's sleep environment is assessed visually and per history, to aid in determining if the circumstances fit with known risk factors for sudden infant death syndrome (SIDS).

Information about total live births, necessary for calculating the infant mortality rate, is obtained from data from the Ministry of the Interior, which provides records for all live births for residents of the district. These numbers are also cross-checked with the birth file maintained at SUMC although as many as 15% of births of Negev residents are at hospitals other than SUMC. The final denominator used is from the Ministry of the Interior data.

After receiving all available information, a group of physicians and researchers with experience in pediatrics, public health, and epidemiology determine the immediate cause of death and categorize it as related to prematurity, other perinatal complications, congenital malformations including genetic and metabolic diseases, infectious disease, external causes, or unknown causes. In the event of combined causes of death (eg. malformation and prematurity or infection) or disagreement between specialists, the group decides on the most significant contribution to death by majority decision.

The results are summarized as number of cases, and where appropriate, infant mortality rates. The Jewish population of southern Israel is used for a convenient comparison, although the groups are significantly different in underlying risk for genetic diseases, socio-economic, and cultural ways and in patterns of access to care.

**Trends in infant mortality in southern Israel**

In general, all populations in Israel have experienced major reductions in infant mortality since 1950 (15). Despite these changes, Bedouins remain with a higher rate of infant mortality compared to Jews in the Negev as well as compared to Moslems in the north of Israel or in the east Jerusalem region. The overall population decrease in infant mortality is attributed to improved hygiene and nutrition, universal vaccination for infants and children, a higher percentage of births within the hospital instead of at home, and technologic advancements in neonatal care, from which all segments of the population, including Bedouins, have benefited to a large degree. Despite these improvements, the Bedouins of the Negev remain at higher risk for infant mortality mostly because of congenital malformations as a result of high rates of consanguinity, especially first-cousin marriages. It should be noted that infant mortality is 50% higher in the Jewish population of the Negev than for Jews in other parts of Israel, possibly related to challenges in health services in the region.

Figure 1 shows infant mortality rates per 1000 live births in the Bedouin and Jewish populations from 1993-2012. It can be seen that the IMR is relatively stable in the Jewish population but varies considerably in the Bedouin population from between 8-18 per 1000 live births. The cause for this variation is uncertain but is not thought to be related to reporting differences between years. The rate ratio for infant mortality in Bedouins compared to Jews in 2012 was 2.68.

A summary of the data on infant mortality in the Bedouin population in 2012 is provided to give the reader a sense of recent trends (see table 1). Of the 97 cases of infants who died before their first birthday, 59% were female and 41% were male. Median gestational age was 35 weeks and median birth weight was 2 kilograms. As many as 44% of infants were small
for gestational age, defined by birth weight less than 10th percentile, compared to 14% in the Jewish population. Multiple gestation pregnancies contributed to 12% of infant mortality, compared to 26% in the Jewish population. Mothers of Bedouin infants tended to be younger than mothers of Jewish infants and 9% of mortality occurred to infants whose mother was under age 20 years. Approximately 20% of pregnancies were characterized by lack of prenatal care (LOPC) defined as fewer than 3 prenatal visits. 54% of Bedouin infant mortality occurred among residents of unrecognized settlements while 46% occurred in residents of the seven towns described above.

Figure 1. Infant mortality rates per 1000 live births, southern Israel 1993-2012.

Table 1. Comparison of infant mortality in Bedouins and Jews, Southern Israel, 2012.

<table>
<thead>
<tr>
<th></th>
<th>Bedouins</th>
<th>Jews</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of deaths until age 1</td>
<td>97</td>
<td>39</td>
<td></td>
</tr>
<tr>
<td>% Recognized villages</td>
<td>54</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Number of live births</td>
<td>8,239</td>
<td>8,776</td>
<td></td>
</tr>
<tr>
<td>Infant mortality rate</td>
<td>11.9/1000</td>
<td>4.4/1000</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Percent female</td>
<td>59</td>
<td>51</td>
<td>0.34</td>
</tr>
<tr>
<td>Gestational age (weeks, median)</td>
<td>35</td>
<td>25</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Birth weight (grams, median)</td>
<td>2020</td>
<td>740</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Percent small for gestational age</td>
<td>44</td>
<td>14</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Percent twin pregnancy</td>
<td>12</td>
<td>26</td>
<td>0.07</td>
</tr>
<tr>
<td>Percent maternal age &lt; 20</td>
<td>9</td>
<td>0</td>
<td>0.06</td>
</tr>
<tr>
<td>Percent maternal age &gt; 34</td>
<td>19</td>
<td>29</td>
<td>0.249</td>
</tr>
<tr>
<td>Percent lack of prenatal care</td>
<td>20</td>
<td>11</td>
<td>0.217</td>
</tr>
</tbody>
</table>

In 2012, the leading categories of death in 97 infants who died before their first birthday were: 1) Congenital malformations (41%), 2) Prematurity and associated complications (22%), 3) Unknown causes including sudden infant death syndrome (19%), 4) Infectious diseases (9%), 5) Perinatal complications in term infants (6%) and 6) External causes (2%).

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Congenital malformations

In 2012, 40 infants died from congenital malformations including structural organ defects, genetic disorders, and metabolic disease. The IMR attributable to congenital malformations was 4.9 per 1000 live births. This rate has remained stable since 2005. Most of the malformations (60%) occurred in residents of unrecognized villages. Metabolic diseases were the most common, followed by congenital heart disease, lethal musculoskeletal malformations, and neural tube defects. Most of the disorders were either diagnosed prenatally or could have been detected by multiple marker screening tests ("triple test"), prenatal ultrasound or directed genetic testing based on tribal origin or family history of disease. Most marriages were consanguineous (67%), the majority of which were between first cousins. In 33% of infant mortality from congenital malformations in 2012, a previous child had also died from congenital malformations, usually the same disease as the index case.

Prematurity

Extreme prematurity and its complications were responsible for the deaths of 21 infants, giving a cause-specific IMR of 2.5 per 1000 live births. Rates in recognized villages were similar to unrecognized villages. 62% of mortality attributed to prematurity occurred in infants less than 600 grams in the first 24 hours of life, and the balance of cases were related to severe intraventricular hemorrhage or necrotizing enterocolitis later in the neonatal period.

Unknown causes

In 2012, 18 infants under age 1 year died of unknown causes. This category is difficult to summarize given the unclear and likely heterogeneous causes for death. Some cases may be consistent with sudden infant death syndrome (SIDS), but autopsies are usually not performed for religious or cultural reasons. Sometimes infectious causes are implicated (fever, upper respiratory symptoms, diarrhea), but the symptoms reported are often not severe enough to explain sudden death. It is also possible that undiagnosed metabolic or other congenital malformations play a role in death from unknown causes, but without autopsy this remains speculation. In 11 infants, the family was reached for complete investigation as described above. The usual case is an infant who was generally healthy and is put to sleep after feeding, and found dead after several hours. Some risk factors for SIDS, such as smoke exposure or other environmental pollution, head coverings or other objects in the child's crib, co-sleeping, suboptimal living conditions/sleep accoutrements, are elicited by history. Prone sleep position for infants is uncommon in the Bedouin population. In 7 other infants, lack of demographic or residential information did not allow for further investigation. 1 family refused to discuss the circumstances of the infant's death.
Infant mortality

Infectious diseases

There were 8 cases of known infectious diseases that led to infant mortality in 2012. There were no deaths from vaccine-preventable diseases. 5 of the cases were infants with chronic problems related to congenital malformations or prematurity with the final cause of death related to infection. 2 other cases were serious bacterial infections in otherwise healthy children, and 1 case was a neonate who died from congenital Haemophilus influenza infection (nontypable).

Perinatal causes not related to extreme prematurity

There were 6 cases of mortality that resulted from other perinatal conditions. These infants were born at term or slightly preterm but all suffered from severe hypoxic ischemic encephalopathy, sometimes related to known maternal conditions such as placental abruption. 33% came from unrecognized villages and another 33% were small for gestational age.

External causes

2 infants died of external causes. 1 was strangled to death along with two siblings by a mother suffering from post-partum psychosis. Another died suddenly but on autopsy had findings consistent with shaken baby syndrome.

Interventions

Since infant mortality is related to a number of biological, socio-economic, cultural, and geographic factors, it is expected that interventions will need to be multi-faceted as well. We detail the major components of possible interventions to reduce infant mortality as well as steps taken in southern Israel to deal with the problem. Clearly, much of child physical health is related to infectious disease prevention including hygiene, routine immunizations, and clean drinking water, and these necessities are the cornerstones of any public health initiative for children. In addition, there are segments of the Bedouin population who do not have adequate food, clothing, or living conditions which can also impact infant and child mortality. In the present article, however, we will focus on interventions that the health sector can implement in conjunction with academic support from a university.
Access to care

The issue of access to care is important in underserved populations in general and goes beyond the provision of medical services, even when they are provided without cost as they are in Israel. Data from SUMC indicate that as many as 16.5% of deliveries were characterized by lack of prenatal care, defined as less than 3 prenatal visits during the course of the pregnancy, compared to 4.4% in the Jewish population (16). While vaccine coverage in the Bedouin population is high, developmental and growth follow-up is often delayed because of missed appointments. Referrals to specialists after routine screening is often late resulting in delayed or missed diagnoses which contribute to death from "unknown causes." Patterns of seeking health care, as defined by family physician and specialist visits, differ between Jews and Arabs, after adjusting for socio-economic status (17).

Health maintenance organizations operate a number of clinics in the Bedouin recognized towns. However, the clinics may be understaffed or staffed by physicians or nurses who do not speak Arabic, making effective communication difficult. In addition, the geographic dispersion in locations without running water, electricity, or possibility of electronic communication makes routine decisions, such as where to build a new clinic, difficult. There has been some success with utilizing mobile health clinics to increase clinic attendance but on a small scale (18). Health maintenance organizations will need to devise creative ways of improving access, which may include, more mobile clinics, increased evening and weekend hours, and with any solution, more human resources. Health care workers who come from outside of the Bedouin community must be trained in cross-cultural competency and medical Arabic in order that clients will understand, ask questions, and implement provider recommendations.

Education

Educational interventions can be divided into three components. Firstly, the Bedouin community is undereducated for the reasons described above. As educational level impacts health choices, such as meeting appointments for prenatal and postnatal follow-up or making difficult decisions regarding a fetus with lethal malformations or extreme prematurity, improving the quantity of education in years at the population level is crucial. Post-high school education for women may also be important for improving socio-economic and nutritional status, level of independence, utilization of medical services, and prolonging interpregnancy interval, all of which may influence infant and child mortality.

Secondly, health care providers must be aware of the increased risk of mortality in this population combined with the cultural and geographic barriers described above. This may result in more detailed anticipatory guidance, lower threshold for hospital referral, and more intensive telephone follow-up after sick visits or failure to keep appointments. To this end, the Ministry of Health organizes multi-disciplinary academic conferences at no charge to the participants relating to infant mortality, high-risk pregnancy, genetic testing, and a variety of related subjects. These conferences are designed to provide state-of-the-art recommendations on risk factors and prevention of morbidity and mortality as well as to raise community awareness of the problem among health professionals.
Finally, given the cultural barriers, it may be impractical to expect health-care providers from a different society and culture to significantly affect long-standing attitudes, behaviors and practices. With this in mind, and in accordance with the principles of health promotion, it is important to enlist members of the Bedouin community to act as partners in health, education, and leadership regarding infant mortality. Since 1995, there has been collaboration between the Ministry of Health and Ben-Gurion University of the Negev in designing and implementing a multi-faceted, longitudinal interventional program aimed at reducing infant mortality in the Bedouins of the Negev. The program partners with community and religious leaders, all levels of the health care system, local municipalities and social services to achieve its goals.

**Conclusion**

Infant mortality is an important marker of population health and quality of life. While Israel as a nation has one of the lowest infant mortality rates in the world, there are differences between subpopulations in Israel. According to these markers, Bedouins of the Negev are an at-risk population for adverse health outcomes of which infant mortality is but one of many. While infant mortality has significantly improved in the past 50 years, a disparity between the Bedouin and Jewish populations remains. The nearly triple rate of infant and child mortality compared to the Jewish population likely reflects a complex interplay of biological, socio-economic, and cultural factors as well as different patterns of accessibility and utilization of health care. These differences are present despite the fact that health care is provided for all citizens by the same health maintenance organizations and, for the most part, the same hospital.

Future directions in monitoring trends in infant mortality include developing information systems to share data between health care providers, more direct interviewing of each case to elicit socio-economic and cultural factors as well as access to care. In addition the impact of environmental pollution on infant mortality resulting from industrial activity, cigarette and open-fire smoke, and kerosene heating in this population remains to be assessed.

Addressing the problem requires a multi-disciplinary, broad-based, longitudinal approach requiring years of investment to achieve significant results. Key components will likely include increasing human resources especially nurses and physicians, financial investments by the health sector, more accessible health care, improved data sharing between health providers, and input and awareness of the problem and motivation to solve it from within the Bedouin community itself.

**Acknowledgments**

The authors would like to thank Professor Ilana Belmaker for her years of activity, guidance, and advocacy in dealing with infant mortality in the Bedouin and general population.

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References

Chapter XIII

Infantile spasms

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Abstract

In this chapter we examine all cases of infantile spasms (IS) diagnosed at the Soroka University Medical Center, Ben Gurion University over a 16 year period. 31 children, 17 (55%) males. 17 (55%) were Jews and 14 (45%) Bedouins. Four (13%) died. Data was gathered from hospital files, neuropediatric unit and Zusman Child Development Center. Demographic and ethnic data, characteristics of the disease type of seizures, EEG pattern imaging studies, type of treatment, psychomotor development, rehabilitation and educational services were analysed. Mean age at diagnosis 7.22 months. Etiology for one third was pre- or perinatal insult, one third postnatal and one third unknown. 26 (84%) were symptomatic and five (16%) cryptogenic. Significant statistical difference was found with more Bedouin children symptomatic with moderate or severe mental
retardation, cerebral palsy with severe motor difficulties and recurrence of the disease. Statistically significant correlation existed between poor response to initial treatment and placement in special education, recurrence of disease and cerebral palsy with moderate or severe motor difficulties, the appearance of a different type of epilepsy during follow-up and placement in special education. 18 children (58%) received first treatment with ACTH, 10 (32%) children with IVIG (immunoglobulin IV), 3 (10%) with neither ACTH nor IVIG. Regarding therapy response we found no significant difference between Jews and Bedouins.

Introduction

Infantile Spasms (IS) is a childhood syndrome characterized by specific epileptic seizures and specific electroencephalography (EEG) patterns. The incidence is 1 per 4,000 births (1-3) and 2%-3% of all childhood seizures disorder (1,2,4). 90% of cases appear during the first year of life with a peak between 4 – 8 months. The attacks appear suddenly in a form of flexion or extension of the body, usually bilateral and generally symmetrical involving neck, trunk and limbs. The seizures are typically described as "Salaam attacks", tend to appear in clusters, and may persist for minutes with brief intervals between each spasm. The spasms occur during sleep or arousal but have a tendency to develop while the patient is drowsy or immediately upon awakening (1,2,5). In about 80% of patients the EEG pattern is characteristic with hypsarrhythmia pattern, which consists of a chaotic pattern of high voltage, bilaterally asynchronous, slow-wave activity (1,2,4).

Infantile spasms are typically classified into three groups: symptomatic, cryptogenic and idiopathic (6). In the symptomatic category, multiple factors have been associated with these spasms – metabolic, dysplastic or dysgenetic abnormalities and a variety of prenatal, perinatal and postnatal insults. In the cryptogenic subgroup a variety of underlying conditions is suspected, but cannot be defined adequately at this time (7-9). The idiopathic subgroup is believed not to be associated with any underlying condition characterized by normal neurodevelopment at the time of clinical presentation, lack of focal features on clinical examination, seizures semiology, characterized EEG, rapid response to medical treatment and a benign course (10).

In most cases the disease is progressive, the epileptic attacks are of mixed type and very difficult to control with the patients suffering psychomotor delay of varied degrees (1,4). The combination of mental retardation, infantile spasms seizures and hypsarrhythmic pattern of EEG is known as West Syndrome (11). The etiology is not clear, but there are several theories about the processes leading to IS: inflammatory changes and devastating processes of neurotransmitters like Serotonin, Norepinephrin on brain stem, a malformation of cortical and subcortical zones in the brain (1,2,12), defects in the immunological system (12), a focal or multifocal damage in the brain with generalization which can be demonstrated with functional tests like PET, SPECT and functional MRI (12).

The efficacy of treatment is measured by significant decrease in the numbers and intensity of seizures, by improvement of the EEG pattern, by normal development and by narrowing the neurological deficits. The usual anti-epileptic drugs are generally not effective in the treatment of IS, but in some cases there has been benefit from Vigabatrin, Nitrazepam or Valproic Acid (4,13). The treatment with adrenocorticotropic hormone (ACTH) has been

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effective (14) and in some cases also prednisone. These treatments are empiric, the studies made on small groups of patients, prospective studies and the protocols of treatment not uniform (1,2,4,15). The duration of treatment were three weeks and a good result obtained in 2/3 of cases (1,2). Treatment with ACTH was accompanied with severe side effects, like hyperglycemia, hypertension, accumulation of sodium and fluids, hypokalemia, ulcers and bleeding in the gastro-intestinal tract, immune suppression and fungal infection (14).

In 1977 Pechadre et al (16) described the efficacy of immunoglobulin IV (IVIG), as an effective treatment in severe seizures. Hence, other researchers stressed the effectiveness of IVIG in infantile spasms (12,15,17). The treatment consisted of a dose of 2 grams/kilogram of body weight divided in two consecutive days. The side effects were rare and included restlessness, rash, and hypotension (18). There was a good correlation between low levels of blood immunoglobulin at the beginning of therapy and good response to therapy (17). In some cases treatment with ketogenic diet and high dose of pyridoxine were successful. Lately early brain surgery found to be effective as part of the whole arsenal of treatment in the symptomatic cases.

In the present study we examined all the IS cases diagnosed in the Soroka University Medical Center (SUMC) during 17 years between 1981 – 1997. The SUMC of the Ben Gurion University of the Negev is the only tertiary medical center in the south of Israel with a population of more than 500,000 persons (80% Jews and 20% Bedouins). The neuropediatric unit and in the Zussman Child Development Center (ZCDC) have developed special protocols for the treatment of IS. Since our work referred to the last two decades, while the actual classification was not in use, we will use the old classification where two types of IS were in use: the cryptogenic and the symptomatic. The children in the cryptogenic group are one third of the total cases usually without clear etiological factor and no associated risk factors. These children are characterized by uneventful pregnancy and birth history as well as normal developmental milestones prior to the onset of seizures, without previous seizures history, normal neurological examination, normal imaging tests and a symmetric hypsarrhythmic EEG pattern over the entire brain (1). The children in the symptomatic group are two third of the cases. There is always an etiological factor, which can be either prenatal, perinatal and postnatal. In the symptomatic form the diagnosis is characteristically established, when there is already developmental delay, abnormal neurological finding, mixed types of seizures, the EEG pattern not typically hypsarrhythmic and abnormal findings in imaging tests. In the cryptogenic cases the prognosis is better then in the symptomatic cases (1,4,19). Good prognostic factors are a minimal delay between diagnosis and initiating treatment with a quick response to therapy. Negative prognostic factors are mixed seizures, delayed response to therapy and repetition of seizures after first positive response to therapy.

Our study

The study population included all children diagnosed with infantile spasms (IS) from the register of the Soroka University Medical Center (SUMC), according to ICD-9 (20) classification from January 1981 to 31th December 1997. During this period of time 144,000 children were born in the SUMC. At the same time 36 children were treated for IS. Five children were excluded from the research due to lack of information or because the diagnosis
was changed. A total of 31 children were included in the research. The data included hospitalization files, follow-up files from the neuropediatric unit and the Zusman Child Development Center (ZCDC). Demographic and ethnic data, characteristics of the disease type of seizures, EEG pattern imaging studies, type of treatment, psychomotor development, rehabilitation and educational services of the child were analysed. Data analysis was made by EPI – INFO software, the statistical analysis by SPSS.

Mono-variant analyses were made by \( \chi^2 \) test, Fisher Exact test, group-t-test and ANOVA. We also used Mann-Whitney test for small groups. Multi-variants analyses were made by logistic regression Stepwise type.

**Findings**

The study population included 31 children, 17 (55%) males. 17 (55%) children were Jews and 14 (45%) Bedouins. 4 (13%) children died. The average age at time of collecting data was 88.58 months (7.4 years). Standard deviation (SD) 55.11, with median 83 months. Mean follow up time was 73.45 months (6.1 years), SD 58.39, with median 55 months. Mean age at diagnosis was 7.22 months, SD 8.18 with median 5 months. Three children (10%) were diagnosed between 1981 – 1985, eight children (26%) between 1986 – 1990, 12 children (38%) between 1991 – 1995 and eight children (26%) between 1996 – 1997.

The etiologies found in the study population included 21 children (68%) with clear etiology: three children (10%) with pre-natal etiology, seven children (23%) with peri-natal etiology (like birth asphyxia, Cystic Periventricular Leukomalacia) and 11 children (35%) with post-natal etiology. In 10 children (32%) the etiology remained unclear. At time of diagnosis all EEG pattern were abnormal. In 84% of the patients the first EEG showed a typical hypsarrhythmic pattern. The rest 16% patient exhibited various pathological pattern that later on became hypsarrhythmic. CT examination was normal in 42%, pathological in 52% of patient. Two patients (6%) were not examined by CT.

**Table 1. clinical and developmental prognosis regarding data at diagnosis**

<table>
<thead>
<tr>
<th>Data at Diagnosis</th>
<th>Developmental Delay at diagnosis</th>
<th>Neurological findings</th>
<th>Seizures</th>
<th>EEG pattern</th>
<th>CT Finding</th>
</tr>
</thead>
<tbody>
<tr>
<td>No response to therapy</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
</tr>
<tr>
<td>Recurrence of disease</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
</tr>
<tr>
<td>Different type of epilepsy</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
</tr>
<tr>
<td>Developmental delay moderate to severe</td>
<td>P = 0.05</td>
<td>P = 0.01</td>
<td>P = 0.01</td>
<td>NS</td>
<td>NS</td>
</tr>
<tr>
<td>Cerebral Palsy</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
</tr>
<tr>
<td>Special Education or no education</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
</tr>
</tbody>
</table>

NS = not significant by \( \chi^2 \) test
Table 1 summarize the clinic and developmental outcome regarding the presenting data at time of diagnosis: developmental delay, abnormal neurological examination and atypical seizures were significantly connected with a special education kindergarten or school. Pathological CT findings were significantly connected with moderate to severe developmental delay. Atypical seizures were significantly connected to resistance to treatment, recurrence of disease and a need for special education.

Table 2 represents the course of the disease and the developmental outcomes according to the type of the disease. In the study population 26 (84%) were symptomatic patients and five (16%) cryptogenic patients. Among the symptomatic patients there was a significant relationship between recurrence of disease, moderate to severe developmental delay, cerebral palsy and special education placement. Among the cryptogenic patients two patients did not respond to treatment and one patient developed another type of epilepsy. In this group there were not cases of developmental delay, cerebral palsy or recurrence of the disease and all the children were in mainstream schools.

Table 2. Course of the disease and the developmental outcomes according to the type of the disease - cryptogenic or symptomatic

<table>
<thead>
<tr>
<th></th>
<th>Cryptogenic N = 5</th>
<th>Symptomatic N = 26</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>No response to treatment</td>
<td>2 (40%)</td>
<td>13 (505)</td>
<td>P = 1.00</td>
</tr>
<tr>
<td>Recurrence of Disease</td>
<td>0 (0%)</td>
<td>13 (50%)</td>
<td>* P = 0.04</td>
</tr>
<tr>
<td>Different type of epilepsy</td>
<td>1 (20%)</td>
<td>17 (65%)</td>
<td>P = 0.14</td>
</tr>
<tr>
<td>Moderate to severe mental retardation</td>
<td>0 (0%)</td>
<td>20 (77%)</td>
<td>* P = 0.001</td>
</tr>
<tr>
<td>Cerebral palsy with severe motor disability</td>
<td>0 (0%)</td>
<td>14 (54%)</td>
<td>* P = 0.03</td>
</tr>
<tr>
<td>Attention deficit disorder</td>
<td>0 (0%)</td>
<td>3 (12%)</td>
<td>P = 1.00</td>
</tr>
<tr>
<td>Special education or no school</td>
<td>0 (0%)</td>
<td>17 (65%)</td>
<td>* P = 0.001</td>
</tr>
</tbody>
</table>
* Statistically significant by $\chi^2$ test

Table 3 represents the developmental follow–up referring to the two ethnical groups of Jews and Bedouins. 17 (55%) Jewish children and 14 (45%) Bedouins and four children died. One Jewish child and one Bedouin child died from severe infection during ACTH treatment. Two children with cerebral palsy and severe mental retardation died later at age five and seven years.

Table 3. IS course referring to ethnical origin

<table>
<thead>
<tr>
<th></th>
<th>Jewish N = 17</th>
<th>Bedouin N = 14</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Symptomatic patients</td>
<td>12 (71%)</td>
<td>14 (100%)</td>
<td>* P = 0.05</td>
</tr>
<tr>
<td>Recurrence of disease</td>
<td>4 (24%)</td>
<td>10 (71%)</td>
<td>* P = 0.02</td>
</tr>
<tr>
<td>Moderate or severe mental retardation</td>
<td>10 (59%)</td>
<td>14 (100%)</td>
<td>* P = 0.02</td>
</tr>
<tr>
<td>Cerebral palsy with severe motor difficulties</td>
<td>4 (24%)</td>
<td>13 (93%)</td>
<td>* P = 0.004</td>
</tr>
</tbody>
</table>
* Statistically significant by $\chi^2$ test
As seen in table 3 there were significant statistical difference between Jewish and Bedouin children on all parameters. All 14 Bedouin children were symptomatic with moderate or severe mental retardation. 13 Bedouin children (93%) had cerebral palsy with severe motor difficulties. 10 Bedouin children (71%) suffered from recurrence of the disease. Among the Jewish children, 12 children (71%) were symptomatic. 10 children (59%) had moderate or severe mental retardation. Four children (24%) suffered from recurrence of the disease and four children (24%) had cerebral palsy with severe motor difficulties.

Table 4 represents the relationships between the clinical course and developmental long term outcomes. A statistically significant correlation existed between: A. Poor responses to initial treatment and placement in special education. B. Recurrence of disease and cerebral palsy with moderate or severe motor difficulties. C. Appearing of different type of epilepsy during long term follow up and placement in special education. There was a trend to statistical significance between recurrence of disease following treatment and moderate or severe mental retardation.

**Table 4. Influence of IS course and treatment on long term developmental outcomes**

<table>
<thead>
<tr>
<th></th>
<th>Mental retardation moderate/severe</th>
<th>Cerebral palsy with severe motor difficulties</th>
<th>Attention deficit disorder</th>
<th>Special education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Older age at diagnosis</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
</tr>
<tr>
<td>Delay in initiating treatment</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
</tr>
<tr>
<td>Poor response to initial treatment</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>* p = 0.04</td>
</tr>
<tr>
<td>Recurrence of disease</td>
<td>** P = 0.06</td>
<td>* P = 0.03</td>
<td>NS</td>
<td>NS</td>
</tr>
<tr>
<td>Different type of epilepsy</td>
<td>NS</td>
<td>NS</td>
<td>* P = 0.05</td>
<td>NS</td>
</tr>
</tbody>
</table>

NS = No statistical significance; * Statistically significant by x² test; ** Trend to statistical significance

**Treatment and response to treatment**

Treatment was immediately initiated after diagnosis in 11 children (35%), treatment initiated a month from diagnosis in 13 children (42%), while treatment was initiated more than a month from diagnosis in five children (16%). There was no significantly statistical correlation between delay in initiating treatment and developmental long term outcomes (see table 4).

This study population was diagnosed and treated over a course of 16 years so various treatments have been given to these patients. The first course of therapy was given as follow: 18 children (58%) received first treatment with ACTH, 10 (32%) children with IVIG, 3 (10%) with neither ACTH nor IVIG. Later some of the children received another course of ACTH. The age at diagnosis of patient treated with IVIG (Cryptogenic) was 8.4 +/- 4.7 months. It was significantly higher than the patients treated with ACTH – age at diagnosis 4.3 +/- 2.1 months (P=0.004). There was a significant difference between Jewish children and Bedouin children with IS. Perhaps this difference was the result of the fact that nine Jewish children...
were treated with IVIG, while only one Bedouin child was treated with IVIG (P=0.04). There were no difference between the number of Bedouin (9 children) treated with ACTH and Jewish (8 children). There was not a significant statistical difference between the two groups treated with ACTH or IVIG concerning clinical course or developmental follow-up.

Side effects of treatment

In 16 (52%) children no side effects were noted. In 8 (26%) there were only minor side effects with no need to stop treatment. Two (6%) children suffered from severe side effects, which required cessation of treatment. Two (6%) children died, while treated with ACTH. They suffered from severe complicated infections and one patient treated with IVIG developed anaphylaxis. All patients who were on other kinds of treatment did not develop any side effects.

Discussion

The number of children diagnosed with infantile spasms (IS) in the present study resulted in an estimated incidence of 1 per 4,000 live birth, as described in the literature (1-3). The high births rate at the Soroka University Medical Center of Ben Gurion University of the Negev gave the opportunity to collect and analyze the data from a well defined geographical area. The limitation is a small sample and hence the difficulties in dividing the patients into different groups.

94% of IS cases were diagnosed in children less then 12 months of age with peak appearance of symptoms at five months. 84% of children had an EEG with Hypsarrhythmia pattern in the first record at diagnosis, which is similar with the literature (1,2,4). In the study population the higher rate was of the symptomatic patient (84%) and the lower rate in the cryptogenic patients (16%), as found by others (1,2,4). The known etiology of IS in the study population was for one third in the pre- and perinatal group, while another third postnatal, especially metabolic and genetics diseases. This is in disagreement with the literature, where the main etiology is Hypoxic - Ischemic Encephalopathy (1,2,4). The disagreement can be explained on the basis of the special composition of the population in the south of Israel, where about 400,000 are Jews and more then 100,000 Bedouins. Although the Bedouins are about a quarter of the population in the region, 45% of the children diagnosed with IS were Bedouins, a population with a higher rate of consanguineous marriage resulting in a higher incidence of metabolic and genetic diseases (21). In the Jewish children the ratio between the symptomatic patient (71%) and the cryptogenic patients (29%) was as found in the literature (1,2,4). The high rate of the symptomatic patients in the Bedouin children can be explained by the high rate of recurrence of the disease in the Bedouin children, more were with moderate or severe mental retardation and high rate of cerebral palsy or other neurological symptoms (93%) in this population.

There was a significant correlation between poor response to initial treatment, different type of epilepsy and recurrence of disease to mental retardation and cerebral palsy with severe motor difficulties – and a trend between recurrence of disease and moderate to severe mental retardation as found in the literature (1,2,4). In contrast to the literature (22) we did not find a

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significant relationship between delay in initiating treatment and long term developmental outcomes (table 4). In comparison between the two types of therapy – ACTH versus IVIG – there was a trend in favor of ACTH, mainly in the Jewish children group, where enough children got both types of treatment. For a better comparison between the two types of treatment we need larger and homogeneous groups of patients, although others with a larger group of patients also found it difficult to determine a preference treatment (23). A severe clinical course of IS, characterized by poor response to treatment, recurrence of disease, appearing of another type of epilepsy was related to several factors, like Bedouin origin, seizures not typical to IS, EEG pattern not characteristic with hypsarrhythmia and older age at diagnosis. The presence of attention deficit disorder was noted in 3 (12%) children, but no significant relationship was noted with type of treatment, response to treatment, recurrence of disease or appearing of other type of epilepsy.

Several negative prognostic factors, affecting development, were found: A – factors relating to symptomatic IS – Bedouin origin, developmental delay at time of diagnosis, neurological absences at diagnosis, atypical seizures and abnormal imaging. B - Factors relating to severe clinical course – Poor response to treatment, recurrence of disease, appearance of different type of epilepsy during follow up.

**Conclusion**

In the study population of infantile spasms (IS) patients from Soroka University Medical Center at Ben Gurion University of the Negev, the rate of symptomatic patients was higher than the rate in the literature. We presume it is a result of higher prevalence of metabolic and genetic etiologies in the Bedouin population due to consanguineous marriage. This fact expressed a severe clinical course and poor developmental outcome in the Bedouin children compared to the Jewish children.

We did not succeed in proving preferability to specific treatment regarding immediate clinical response, long term developmental outcome or rate and severity of side effects. This is most probably a result of the small number of patients. We need multi-center research to achieve a better response for this important issue.

We need to consider starting treatment, within the cryptogenic patient group, with IVIG because of lesser side effects and shorter period of treatment. In case of poor response to continue with ACTH.

A child with symptomatic IS with severe clinical course is at higher risk for a negative developmental outcome, which include mental retardation, special education and cerebral palsy. IS is a severe disease in need of early diagnosis and appropriate treatment to try to prevent the severe implications for the patient, the family and the environment.

**Acknowledgements**


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References

Anemia in the Bedouin infant

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Abstract

Iron deficiency anemia is prevalent in low socioeconomic communities. The prevalence of anemia in Bedouin children in southern Israel was above 10 per cent in the year 2008. The Ministry of Health recommends iron supplementation to all children, starting from the age of four months. The Clalit Health Services (HMO), which provides primary medical care to most of the children has introduced hemoglobin screening as a health indicators. Over the period of four years, the prevalence of anemia dropped to 5.13% in family medicine clinics and to 2.85% in pediatric clinics after screening was introduced.

Introduction

Despite considerable interventions the global prevalence of anemia in infants and toddlers is high. Forty seven percent of preschool children (0-5 years) are anemic. Iron deficiency anemia (IDA) is the main cause of anemia in childhood, which accounts for about half of the anemic cases (1). Infants of low income families are at a higher risk and the prevalence of IDA reaches up to 33% (2). IDA in children is associated with impaired psychomotor development and growth. When compared to non-anemic children, the gap in the cognitive scores is widening over time. This is in addition to other developmental risk factors in low...
socio-economic families. IDF can cause long-lasting adverse effects on auditory and visual function, poor school achievement, and some behavioral problems (3-7). IDA has also been implicated in contributing to ADHD (8). The Nutrition Committee of the American Academy of Pediatrics published recommendations for prevention of IDA in infants (9). The Ministry of Health in Israel adopted similar recommendations and iron supplementation should be given to all infants aged 4 to 18 months (age 4-6 months 7.5 mg/d, age 6-18 months 15mg/d). At or near the age of 12 months, a routine hemoglobin screening is recommended. In addition, breast feeding is recommended, avoidance of cow milk and tea till the age of one year and to start eating meat from the age of six months. In 2006, a study using a comprehensive computerized database found the prevalence of anemia in the non-Jewish toddlers in Israel at 22.5% (10). The Clalit Health Services (CHS) adopted the recommendation to reduce the prevalence of anemia as a health quality indicator starting in 2008. Noticing the high prevalence of anemia in Bedouin infants in southern Israel, we were challenged by the recommendation to reduce the prevalence of anemia. The purpose of the chapter was to describe the changes in the prevalence of anemia in Bedouin toddlers in southern Israel in a large Bedouin pediatric clinic over the first four years of intervention.

Our study

Clalit Health Services (CHS), the largest health fund or HMO in Israel, has a computerized laboratory database that includes data on hemoglobin levels. We used the computerized databases to study the prevalence of anemia in Bedouin, infants aged 9 to 18 months, in the Rahat Pediatric Center during the years 2008-2012. The Rahat Pediatric Center is one of the largest pediatric clinics in the country with a population of 12,000 Bedouin children. This clinic, as the other clinics that take care of the Bedouin children, adopted the recommendation of the Ministry of Health in Israel to prevent anemia. In order to reduce the prevalence of IDA in the infants we developed an intervention program that was carried out by all the staff members in the clinic. All the infants at the age of four months were called to the clinic and were given iron supplement of 2mg/kg/day and the dose doubled at the age of six months. We checked the medical charts to verify that the parents purchased the iron preparation. If they did not purchase the iron preparation, they were invited again to the clinic. All the mothers were instructed, at the four month visit, which food is rich in iron and to refrain from drinking tea and cow milk until they reach the age of one. At the age of 10-12 months, a hemoglobin test was performed. If the infant was found anemic he was invited to the clinic to ensure that he would receive the recommended dose of iron supplements. Eating recommendations were repeated to the mother and a second hemoglobin test was done about eight weeks later.

For the purpose of our study, we queried the hemoglobin levels of infants aged 9 to 18 months assuming that all the infants at this age have had hemoglobin screening due to the Ministry of Health requirement. The prevalence of IDA in the Rahat Pediatric Center and all the other Bedouin clinics was assessed separately for each consecutive year. Infant who were diagnosed with chronic diseases or chronic anemia other than IDA were excluded. Anemia was defined as a hemoglobin level <105 g/L, as the cut-off point for anemia in ages 9-18 months recommended by Nelson Textbook of Pediatrics (11).
Findings

In the year 2008 the prevalence of IDA was 10.96 % in infants who were affiliated with family clinics and 8.76 % in the Rahat Pediatric Center. Over the five years of intervention the prevalence dropped to 5.13 % and 2.85 % respectively (see table 1).

Table 1. Prevalence of anemia in family clinics compared to Rahat Pediatric Center 2008-2012

<table>
<thead>
<tr>
<th></th>
<th>Infant in family clinics</th>
<th>Infants in the pediatric clinic in Rahat</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. of subjects**</td>
<td>No. anemic</td>
</tr>
<tr>
<td>12/2008</td>
<td>5,000</td>
<td>548</td>
</tr>
<tr>
<td>12/2009</td>
<td>5,593</td>
<td>579</td>
</tr>
<tr>
<td>12/2010</td>
<td>6,095</td>
<td>505</td>
</tr>
<tr>
<td>12/2011</td>
<td>5,901</td>
<td>406</td>
</tr>
<tr>
<td>12/2012</td>
<td>6,130</td>
<td>310</td>
</tr>
</tbody>
</table>

**subjects= toddlers at the age of 9-18 month of age at the time of hemoglobin examination

Discussion

Iron-deficiency anemia (IDA) in infants is a common problem worldwide and a public health risk factor to children in developing countries and in low-income populations (1,12,13). The high prevalence of IDA found in Bedouin children in southern Israel can be explained by their lower socioeconomic status (10). This trend is augmented by maternal multiparty, frequent deliveries, and prolonged breast feeding. Babies who are born with iron deficient store are prone to develop IDA. In addition, the breast milk of mothers with an iron deficiency lacks sufficient iron for the baby (1,10,14).

Lack of compliance with the recommendations to give iron supplementation to babies could be the most significant cause of IDA in this population. Prevention of IDA is of great importance as a lack of IDA improves growth, cognitive and motor development and performance in school (6,7). Public health intervention to reduce the burden of IDA should recommend increasing iron stores in babies and toddlers through supplementation, fortification of processed food and increased consumption of food with high iron content and bioavailability and daily administration of iron to infant and pregnant women (1).

The Ministry of Health in Israel recommends iron supplementation to be given to all infants aged 4-18 months. For many years primary physicians in Clalit Health Services were treating anemic infants, but since the year 2008 they took the responsibility not only for treatment, but also for prevention of anemia. The adoption of IDA as a health indicator boosted a sense of competition between clinics and encouraged each staff to excel in reducing IDA in their patients.

The yearly cohort of Bedouin babies in southern Israel is about 4,800. At the age of 9-18 months about 845 of them are affiliated to the Rahat Pediatric Center. The active approach of the clinics to treat and prevent IDA achieved an important reduction in the prevalence of anemia in this population. The lower prevalence of IDA found among infants treated in health
centers that are attended by pediatricians can be related to the high awareness of pediatricians to the importance of preventing IDA in infants.

The World Health Organization recommends a hemoglobin level of 110gr/l as a cut-off point for the diagnosis of anemia in the pediatric population (15), but we decided on a cut-off of 105gr/l. By that we increased the prevalence of IDA and the number of toddlers that were shifted from getting preventive iron supplementation to curative dosage of iron preparations. In this study there is no information about the mothers' hemoglobin levels and about the infants' intake. Correlating these variables to infant's IDA could help in designing future preventive measures. As this is a retrospective study, we lack measurements of iron storage levels. We assume that most of the infants with low hemoglobin are due to IDA, because other known anemic diseases were excluded from the study.

Despite this weakness, this work demonstrates that active intervention to prevent and treat IDA can significantly reduce the prevalence of IDA in Bedouin infants.

References


Chapter XV

Ethnicity and ethnic identity among Bedouin adolescents in Israel

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Abstract

While the focus on ethnic identity in the Middle East conflict has tended to be on Israeli Jews and Palestinian Arabs, there has been a paucity of research on the effects of this social construct on the marginal groups that are directly or indirectly affected by this political dispute. Methods: A sample of high-school students from five Bedouin schools in the south of Israel (n = 351). Results: Sample members (46.9%) ranked religion as the most important factor in forming their identity. Although they were Israeli citizens, 73% of the participants stated that the term “Israeli” was not an appropriate definition of their identity, and 44.9% stated that the term “Palestinian” was. Moreover, when given a list of six ways of characterizing themselves (i.e., Arab, Israeli Arab, Israeli, Palestinian Arab, Israeli Palestinian, Palestinian), “Palestinian Arab” received the highest endorsement (33.5%), followed respectively by “Israeli Arab” (29.7%), “Arab” (18.7%), Israeli Palestinian (11.7%), and Palestinian (3.5%); only 2.9% characterized themselves as Israelis. Conclusions: This indicates that their Arab/Palestinian ethnic identity is predominant and that an acceptance of their Israeli identity, while secondary, also is widespread. More than two-thirds (68.6%) of the respondents were in favor of establishing a Palestinian state alongside Israel. The implications of these and other findings are discussed.

Introduction

Much that has been written about the Arab Bedouins of the Negev has focused on the significant impact of the state of Israel and its attempts to settle this semi-nomadic group (1-3). Not surprisingly, the Negev Bedouins have occupied the attention of many Israeli social scientists (4-6). One evident exception, however, is that they have rarely addressed the ethnic identity of these Bedouin Israeli citizens.

The present chapter goes further by focusing on the formation of ethnic consciousness and ethnic identity among Bedouin adolescents. Studies have established the association between ethnic identity and self-esteem (7), ethnic identity and psychological functioning (8), as well as ethnic identity and experiences of racism and discrimination (9). According to Phinney et al (9), “when one’s group faces rejection and discrimination, a common strategy, in order to preserve one’s self-respect, is to reaffirm and strengthen group identity, through movements, which stress ethnic pride” (p. 179). In a similar vein, Smith (10) found that ethnic identity is formed by a person’s majority or minority group membership and the quality and nature of interaction with out-groups members. As outside forces challenge identity, it is actually further reinforced as the group attempts to regain its collective sense of security and empowerment.

The primary objective of this paper is to examine how sociopolitical and historical factors are shaping the ethnic identity of the Bedouin Arab citizens of Israel. This group has a dual identity that is both Palestinian Arab and Israeli, although they hold a marginal status with respect to both groups. Thus, the process of ethnic identity formation is becoming more challenging and complex for this group. First, as Arab Bedouin, they are an oppressed minority within Israel, although they are Israeli citizens (11). Second, by virtue of their Israeli citizenship, they are outsiders within the Palestinian community, although they are part of that community by racial origin (11,12). Through no choice of their own (13), the Israeli Bedouin

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belong to both warring factions, and their joint membership in both groups may have the potential to impose psychological conflict as well as cognitive dissonance and incongruence, cognitive processes that elicit self and ethnic searching.

Generally speaking, most of the Israeli Jewish population perceives the Bedouin Arab community as a marginal and neutral group that is not allied with either the Israeli Jews or the Palestinian Arabs. Based on the assumption that marginal individuals are psychologically unbiased and ideologically uncommitted, they do not expect the Bedouin to show any loyalty or favoritism toward either group. This offers the Bedouin the potential of emerging as social critics (13), who use their marginality to play the role of bridging the warring Israeli and Palestinian Arab parties. Thus, they have the potential to respond creatively to a polarized political situation, combining their knowledge and experience as insiders with the critical attitude of outsiders, to the advantage of both the Israelis and the Palestinians. But, as the minimal group paradigm (14) suggests, an arbitrary single factor alone is capable of eliciting emotional bias among participants randomly assigned to two groups: ingroup “us” and outgroup “them.” Israelis and Palestinian Arabs have a long history of antagonism, conflict over land and power, which exacerbates group categorization and differentiations, thereby accelerating their ethnic pride and ethnic self-identification (15).

**Review of related literature**

Over the last decade, research on the development of ethnic identity has garnered increased attention among social scientists (10,16-18). Ethnic identity refers to a set of ideals, values, behaviors, and attitudes that pertain to one’s membership in an ethnic group (19,20). Feagin (21) defined an ethnic group as a “socially distinguished” entity formed by those who embrace a specific culture or nationality. Ethnic identity also is viewed as a selected social domain in which the shared values of the in-group merge with its interactions with the out-group (18,22,23). However, Thompson (24) argued that groups engage in behaviors within a social context, based on relevant cultural or physical criteria.

Theoretically speaking, an individual’s ethnic identity provides information about the degree to which the individual has reflected on and examined the meaning of his or her ethnicity, thereby developing and nurturing a sense of obligation to a particular ethnic background and lineage (25,26). According to Garcia and Hurtado (17), racial ethnic identity and awareness has been reported among children as young as five years old. It has also been established that identification with an ethnic group is associated with positive self-esteem and self-concept, as well as resiliency (27). According to Tajfel (28), ethnic identity relates to some extent to social identity, and is defined as “that part of an individual’s self-concept which derives from his knowledge of his membership in a social group (or groups) together with the value and emotional significance attached to that membership” (19).

Phinney (20) attempted to expand on this premise by defining ethnic identity as a dynamic process that entails one’s identity and cultural practices, along with other ethnic involvements, such as a common ancestry, culture, race, religion, language, kinship, or place of origin. According to Phinney (29), some researchers stress that self-identification is the key component of ethnic identity; others believe that feelings of belonging and commitment are the essential elements of ethnic identity. Ethnic identity is chosen, and, in some cases, may be
invisible to those who are not members of the relevant group. However, in other cases, a racial identity founded upon outwardly discernable features may be imposed on a group (30).

When evaluating the worth and adaptation of individuals, Euro-American cultural values place considerable emphasis on individualism, materialism, physical attributes, and social status. Marginalized groups, such as African Americans, are compelled to adapt to this monocultural Western worldview (31), which are often quite different from their own cultural value systems (32,33). When minority groups fail to abide by the attitudes and worldviews held by the dominant group, they become subject to discrimination, stereotyping, and prejudice (34). As result of these experiences, minority groups “carve up” their ethnic identities and group categorization and differentiation become inevitable. Ethnic identity is a direct function of these values and worldview frameworks, and is mediated by other social and historical forces such as distribution of power, quality of contact with dominant group, ethnic worry, ethnic discrimination, and racism (25,34,35).

The Bedouin Arab community in Israel is a minority group. It consists of nearly 1,400,000 people from 27 different tribes. Since the aftermath of the 1948 war, the community’s traditional social structure has collapsed, and they have been forced to abandon their traditional semi-nomadic lifestyles and move into urban settlements (36,37). From 1948 until the present, the successive governments of Israel have followed a policy of urbanization of the Bedouin population, ostensibly in order to a) more efficiently provide government services such as education, health, and welfare; and b) use the large tracts of land traditionally used by the nomadic Bedouin to establish cities, towns, and villages for the ever-increasing Israeli Jewish population (11,36). However, the Bedouin community has resisted this forced urbanization policy and over time, their resistance has grown more active (12). The Bedouin are currently being forced out of and restricted from using open lands, and the Israeli government appears to be indifferent to their needs (4,38). Israeli scholars have supported this policy, on the grounds that the “people of the desert” lack a sense of ownership, and in the Western worldview, ownership is the primary means of valuing property. This fundamental conflict over land has shaped the contacts that the Bedouin have had with the Israelis, and has led to negative attitudes towards Israeli Jews (12,38).

The Bedouin Arabs themselves have been unable to express their connection to the land in a way that is understandable to sedentary Westernized people. However, their attachment to the land is poignantly reflected in their actions since the displacement of more than half of their population in 1948. To this day, most of them have refused to take any compensation for their land, despite the Israeli government’s attempts to encourage them to do so. After more than 50 years, they are still prohibited from using their traditional lands (38,39) and they believe that in this respect they are being targeted and discriminated against because of their ethnicity.

Before the establishment of the Israeli state, the Bedouin represented the majority of the population in the Negev. However, since the creation of Israel, they have been reduced to the status of a minority in what they see as their homeland. This change has occurred for many reasons, including the fact that a) many Bedouin Arabs were forced to leave the Negev region by the Israeli authorities; b) some Bedouin voluntarily left the region to go to an Arab country (e.g., Jordan) in search of a more secure environment; and c) there has been an influx of Jewish immigration into the area (40). Another external force that significantly altered the condition of the Bedouin was the social change that occurred after the occupation of the West Bank (Judea and Samaria) and Gaza Strip in 1967. Historically, Negev Bedouin Arabs have
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been isolated from other Arab communities, because they have been subject to restrictions on their movements. In fact, any Bedouin who wished to travel across Israel required special authorization from the Israeli army (3). However, after 1967, Bedouin Arabs were no longer isolated from other Arabs in these areas (12,41). Some of them reconnected with relatives, while others married Palestinian Arabs and formed families in the Negev. Because of the relatively higher education levels of Palestinian Arab women compared to Bedouin women, some well-educated Bedouin men chose to marry Palestinians from Jordan. Some of the Bedouin (although a relatively small proportion) resettled in the West Bank and Gaza Strip. After the peace accord between Israel and Jordan, many Bedouin were able to reconnect with relatives who had been expelled to Jordan (40,42). In recent years, many Bedouin college students have attended educational institutions outside Israel, in the Gaza Strip, West Bank, or Jordan, and many Bedouin schoolchildren have been taught by Palestinian Arab teachers (43).

The development of ethnic identity is not only influenced by in-group membership, but also shaped by the quality of interactions with members of out-groups (10). The ongoing dispute between the Israelis and the Palestinian Arabs has deeply affected the course and direction of Bedouin ethnic awareness, self-identification, preferences, and attitudes. Previous studies have established an inverse relationship between the self-identification of ethnic, national, and social groups and their attitudes towards out-groups (16,44-46). Consistent with this finding, group identification has been found to induce individuals to prefer in-group members over out-group members (47), to view themselves as a representative in-group member, and to exhibit high levels of cooperation with in-group members, often sacrificing personal interests in an attempt to preserve the interests of the in-group (48,49).

The Israeli and Palestinian groups have deep-seated, persistent attitudes not only about the conflict per se, but also about their in-group and the members of the out-group. According to Kelman (15), each side in the conflict “holds the view that only one can be a nation: ‘Either we are a nation or they are. They can acquire national identity and rights only at the expense of our identity and rights’” (p. 354, emphasis in original). In the course of this conflict, both sides believe that they are competing for the same resources (e.g., land), using a “winner-takes-all” approach. According to Heraclides (50), this ethnic-based conflict “is based on a vertical psychological boundary—an ‘intermediary’ between ingroup and outgroup, which has the potential to give rise to group mobilization and politicization” (p. 197). As such, the conflict has served neither group; rather, it has politicized interpersonal relationships among ordinary people from both groups, including the Bedouin community. Moreover, the ongoing conflict has exacerbated each person’s sense of belonging to the in-group, to the point where the thoughts and feelings of the in-group are taken on as the individual’s own (51, 52). The result of this prolonged and intense conflict is that significant pressure has been placed on the individual to differentiate his or her in-group from that of the out-group, and each group has dehumanized and even demonized the other.

While the focus on ethnic identity in the Middle East conflict has tended to be on Israeli Jews and Palestinian Arabs, there has been a paucity of research on the effects of this social construct on the marginal groups that are directly or indirectly affected by this political dispute. However, dual identification with both two groups is becoming problematic. As a result of the regional conflict, the Bedouin community has become more politically active, and has been increasingly forced to choose between their Palestinian Arab ethnicity and their bicultural ethnic identity, which has become difficult to maintain in this political context.
The threats to their cultural and traditional ways of life, their socioeconomic disadvantages and their position on the fringes of Israeli society (5,12) all make it challenging for the Bedouins to develop a positive association with the Jewish majority in Israel. The Israeli government anticipated that establishing towns for the Bedouin would increase their opportunities for employment and access to welfare services, which in turn would build their levels of self-confidence, self-worth, and sense of control over their destinies. However, the urbanized Bedouin, who are no longer employed in their traditional occupations, such as sheep or camel herding and agrarian activities, are still suffering from a grossly inadequate economic infrastructure and a paucity of employment opportunities (53). Many of their dwellings resemble those found in shantytowns in the world’s poorest urban environments. The result is that, for the average Bedouin, life has gone from bad to worse. The seven towns into which the Bedouin have been relocated are desolate settlements; paved roads are scarce, and there is a lack of basic, essential services, including healthcare facilities, public libraries, playgrounds, and cultural centers (53,54). In towns such as Tel Sheva, Kessifa, Ar Ara, and Lakya (with populations ranging from 5,000 to 9,500 people), most of the roads are in poor condition—incomplete, unpaved, or nonexistent altogether. These settlements also are characterized by extremely high rates of poverty and unemployment. In the 1999 Haaretz report, the unemployment rates were 17.7% in Rahat, 12.2% in Tel Sheva, and 10.4% in Ar Ara. Using survey research, Abu-Saad and Lithwick (54) also noted that out of the seven Bedouin towns, six were ranked last in Israel for employment opportunities. In addition, the Bedouin towns have not been classified as national development areas, which would make them eligible for tax incentives for industry, educational development, and housing. These factors heighten the sense of vulnerability and distinctiveness within the Bedouin community, and increases their sense of alienation from Israeli society.

Formal education has the potential to help this minority group adjust successfully to the new Western way of life in Israel and expedite its full integration into mainstream society. However, the Bedouin education system has not received the needed attention and funding from the Israeli government (36,43,55).

It comes as no surprise, therefore, that the school achievement levels of Bedouin children are substantially lower than that of Jewish children (56). The Bedouin schools are poorly built and maintained, overcrowded, understaffed, and staffed by unqualified teachers (36,43,55). School dropout rates have reached 40% in Rahat, 45% in Tel Sheva, and 50% in Kessifa. Furthermore, the percentage of high school students who have passed the matriculation exams is among the lowest in the country. Because of the poor quality of the Bedouin educational system, there is little incentive for Bedouin students to remain in the school. During the 1991–92 school year, only 16% of Arab 17-year-olds earned their matriculation certificates, compared to 38% of Jewish seventeen-year-olds (56). And the proportion of Negev Bedouin graduates was even lower, due to not having access to the programs intended to increase their participation in higher education. The gap in educational outcomes and resources allocated to the Bedouin schools compared to the schools in the Jewish areas of Israel reflects discriminatory practices and reinforces the Bedouin Arabs’ attitudes that their ethnicity and minority status are negatively impacting their lives and the quality of their education.

Unfortunately, there is a lack of empirical data on the ethnic identity of the Bedouin in Israel. While the focus of ethnic identity in the Middle East conflict has tended to be on Israeli Jews and Palestinians, there has been little research on the effects of this conflict on the marginal communities with allegiances to both groups. The present study investigates...
how sociopolitical factors (e.g., minority status, the Israeli-Arab conflict, the lack of power and resources) have influenced the development of ethnic identity in the Bedouin. For the first time, this study allows Bedouin youth to define themselves and demonstrate their self-identities, as well as express their ethnic self-consciousness (consciousness of self within a particular group) (57). Therefore, the primary purpose of the present study was to investigate the development of the ethnic identity of Bedouin-Arab adolescents in the context of their life experiences. Bachay (58) stated that the formation of ethnic identity is “a function of adolescence, but it neither begins nor ends in adolescence” (p. 107). Our objective in this study is to examine the ethnic identity of this cohort and provide empirical evidence about four possible ethnic orientations:

- Integration or biculturalism: The Bedouin group identifies strongly with both the Palestinian Arab and the Israeli groups.
- Marginality: The Bedouin group identifies with neither group.
- Assimilation: The Bedouin group identifies exclusively with the majority Israeli group and culture.
- Separation: The Bedouin group identifies only with the ethnic Palestinian Arab group and culture.

Our prediction is that the Bedouin Arab adolescents in this study will embrace their Palestinian Arab ethnicity as the central component of their identity, will perceive Palestinian Arabs as their primary reference group, and will relegate their identity as Israeli citizens to a secondary status. Despite research findings that minorities who are discriminated against tend to identify with the majority culture rather than their own cultural groups, we still predict that the Bedouin minority will embrace its Palestinian ethnic identity more prominently and assert a greater sense of belonging to its racial group. These expected results will raise the question whether it is still possible, in the face of the Middle East conflict, for the Bedouin to maintain a unique ethnic identity that involves marginalization or dual identification with both Israelis and Palestinian Arabs.

Because the Bedouin-Arab community is characterized by distinct gender differences and a patriarchal social structure, and because boys enjoy higher levels of social interaction than do girls (6,51,59), we also predict that there will be gender differences among Bedouin adolescents with respect to the thoughts, values, ideals, attitudes, feelings, and behavior that they hold about their identity as a member of the in-group. Thus, the second purpose of this investigation was to compare male and female adolescents with respect to their ethnic identity. Also because approximately 40% of the Bedouin in the Negev live in towns and villages, and 60% live semi-nomadically in unrecognized villages that are devoid of infrastructure or services (12), it is probable that level of urbanicity also will be related to ethnic identity among the sample group. Because Bedouin children experience severe disadvantages in the Israeli education system, including high attrition rates, low high school graduation rates, and low enrollment and completion rates in colleges and universities (60), it is likely that the ethnic identity of Bedouin-Arab adolescents will vary as a function of education level. Thus, the final purpose of the study was to determine whether the fathers’ level of education is associated with the ethnic identity of Bedouin adolescents. It should be noted that because the majority of Bedouin women are homemakers and have limited access
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The present study is unique in several ways. First, it represents the initial empirical investigation of ethnic identity among the Bedouin Israeli population. Second, this inquiry is one of a few that has examined the ethnic identity of a group that has been forced to change its citizenship. Third, it is one of the first investigations to disaggregate ethnic identity within a population. Finally, previous studies (51) mostly have investigated the mental health of Palestinian and Israeli children and adolescents. Other investigations have examined various attitudes of these group members. The current inquiry expands on these studies associated with the Israeli-Palestinian conflict by examining, for the first time, a group that is not a direct combatant in the dispute. As such, it was hoped that findings from this study would increase our understanding of the social and ethnic dynamics of the Middle-East conflict.

Our sample

The sample involved students from five Bedouin-Arab urban high schools located in Israel: Rahat School, Arur School, Segev-Shalom School, Tel-Sheva School and Lakiya School. These schools were located in the areas that have been formally recognized by the Israeli authorities for the settlement of the Bedouin. Efforts were made for the participants to be divided as evenly as possible among each school, so that the sample represented all the schools in the area. All the sample members were residents of the Negev in the southern part of Israel, and all the participants and their parents were born in the Negev. The Israeli government has established high schools in these six Bedouin-Arab settlements, despite the fact that 60% of the Bedouin continue to live in the unrecognized villages, all Bedouin children have to attend one of these six high schools (54). The Israeli authorities have deemed these villages as unrecognized and unplanned (11,52).

This study received authorization from the Israeli Ministry of Education, and the permission for each student to participate was obtained through their parents’ signed permission. The participants and their parents were promised full anonymity and the right to pull out of the study at any time, if so desired. The participants received no material or other payment; however, they were informed that their participation would help the researchers add to the body of knowledge.

A total of 351 students participated in the study. Males represented 48% of the sample. The ages of the participants ranged from 14 to 20 years (M = 16.35, SD = 1.17). Approximately one-fifth (i.e., 21.6%) of the sample resided in the city, with 48.8% living in a village, 17.5% living as part of a tribe, and the remainder (i.e., 12.1%) residing in an unrecognized village. In addition, 44.2% of participants lived in houses that they classified as modern, 33.5% lived in single wood houses, 19.8% lived in huts, and 2.4% lived in tents. The number of members in each household ranged from 1 to 27 (M = 9.46, SD = 3.96). In line with this, the number of rooms in each dwelling ranged from 1 to 20 (M = 5.42, SD = 2.59). Only slightly more of the participants (54.5%) lived in places that had separate bedrooms than lived in abodes with no separate bedrooms.

Although the majority (68.1%) of sample had telephones in their homes, relatively few of them (14.7%) lived in dwellings that had hot water. With respect to the father’s level of
education, the adolescents reported that approximately one-third (33.7%) of the fathers had no formal education at all, with another third (37.6%) having only an elementary school education. A complete high school education was the highest level of attainment earned by 15.5% of fathers. Only 13.3% of fathers had a college or university education. With regard to the mothers, the majority (61.1%) had no formal education, with an additional 19.1% experiencing only an elementary school education. A further 14.2% had attained a high school education, with the remaining 4.7% attaining a college or university education. These distributions pertaining to parental education were similar to those reported by Elbedour, Onwuegbuzie, Caridine and Abu-Saad (61), who studied the effect of polygamy on Bedouin third graders.

Instruments

All participants were administered the Ethnic Identity Questionnaire (EIQ), an instrument designed by Smooha (62) to be administered within 90 minutes. The EIQ consists of three sections. The first section, entitled, “Lifestyle,” extracts demographic information (e.g., gender, age). The second section, entitled, “Ethnic Identity,” contains items that attempt to assess the ethnic identity of each respondent, as well as her/his attitudes toward Arab-Jewish relations. Some of the items on the questionnaire represent categories (e.g., “daily,” “quite often,” “sometimes,” “almost never”); whereas some of the items involve rating scales (e.g., “not good at all,” “not good,” “good,” “very good”), with the remaining items representing Likert-format scales (e.g., “definitely willing,” “willing,” “uncertain,” “unwilling,” “definitely unwilling”). In order to maximize validity (i.e., content-related validity and construct-related validity), all items were read aloud by the first author and a research assistant to participants, and sufficient time was given to respond to each question. Unfortunately, because of the mixed item format, score reliability pertaining to the instrument could not be computed.

Procedures

In order to maximize the internal validity of the findings by minimizing threats via differential selection of participants and instrumentation (63), the study was carried out within the school framework according to the following criteria. First, the sample members participated in small groups of 10 adolescents only. Second, all participants were residents of the Negev area and from Bedouin backgrounds, from whom the researchers received their permission and that of their parents to participate in the study. Third, questionnaire instructions and explanations were delivered to the participants on a pre-prepared audio tape. Fourth, in an attempt to collect independent observations, the study did not include siblings from the same family. Fifth, the researchers and their assistant—Arabic speakers who were familiar with the culture—were present during the administration of the instrument to clarify and answer any student questions, as well as to emphasize the importance of the study and stress that anonymity would be maintained. Finally, the study was undertaken consecutively, without breaks.
Findings

In line with the purposes of the study, the results are presented in four major sections. The first section contains descriptive statistics pertaining to ethnic identity and attitudes towards Arab-Jewish relations of the full sample. The remaining three sections involve the presentation of inferential statistics, using a series of chi-square analyses to examine ethnic identity as a function of gender, urbanicity, and parental education level, respectively. It should be noted that because of the length of the EIQ, only items considered to yield the most notable responses were reported.

Ethnic identity and attitudes towards Arab-Jewish relations of full sample

Dwellings. The Bedouin-Arab adolescent participants were asked to indicate the degree to which they were satisfied with their dwellings. Encouragingly, only 9.7% of the respondents deemed their homes to be either “not good” (2.9%) or “not good at all” (6.9%). The remaining 91.3% rated their abodes as being either “good” (54.2%) or “very good” (36.1%). However, the picture was not as positive with respect to the adolescents’ attitudes towards the cultural and educational services (e.g., schools, extra-curricular education, libraries, and entertainment opportunities) in their places of residence. Indeed, only 36.0% were either “satisfied” (18.6%) or “definitely satisfied” (17.4%) with these services, with 28.3% “not too satisfied”, 22.6% “not satisfied”, and 13.1% “definitely not satisfied”.

Social relationships. Somewhat surprisingly, nearly one-half of the sample members (44.4%) almost never had contact with Jews, with a further 37.2% having only occasional contact with Jews. Only 12.9% and 5.4% had frequent and daily contact, respectively. Moreover, half of the participants (50.1%) reported having no Jewish acquaintances or friends. Also, an additional 23.1% of adolescents who had Jewish friends had never visited them at their homes in the last two years. Only 13.5% and 13.3% had visited Jewish friends once/twice and on three or more occasions, respectively. With respect to having Jewish people as one of two immediate neighbors, one-fourth (25.7%) were either willing (15.0%) or definitely willing (10.7%) for this to occur. A further 38.4% were willing to have a Jewish person as an immediate neighbor, although they would prefer Arab neighbors. Finally, 35.8% of the teenagers wanted to have exclusively Arab people as immediate neighbors.

All research participants were asked whether they believed that their relations with Jewish people were on an equal footing. Responses were very mixed. Whereas 15.1%, 24.9%, and 7.8% indicated that they believed this to be always the case, mostly the case, or often the case, respectively, slightly more than half (52.2%) of the adolescents reported either that they believed that this was almost never the case (27.8%), or that they had no contacts with Jewish people for them to hold this belief (24.3%). Another interesting split occurred when the teenagers were asked whether they believed that there should be separate schools for Arabs and for Jews. Slightly less than one-half (42.9%) agreed with this idea, with 36.0% uncertain, and 20.5% against this plan. A very similar distribution occurred when the question was raised as to whether there should be separate residential quarters for Arabs and Jews. Here, 46% agreed, with 31.9% uncertain, and 22.1% disagreeing. Finally, an extremely large
proportion (97.1%) of the teenagers indicated that their thinking and behavior were affected by their Arabic origin either to a great extent (60.6%) or to some extent (36.5%).

Political representation. When asked whether they thought that political parties should be separate for Arabs and Jews, responses were very evenly split. Specifically, 34.1% agreed, 34.4% were uncertain, and 31.5% disagreed. Approximately two-thirds (66.4%) of adolescents reported that they did not favor the imposition of compulsory military service on Arabs in Israel, with only 16.2% in favor of this and the remainder (17.4%) uncertain.

The following issues led to approximately two-thirds of sample members deeming them to be important, with less than one-fifth regarding these issues as not important: Arabs controlling their own educational system (68.6% vs. 9.1%); Arabs controlling their own local governments (62.3% vs. 13.5%); Arabs controlling separate Arab departments (55.3% vs. 15.6%); establishing an independent Arab university (62.7% vs. 19.1%); establishing a new, independent Arab-language newspaper, radio, or television station (66.6% vs. 15.0%); establishing an independent Arab trade union (68.9% vs. 13.1%); establishing an independent Arab industry (64.5% vs. 15.8%); and establishing a new, independent Arab national political party (63.0% vs. 12.5%).

Of the types of political organizations presented as being the most desirable for Arabs in Israel at the current time, independent Arab national political parties received the greatest endorsement (43.0%), followed, respectively, by non–Zionist parties composed of Arabs and Jews (27.9%), no political parties at all (19.3%), Arab parties affiliated with Zionist parties (6.5%), and the existing Zionist parties but joining as individuals with equal status (3.3%).

Ethnic identity. The adolescents were asked to rank which identities they found to be the most important. Interestingly, religion was rated as being by far the most important component of identity (46.9%), followed, a long way behind, by nationality (15.8%), socioeconomic status (15.5%), extended family (11.1%), and citizenship (10.6%), respectively. Not only did citizenship receive the lowest endorsement, but when asked whether they were satisfied with being an Israeli citizen, only 44.5% reported that they were either definitely satisfied (24.9%) or satisfied (19.7%), with the remaining 55.5% expressing dissatisfaction. Further, nearly three-fourths of the adolescents (73.0%) believed that the term “Israeli” was not appropriate in describing their identity. Also, a relatively large, albeit smaller, proportion of sample members (44.9%) believed that the term “Palestinian” was appropriate in describing their identity. Moreover, when given a list of six ways of characterizing themselves (i.e., Arab, Israeli Arab, Israeli, Palestinian Arab, Israeli Palestinian, Palestinian), “Palestinian Arab” received the highest endorsement (33.5%), followed respectively by “Israeli Arab” (29.7%), “Arab” (18.7%), “Israeli Palestinian” (11.7%), and “Palestinian” (3.5%); only 2.9% characterized themselves as Israelis.

Approximately one-third of the adolescents (36.5%) revealed that they felt closer to Oriental Jews than to Ashkenazi Jews. The reverse was true for only 12.8%. Half of the sample (50.4%) stated that it made no difference. A similar proportion of study participants (47.9%) indicated that they felt closer to Arabs in the West Bank and Gaza Strip than they did to Jews in Israel. Disturbingly, nearly one-half of the sample (48.2%) did not recognize Israeli’s right to exist, with a further 33.8% recognizing this right with reservations. Only 17.9% of the adolescents unequivocally recognized Israeli’s right to exist.

More than two-thirds (69.2%) indicated that Israel should recognize the Palestinians as a nation, with an additional 17.7% supporting this under certain circumstances. Only 13.1% were against the creation of a Palestinian nation. Similarly, 68.6% of sample members were
in favor of establishing a Palestinian state alongside Israel, 18.2% supported this under certain circumstances, and only 13.2% opposed this scenario. Also, 65.1% of study participants reported that they would definitely (27.9%) or would consider (37.2%) moving to a Palestinian state if one were established alongside Israel.

Finally, when asked where they felt most at home, 45.4% revealed that they felt most at home in Israel, 21.8% felt most at home in an Arab country, and 13.6% felt more at home in the West Bank and Gaza Strip, with 19.2% reporting that it made no difference.

Gender comparisons

A series of chi-square analyses was conducted to compare the male and female adolescent participants with respect to the items presented in the previous section. The items falling under each of the four sub-sections above (i.e., Dwellings, Social Relationships, Political Representation, and Ethnic Identity) were treated as a family, and the Bonferroni adjustment was used to maintain a 5% familywise error rate. Due to space constraints, only differences that were statistically significant after this adjustment are discussed. In all cases, Cramer’s V statistic was used as an index of effect size (i.e., practical significance), using Cohen’s (1988) criteria to determine whether the statistically significant differences represented small (V = .10 to .29), medium (V = .30 to .49), or large (V > .49) effects.

After applying the Bonferroni adjustment, six gender comparisons emerged as statistically significant. With respect to the four sub-sections, these six statistically significant differences were distributed as follows: dwellings (no gender differences), social relationships (one gender difference), political representation (two gender differences), and ethnic identity (three gender differences).

Social relationships. A statistically significant difference emerged between the male and female adolescents with regard to the number of times they visited their Jewish friends ($p^2[3] = 10.91, p < .01$), with a small-to-moderate effect size (Cramer’s V = .19). Interestingly, females (57.5%) were more likely to declare that they had no Jewish friends/acquaintances than were males (41.7%). On the other hand, females (19.0%) were less likely than were males (35.2%) to have visited a Jewish friend/acquaintance at least once.

Political representation. A statistically significant gender difference was found among the adolescents in terms of whether they supported that an independent Arab national political party be established ($p^2[2] = 12.33, p < .001$). Here, males (74.1%) were more likely to endorse the establishment of this political party than were females (58.9%). The converse also was true. That is, males (5.2%) were less likely than were females (17.9%) to support this formation. The effect size (Cramer's V = .21) was small-to-moderate. Further, the male and female participants differed with respect to the types of political organizations they believed were the most desirable for Arabs in Israel at the current time. In particular, females (25.9%) were statistically significantly ($p^2[2] = 12.60, p < .01$) more likely than were males (11.6%) to endorse no political parties at all. The effect size (Cramer's V = .21) again was small-to-moderate.

Ethnic identity. A statistically significant gender difference was found among the adolescents in terms of whether they felt closer to Oriental Jews or to Ashkenazic Jews ($p^2[3] = 10.65, p < .01$). Specifically, a greater proportion of males (16.5%) than did females (6.7%) revealed that they felt closer to Ashkenazic Jews than to Oriental Jews. At the same time, a
higher percentage of females (58.7%) than did males (43.9%) stated that it made no difference. The effect size (Cramer’s V = .19) again was small-to-moderate.

Interestingly, a statistically significantly ($p^2 = 8.29, p < .01$) greater proportion of males (58.4%) than did females (41.4%) did not recognize Israeli’s right to exist. At the same time, females (39.5%) were more likely than were males (28.5%) to recognize this right with reservations. The effect size (Cramer’s V = .17), once again, was small-to-moderate.

Finally, a statistically significant gender difference was observed with respect to what the adolescents believed should be the borders of the state of Israel ($p^2 = 16.01, p < .001$). The effect size (Cramer’s V = .24) associated with this difference was small-to-moderate. Although a similar proportion of males (30.9%) and females (31.7%) believed that Israel should return to the 1947 United Nations Partition Resolution borders, a higher percentage of males (39.0%) than did females (19.0%) supported the pre-1967 borders. At the same time, a smaller proportion of males (30.1%) than did females (49.3%) endorsed the present borders with certain modifications.

**Urbanicity comparisons**

After applying the Bonferroni adjustment, three urbanicity comparisons emerged as statistically significant. With respect to the four sub-sections, these three statistically significant differences were distributed as follows: dwellings (one difference), social relationships (no difference), political representation (two differences), and ethnic identity (no difference).

**Dwellings.** A statistically significant relationship was found between urbanicity (i.e., city/village vs. unrecognized village) and whether adolescents liked their dwellings ($p^2 = 20.42, p < .0001$). The effect size (Cramer’s V = .27) associated with this relationship was moderate. Specifically, adolescents who lived in unrecognized villages (26.8%) were the most likely to deem their homes as being either “not good” or “not good at all.” In contrast, only 5.9% of those living in either cities or villages were dissatisfied with their dwellings.

**Political representation.** A statistically significant relationship was found between urbanicity and how important the adolescents believed it was for Arabs to control separate Arab departments ($p^2 = 7.02, p < .05$). The effect size associated with this relationship was small-to-moderate (Cramer’s V = .15). In particular, adolescents living in villages and cities (51.9%) were less likely than were those living in unrecognized villages (63.4%) to endorse Arabs controlling separate Arab departments.

Further, a statistically significant relationship was found between urbanicity and whether the adolescents believed that there should be separate political parties for Arabs and Jews ($p^2 = 8.17, p < .01$), with a small-to-moderate effect size (Cramer’s V = .17). Specifically, adolescents living in cities and villages (31.2%) were less likely than were those living in unrecognized villages (45.0%) to endorse separate political parties for Arabs and Jews.

**Parental education level**

After applying the Bonferroni adjustment, four parental education level comparisons emerged as statistically significant. With respect to the four sub-sections, these four statistically
significant differences were distributed as follows: dwellings (one difference), social
relationships (one difference), political representation (two differences), and ethnic identity
(no differences).

Dwellings. A statistically significant relationship was found between parental education
level and whether adolescents liked their dwellings ($p^2[9] = 20.11, p < .01$). The effect size
(Cramer’s $V = .25$) associated with this relationship was small-to-moderate. Specifically,
adolescents whose fathers had received no formal education at all (14.3%) were the most
likely to deem their homes as being either “not good” or “not good at all.” This was followed,
respectively, by teenagers whose fathers had received elementary school education (11.1%),
those whose fathers had received college/university education (4.5%), and those whose
fathers had received high school education (4.0%).

Social relationships. A statistically significant relationship was found between parental
education level and whether adolescents believed that their relations with Jewish people were
on an equal footing ($p^2[12] = 31.65, p < .001$). The effect size (Cramer’s $V = .31$) associated
with this relationship was moderate. Most notably, adolescents whose fathers had received
high school education (26.9%) and college/university education (25.6%) were more likely
than were those whose fathers had received elementary school education (10.3%) and no
formal education (11.0%) to believe that their relations with Jewish was on an equal footing.

Political representation. A statistically significant relationship was found between
parental education level and whether adolescents believed in the imposition of compulsory
military service on Arabs in Israel ($p^2[6] = 15.69, p < .01$). The effect size (Cramer’s $V = .22$)
associated with this relationship was small-to-moderate. Interestingly, adolescents whose
fathers had received college/university education (20.5%) and no formal education (20.9%)were more likely than were those whose fathers had received high school education (9.6%) or
elementary school education (11.3%) to support the imposition of compulsory military
service on Arabs in Israel.

Finally, a statistically significant relationship was found between parental education level
and whether adolescents supported the establishment of an independent Arab university
was small-to-moderate. Interestingly, adolescents whose fathers had received
college/university education (54.5%) were less likely than were those whose fathers had
received high school education (73.1%), elementary school education (61.3%), and no
formal education (63.4%) to be in favor of the establishment of an independent Arab
university.

Discussion

Identity formation in adolescence is remarkably significant (64). More than four decades ago,
Strauss (65) pointed out that if you “wish to understand persons—their development and their
relations with significant others—you must be prepared to view them as embedded in
historical context” (p. 164). And with this in mind, “we must recognize that all ethnic groups
and units can change genes, while yet remaining whole and retaining their identity” (66). As
the present authors assert, the historical and political events experienced by contemporary
Bedouin adolescents are likely to strengthen their identity as a separate group from the Israeli

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Ethnicity and ethnic identity among Bedouin adolescents in Israel

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Because this is the first comprehensive study to document the ethnic identity of Bedouin adolescents, it is difficult to determine whether a sense of Palestinian ethnic membership has been growing among this population. However, it also appears that this group is now displaying a much stronger sense of its Palestinian Arab identity, becoming more attached to its Palestinian heritage, pride, and nationalist philosophy. In response to the profound sociopolitical events that they have experienced in recent years. Although they are Israeli citizens, 73% of the participants stated that the term “Israeli” was not an appropriate definition of their identity, and 44.9% stated that the term “Palestinian” was. Moreover, when presented with various ways of characterizing themselves (Arab, Israeli, Israeli Arab, Palestinian Arab, Israeli Palestinian, Palestinian), the term “Palestinian Arab” received the highest endorsement (33.5%), followed by “Israeli Arab” (29.7%), “Arab” (18.7%), “Israeli Palestinian” (11.7%), and “Palestinian” (3.5%); only 2.9% of the sample characterized themselves as Israelis. As these results indicate, the participants showed a strong preference for an Arab or Palestinian identity, while a significant minority also acknowledged their status as Israeli citizens. This indicates that their Arab/Palestinian ethnic identity is predominant and that an acceptance of their Israeli identity, while secondary, also is widespread. Although this dichotomy is viewed as a fundamental conflict by Jewish Israelis, it is not seen that way by Israeli Arabs (11).

Interestingly, the results show that religion plays a significant role in the ethnic identity in this group; they ranked it as by far the most important factor in forming their identity (46.9%). Religion is a learned frame of reference—a set of beliefs, values, and attitudes that, once adopted, serve to shape and guide a person’s behavior and identity (37). The participants (11.1%) identified religion as a more potent aspect of their ethnic identity than their tribal heritage or their extended family—the parameters by which they traditionally defined themselves (67). It appears that as social change has transformed their traditional culture, the Bedouin have coped by revising their collective identity to fit into the culture of politicized Islam that has enveloped the region. Consistent with this observation, the psychological literature shows that religious identification tends to increase when an individual’s control over his or her environment is weakened (68,69).

The effects of Israeli state policies on ethnic identity

Since the establishment of the state of Israel in 1948, the Bedouin community of the Negev has suffered the cumulative effects of neglect, which have continually intensified their sense of alienation (70,71). Their traditional culture and way of life has been threatened with extinction by the Israeli state policy of forced settlement. As they witness continuing pressure, the Bedouin continue to resist assimilation into the larger Israeli culture (12,72). This is reflected in our study. When asked whether they were satisfied with being an Israeli citizen, only 44.5% of the sample members reported that they were either definitely satisfied (24.9%) or satisfied (19.7%). As the identity theorist Erikson (73) pointed out, when an oppressed minority group becomes “aware of the dominant cultural ideals but prevented from emulating them, [they] are apt to fuse [their identify with] the negative images held up to them” by the majority dominant group (p. 237). Experiences of rejection and discrimination

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pose a threat to a person’s sense of self, motivating a reevaluation of the old identity and the creation of a new identity to reinvent the self (34).

The political point of reference of our participants shows that their ethnic identity also encompasses a salient political foundation. Disturbingly, nearly half of the sample (48.2%) does not recognize Israeli’s right to exist (58.4% for males and 41.4% for females) and a further 33.8% recognize it only with reservations. Only 17.9% of the adolescents unequivocally recognize Israeli’s right to exist. These results reflect a widespread sense of socioeconomic and political marginalization among Israeli Arabs. The dominant Jewish group has implemented a variety of policies to control other groups and maintain a psychological distance from them. One such policy is the principle that Israel was established as a Jewish state to serve the Jewish people and another policy, based on security considerations, fundamentally regards all non-Jewish Israelis as a security threat or potential danger to the existence of the state (70,71).

Over the years, Bedouin-Arabs have been either ignored or viewed with suspicion by the Israeli authorities. For example, the state imposed restrictions on the movements of Bedouin-Arabs, so that those who wished to travel within Israel had to seek special authorization from the army (74). The Israeli state and its institutions are based on the values and culture of its dominant Jewish group; the Bedouin (and other non-Jewish groups) are excluded and viewed with suspicion. Therefore, it should be no surprise to find that the Bedouin Arabs are completely alienated from the majority Jewish community. It can be argued that the “disloyalty” of the Bedouin youth in our study is a natural response to the fact that they have been treated as a separate racial group that is subordinate to the Jewish Israelis and a threat to their security.

The literature suggests that the cohesion of two groups and the ethnic and racial separation between them is most evident when the groups interact less frequently and possess unequal power status (75). When the participants in this study were asked whether they believed that their relations with Jewish people were conducted on an equal footing, the responses were very mixed. While 15.1%, 24.9%, and 7.8% of the respondents indicated that they believed this to be always, mostly, or often the case, more than half (52.2%) of them reported either that this was almost never the case (27.8%), or that they never had any interaction with Jewish people (24.3%). These results clearly demonstrate the polarizing negativity of the interethnic contacts between the two groups and the view that Israeli Arabs should be assimilated and treated as equals has failed to gain significant support.

Almost a century ago, Sumner (76) theorized that there is a strong relationship between identification within an ethnic group and the group’s experiences of maltreatment or hostility from outside groups. Branscombe and Wann (77) made a distinction between symbolic and material threats to identity. However, the threats that the Bedouin community of Israel are facing have been both symbolic (threats to their social and cultural continuity) and material (hostility and neglect). A succession of Israeli governments largely has ignored the social and economic needs of the Bedouin community, and the minimal attention that they have received has been random rather than far-reaching or sustained. Israeli Bedouins have responded to their highly threatening environment by increasingly defining themselves in contrast to Israeli Jews. It is worth noting that this attitude is a significant change from their traditional self-definition in contrast to the fellahin, the sedentary Arab farmers.

This continuous neglect has deepened the frustration of the Bedouin community and disrupted its trust of the Israeli government. The lack of trust in the Israeli government is

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especially strong among the 70,000 Bedouin (approximately half of the Israeli Bedouin population) who live in 45 villages that have not been authorized by the Israeli government—the so-called “unrecognized” villages. These are illegal settlements, and the Bedouin who live there are not allowed to build houses. These communities suffer from a lack of essential services, including medical services, schools, power, water, and paved roads. These abysmal conditions are reflected in the current study; 26.8% of the respondents living in unrecognized villages described their home as “not good,” as opposed to only 5.9% of those living in recognized villages and towns. The members of the unrecognized villages also lack political representation in local government (11). Although under Prime Minister Itzhak Rabin the Israeli government did recognize many of these communities and provide funding to develop their services and infrastructure, in subsequent years, these budget allocations have not been spent (11). Also, despite the fact that these communities suffer from the highest unemployment rates in the country (11,53,54), none of the Bedouin villages have been designated as “national priority” economic zones, a designation that brings additional funding and tax exemptions for economic development (11). Because of the political neglect and lack of government services in the unrecognized villages, as the findings demonstrate, the sample members who live there are more inclined to endorse political autonomy for Israeli Arabs and separate political parties for Arabs and Jews. In our results, this is reflected in higher levels of ethnocentrism and pro-Palestinian sentiment in the respondents from the unrecognized villages.

The Bedouin school system

In Bedouin communities, the only law-abiding ways to make a living are teaching and taking low-paying jobs such as construction work and truck driving. However, any Israeli Arab who wishes to become a teacher must first pass strict tests of security and loyalty and be approved by the Israeli authorities (12). Once working, a teacher’s subsequent promotions are based on his or her connections with the authorities, rather than credentials and experience. Any teacher who is believed to favor the Palestinian cause or otherwise to lack loyalty to the state may be dismissed or pressured to leave (70). School principals are appointed based not on their qualifications but on their political loyalty and influence within a political party (either the party that is in power, or the party favored by their chief superintendent). Because of the rampant political corruption and state control in the schools, there are many Bedouin with excellent educational credentials (PhDs) and experience who are unemployed and unable to find positions in the school system.

In 1998 the Israeli government formed a committee to report on the Bedouin school system. It found that the “schools in the unrecognized villages were poorly equipped, with low budgets, inadequate facilities, poor buildings and furniture, and few teaching materials . . . they were not supplied with running water and electricity, although some are [located] next to water pipes and electric lines. Schools in the planned settlements, although they are housed in modern buildings and have electricity and water, do not have sufficient laboratories, libraries or other teaching materials”.

The poor state of the Bedouin schools is especially alarming, because it further perpetuates the divide between Arab and Jewish Israelis. For example, in our study the adolescents whose fathers had a high school (26.9%) or college (25.6%) education were more
likely than those whose fathers had an elementary school (10.3%) or no formal (11.0%) education to believe that their relations with Jewish Israelis were on an equal footing. By treating the Bedouin educational system as if it were a threat to the state, rather than a potential uniting force, the Israeli authorities further alienate their Bedouin citizens.

The political implications of segregation and ethnic cohesion

Our results indicate that Bedouin adolescents experience a strong awareness of their racial and ethnic identity. The Jewish character of the state of Israel (12), the Arab-Israeli conflict, the state-sanctioned discrimination in jobs, funding, and services (74,78), the lack of political equality, participation, and representation (12), and the negative portrayal of Arabs in the media have all influenced the development of identity in our respondents and made them more likely to identify themselves from a racial/ethnic perspective.

Overall, the Bedouin culture in Israel has been marginalized and (at best) tolerated, instead of being integrated into the larger society. Israeli Arabs have been segregated, forced by official government policy into a few overcrowded cities (Rahat, Tel Sheva, Laquia), in order to ensure their separation from the surrounding Jewish population. Their traditional ways of life have been destroyed; their land and other cultural and economic resources have been appropriated by the state and transferred to other uses (11,12).

The result of these segregationist policies is that the Bedouin community now perceives itself as a distinct group, socially and ethnically separate from the Jewish population of Israel (35) and marginalized into social isolation. Almost half of the respondents in our study (44.4%) almost never had contact with Jews, and a further 37.2% had only occasional contact with Jews. An additional 23.1% of those who did have Jewish friends had never visited them in their homes in the last two years. Interestingly, although females (57.5%) were more likely to have no Jewish friends or acquaintances than males (41.7%), females (19.0%) were less likely than males (35.2%) to have visited a Jewish friend or acquaintance at least once.

The state policies also have conveyed the message that the rights associated with being a member of the state of Israel are awarded not on the basis of citizenship, but based on Jewish racial heritage. So it is not surprising that the respondents also evidence the ideology of an oppressed minority—they emphasize the similarities between themselves and other oppressed groups in Israel. Specifically, almost one-third of the respondents (36.5%) stressed that they felt closer to the Oriental Jews than to Ashkenazic Jews. Deprived minority groups compare themselves with other disadvantaged groups. As the social, psychological, and cultural barriers between Israeli Jews and Bedouin grow larger, the individual’s need to align, identify with, and rely on his or her own ethnic group is reinforced. Among the adolescents in our study, Arab ethnicity has become integral to their self concept. Most of them are no longer able to relate to or identify with the symbols and values of the Jewish state that has failed to respect either their group identity or their rights as citizens, and that has actively pursued discrimination in religion, education, politics, security, and employment (12).

However, the findings also demonstrate that although the participants identify with their Palestinian heritage, they demonstrate no hatred for the Jewish people of Israel. In the words of Siham Fahoum, a local political leader and member of the Nazareth local council, “Our objection is not to the state, but to the state’s discriminatory policy” (11). One-fourth of the respondents were either definitely willing (10.7%) or willing (15.0%) to have a Jewish
neighbor. An additional 38.4% also were willing to have a Jewish neighbor, although they would prefer an Arab neighbor. These responses are surprisingly positive, considering that the relationship between these two groups has been characterized in recent generations by racial discrimination, political inequality, and a bitter competition for land and resources. In addition, the two groups live in segregated villages and neighborhoods, attend separate educational systems, speak different languages, and observe different religious and cultural traditions.

More than two-thirds (68.6%) of the respondents were in favor of establishing a Palestinian state alongside Israel. A similar number (69.2%) believed that Israel should recognize a Palestinian state, and an additional 17.7% expressed conditional support for this recognition. The Israeli-Palestinian conflict has contributed to the self-perception and attitudes of our respondents and their relationships with Israeli Jews and the larger world. However, the results also appear to show that our sample group perceives surprisingly little contradiction between their identification with Palestinian Arab causes and their connection to Israel as citizens of that country. When participants were asked where they felt most at home, 45.4% revealed that they felt most at home in Israel. Although the Israeli part of their self-perception is subordinate to their ethnic self-identification as Palestinians, our findings suggest that it is also a critical characteristic of their self-description.

The respondents in the current study were asked to respond to a list of specific suggestions for furthering equality and coexistence within the Jewish state. Their responses (pro and con) were as follows, in order of positive responses:

- establishing an independent Arab trade union (68.9% vs. 13.1%)
- Arabs controlling their own educational system (68.6% vs. 9.1%)
- establishing a new, independent Arab-language newspaper, radio, or television station (66.6% vs. 15.0%)
- establishing an independent Arab industry (64.5% vs. 15.8%)
- establishing a new, independent Arab national political party (63.0% vs. 12.5%)
- establishing an independent Arab university (62.7% vs. 19.1%)
- Arabs controlling their own local governments (62.3% vs. 13.5%)
- Arabs controlling separate Arab departments (i.e., political divisions within the state) (55.3% vs. 15.6%). The respondents from unrecognized villages endorsed this by a wide majority (63.4%), whereas those from recognized villages were more evenly split (51.9%).

These results raise a fundamental challenge for the Israeli state—is it willing and able to confront the undemocratic attitudes of its Israeli citizens and take steps to provide the equity and fairness that it has so far failed to deliver to its Arab citizens, who constitute a major (and growing) proportion of its population? If the current policies of discrimination and marginalization are allowed to continue, it will only increase the volatility of the regional conflict and further polarize the Israeli Arabs who are caught in the middle. In the words of Elie Rekhess of the Moshe Dayan Centre, “a concrete, integrated plan of action, showing observable achievements, will offer a palpable alternative to many Arab citizens who seek their place in the state of Israel without confrontation” (11).
Conclusion

As with all studies, the present investigation has limitations. In particular, population validity and temporal validity threaten the external validity of the findings (63). Thus, replications of this study are needed. However, by collective empirical data from a relatively large sample, the current inquiry has taken an important first step towards identifying the ethnic identity of Bedouin-Arab adolescents in the context of the Middle East conflict.

References

Ethnicity and ethnic identity among Bedouin adolescents in Israel


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In this chapter we compare the metabolic control of type 1 diabetes mellitus among Bedouin and Jewish children through a retrospective study of 60 Bedouins and 60 Jews aged 0-18 years followed at a pediatric diabetes unit. The information was extracted from the clinic records. Results: Differences were found between the groups in the parameters of the socio-economic status of the families. Education, employment rate and income levels were lower among Bedouins compared to Jewish families. In addition, the average number of visits since diagnosis to the diabetes clinic was lower among Bedouin patients relative to Jews (20.7 ± 18.9 vs. 15, p ± 27.2 <0.01). The HbA1c average over the years of follow-up showed that high percentages (88%) of all the patients did not achieve sufficient metabolic control. No significant difference was found between the groups in metabolic control based on the average HbA1c values levels, which were 9.74±1.94 and -9.65 %± 2.03 for the Bedouin and Jewish patients, respectively (p = 0.86). Multivariate analysis demonstrated a higher risk of insufficient metabolic control (HbA1c level above 7%) among the Bedouin population (AdjOR = 1.7, p = 0.58). Conclusions: Lack of significant difference in metabolic control and the use of health services between Bedouin and Jewish populations, despite differences socio-economic statuses. Similar accessibility to health services in the community for the two populations and/or high awareness and motivation of the Bedouin population to treat the disease could explain the similar outcomes.
Introduction

According to the World Health Organization (WHO) report more than 220 million people worldwide have diabetes mellitus and this number is expected to double in 2030, if preventive initiatives will fail to prevent it. It is noteworthy that about 80% of the affected live in developing countries or are of low socioeconomic parameters (1). People with type 1 diabetes mellitus (T1DM) can live normal lives as long as they keep proper diet and comply to medical instructions (2). Complications can be reduced significantly by education of patients to adhere to a treatment plan that is customized for each patient which includes diet and nutrition, medications, physical activity and self-monitoring of blood glucose level (3).

The Bedouin population is characterized by culture, tradition, genetics, soci-economic parameters and special health needs. There is a need to describe Bedouin T1DM young patients of the ages 0-18 years in terms of age, gender, age of onset of T1DM, in order to identify the patients with low compliance in order to improve the quality of care and reduce repeated hospitalizations.

The hypothesis of this study was that there is a significant difference in metabolic control of Bedouin children with T1DM (ages 1-18 years), when compared to Jewish children. Research objectives were: 1) To characterize the T1DM patients in terms of age, sex, age of onset of the disease, rate of medical complications, the presence of a relatives with T1DM, place of residency and socioeconomic status and 2) to examine the differences between Bedouin and Jewish patients in terms of: age, sex, age at onset of disease, the number of visits to the endocrine clinic, number of inpatients admissions, and metabolic control as reflected by the hemoglobin HbA1c levels.

Our sample

The study population was sampled randomly from the databases of the Diabetes Clinic at the Soroka University Medical Center in Beer-Sheva, Israel. One hundred and twenty patients (60 Jews and 60 Bedouins) ages 0-18 years with T1DM were the study population. We collected information about the socio-economic status of the families and reviewed the medical records. In the case of missing socio-demographics information in the record, we contacted the family by telephone to obtain the data. Depended variables were: HbA1c, clinic visits rate, and hospitalizations. Independent variables were: age, gender, age of onset of T1DM, residential area, and family characteristics: socioeconomic status, parents' employment, and the patient and parent education. Logistic regression models were adjusted dependent variable (mean HbA1c level). The independent variables were introduced into the model, parents' education, average family income, parental employment, ethnicity, gender and age.

Findings

Seventy five per cent of the Bedouin population lives in remote villages, while most of the Jewish population lives in urban communities. Most of the Bedouin families have seven or more persons living in the same household, whereas for the Jewish population the number is...
4-6. The number of social security special support recipients among the Bedouin population was twice (n=40) than among the Jewish population (n=17).

The average number of visits to the diabetes clinic was significantly lower among the Bedouin population (table 1). The only significant difference was the number of clinic visits, Bedouins had less clinic visits than Jews (20.7 versus 27.18 p<0.005).

**Table 1. Characteristics of patients Bedouin and Jewish**

<table>
<thead>
<tr>
<th></th>
<th>Bedouins (n=60)</th>
<th>Jews (n=60)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average</td>
<td>SD</td>
<td>Average</td>
</tr>
<tr>
<td>Age</td>
<td>13.2</td>
<td>4.01</td>
<td>13.3</td>
</tr>
<tr>
<td>Age of diagnosis</td>
<td>9.2</td>
<td>4.19</td>
<td>8.4</td>
</tr>
<tr>
<td>Admissions per year</td>
<td>0.2</td>
<td>4.19</td>
<td>8.4</td>
</tr>
<tr>
<td>Admissions in PICU per year</td>
<td>0.1</td>
<td>0.399</td>
<td>0.16</td>
</tr>
<tr>
<td>No. of visits to the Diabetes clinic</td>
<td>20.7</td>
<td>18.88</td>
<td>27.18</td>
</tr>
</tbody>
</table>

* Calculated according to the number of hospitalizations divided by the number of years since the child was diagnosed to date of the research
PICU- pediatric intensive care unit

**Table 2. Demographic characteristics of the Bedouin and the Jewish families**

<table>
<thead>
<tr>
<th></th>
<th>Bedouins</th>
<th>Jews</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Father education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Illiterate</td>
<td>%14.3</td>
<td>%3.6</td>
</tr>
<tr>
<td>Elementary school</td>
<td>%50</td>
<td>%7.3</td>
</tr>
<tr>
<td>High school</td>
<td>%23.2</td>
<td>%45.5</td>
</tr>
<tr>
<td>Tertiary- professional</td>
<td>%7.1</td>
<td>%20</td>
</tr>
<tr>
<td>Academic</td>
<td>3.6%</td>
<td>23.6%</td>
</tr>
<tr>
<td><strong>Mother education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Illiterate</td>
<td>%49.1</td>
<td>%5.4</td>
</tr>
<tr>
<td>Elementary school</td>
<td>%24.6</td>
<td>%5.4</td>
</tr>
<tr>
<td>High school</td>
<td>%17.5</td>
<td>%42.9</td>
</tr>
<tr>
<td>Tertiary- professional</td>
<td>%8.8</td>
<td>%17.9</td>
</tr>
<tr>
<td>Academic</td>
<td>0%</td>
<td>28.6%</td>
</tr>
<tr>
<td><strong>Father employment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployed</td>
<td>%53.6</td>
<td>%12.7</td>
</tr>
<tr>
<td>Part time</td>
<td>%33.9</td>
<td>%16.4</td>
</tr>
<tr>
<td>Fool time</td>
<td>12.5%</td>
<td>70.9%</td>
</tr>
<tr>
<td><strong>Mother employment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployed</td>
<td>%91.4</td>
<td>%28.6</td>
</tr>
<tr>
<td>Part time</td>
<td>%6.9</td>
<td>%30.4</td>
</tr>
<tr>
<td>Fool time</td>
<td>1.7%</td>
<td>41.1%</td>
</tr>
</tbody>
</table>
No significant difference was found in average hemoglobin HbA1c results between the two populations, 7.74% in the Bedouin compare to 9.65% in the Jewish population (p=0.06).

Significant socio-economic differences were found between the Bedouin and the Jewish families (see table 2). Only 3.6% of Bedouin fathers have college education, compared to 23.6% of the Jewish fathers. About 50% of Bedouin mothers are illiterate compared to 5.4% of Jewish mothers (all Ethiopian immigrants).

Parents were asked to define the level of income compared to the country's average income. Income levels were significantly different between the two populations: 81.7% of the Bedouin and 33.3% of Jewish families defined themselves as of low income. Of average income were 15% of the Bedouin and 50.9% of the Jewish families, while above-average income were 1.7% and 12.3% respectively.

Statistical significant differences were found in the employment of the two populations: 53.6% of Bedouin fathers and 91.4% of mothers were unemployed. For the Jewish families the numbers were 12.7% and 28.60% respectively. The percent of Bedouin mothers who were working part-time was 6.9%, and full-time 1.7%. For Jewish mothers 30.4% worked part-time and 41.1% full-time. Only 12.5% of Bedouin fathers worked full time compared to 70.9% of Jewish father.

Logistic regression models were adjusted to dependent variable (mean HbA1c level), good metabolic control versus poor metabolic control, whereas the independent variables that introduced into the model were: mother education (illiterate, elementary school ...), average family income (low, average and high), employment of mother (working or unemployed), ethnicity (Bedouin or Jew), sex, and age. None of the independent variables were statistically significant (see table 3).

### Table 3. Logistic regression analysis of the dependent variable of the two populations

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>S.E</th>
<th>P</th>
<th>OR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mother education</td>
<td>0.721</td>
<td>0.83</td>
<td>0.400</td>
<td>2.05</td>
</tr>
<tr>
<td>Average income</td>
<td>0.66</td>
<td>1.23</td>
<td>0.594</td>
<td>1.935</td>
</tr>
<tr>
<td>Mother employment</td>
<td>0.579</td>
<td>0.97</td>
<td>0.551</td>
<td>0.560</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>0.524</td>
<td>0.94</td>
<td>0.580</td>
<td>1.688</td>
</tr>
<tr>
<td>Sex</td>
<td>0.262</td>
<td>0.69</td>
<td>0.705</td>
<td>1.299</td>
</tr>
<tr>
<td>Age</td>
<td>0.109</td>
<td>0.10</td>
<td>0.290</td>
<td>1.115</td>
</tr>
</tbody>
</table>

### Discussion

This study showed that there is a significant difference in the use of the diabetes clinic between the Bedouin and the Jewish population. A study assessing adherence to drug treatment for hypertension, diabetes and lipid metabolic disorder among adult Bedouins compared with the Jewish population in the Negev area found significantly lower adherence rates to treatment in the Bedouin population, with 67% of the hypertensive and 73% of the diabetic Bedouin patients not adhering to treatment (4).
To the best of our knowledge there is no study assessing the adherence or diabetes control among pediatric Bedouin population. In contrast to the assumption of this study, no significant difference was found in the metabolic control of diabetes among children of the two populations. On the other hand a study in adult Bedouins with diabetes in the Negev area compared with the non-Bedouin population found that the diabetes control was significantly lower among Bedouins with diabetes (5). The explanation for our findings might be the availability of the family physicians. A study comparing the levels of utilization of health services in Jews and Arabs in Israel showed that Arabs reported more often visiting a family physician and less often reported visiting a specialist, but hospitalization was similar among Arabs and Jews (6). Another explanation might be the smaller sample size of our study and the shorter duration of the disease in our patients compared to patients with type 2 diabetes.

Other findings in the study revealed significant differences in the socioeconomic level between the two populations, the percentage of unemployed among the Bedouin population was very high (about 54% of fathers and 92% of mothers are unemployed). We assumed that percentages of education, employment and income levels would be low among the Bedouin population sample. The study results reassured the hypothesis, but in larger percentages. The percentage of illiteracy (about 15% of Bedouin fathers and 50% of mothers), the unemployed (about 54% of Bedouin fathers and 92% of mothers) and the low-income (81.7% of the Bedouin defined themselves as low-income) in the Bedouin was very high and the percentage of people with academic education was very low (3.6%). Despite these differences in the socioeconomic background between the Jewish and Bedouin population, the metabolic control assessed by HbA1c was not significantly different. A recent study has found a linear association between household income and metabolic control of insulin depended diabetes in Canadian children assessed by HbA1c, in a country where they have free access to public health system (7). In this study the annual median household income was based on the neighborhood, where the patient lived, but in our study the socioeconomic status was based on the report from the parents and therefore could be biased.

This study has several limitations. The first one is the study size, thus there is a need to perform research with larger sample size to avoid sample size bias. Further investigations are needed to characterize demographic and socio-economic factors as family composition, parents' occupation, and whether the family receives welfare in order to examine whether these factors have an impact. There is also a need to test the reasons for the relatively low rate of visits to the diabetes clinic among the Bedouin population. This retrospective study encountered data collection difficulties due to the lack of complete data in medical records. A prospective study would allow a more complete data collection.

References


Chapter XVII

Monogamous and polygamous Bedouin Arab families and parent-adolescent conflict

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Abstract

The purpose of this chapter was twofold: 1) to compare whether children from polygamous family structures significantly differ from children from monogamous family structures with regard to the frequency of parent-child conflict and 2) whether children from these two structures employ different patterns of family conflict resolution. To address these questions, a random sample of 212 high school students (60.8% monogamous) completed a self-administered survey. The results of MANOVA showed no significant differences (p > 0.05) between these two structures with regard to the frequency of parent-child conflict. The results also show similar conflict management styles between these two family structures within each of the following five domains (privacy, school and career, money spending, going out and leisure, and physical appearance). This study is unique in that it is the first empirical research to be conducted in the field of conflict resolution among youth and adolescents in polygamous marital structures and therefore, further investigation is needed to replicate these results utilizing different cross-cultural populations practicing polygamy.

Introduction

The unfavorable effects of polygamous marital structures on the well being of children have been established by a wide range of sources (1-9). Compared to their counterparts in monogamous families, children raised in polygamous families commonly exhibit developmental dysfunction, as reflected in many outcomes including poor school performance (10,11), poor mental health status (3,12,13), low self-esteem (14), poor social adjustment (11) and rivalry between full- and half-siblings (15). Elbedour et al (16) assign these adverse outcomes not directly to the polygamous marital structure, but to the family dynamics within these polygamous families. Elbedour et al (16) found support for this proposition not only from research related to polygamous marital structures, but relevant work conducted on children of marital conflict (17,18) in Western societies.

Specifically, after an extensive review of the literature (16) these problems were attributed not to the polygamous family structure itself, but rather to family factors such as competition among wives (19), parental conflict over the father’s absences, rivalry between full- and half-siblings (15), uneven treatment of wives by their husband (20) and the child’s perception of neglect and abandonment by the father (21). Other challenges for polygamous families include the financial burden of supporting a larger family and the relative psychological absence of the father (16). These stressors lead to distress, disagreement, and marital tension, which challenge the parents’ ability to care for their children. When a family breaks down in this way, the children bear the greatest burden and often become the target of their parents’ frustrations (22,23). Support for this proposition is also provided by the “spillover” hypothesis (24,25), which holds that the distress, hostility, and preoccupation that arises from marital difficulties is transferred into parenting behavior, resulting in dysfunctional parenting and impaired outcomes for the children. Spousal tension can disrupt parenting (26) and cause mothers to withdraw and become hostile toward their children, and the children themselves may be pressured to take sides in the conflict between the parents (17).
Monogamous and polygamous Bedouin Arab families...

In a recent study by Krishnakumar and Buehler (27), half the parents reported that spousal conflict was a precipitator of parent-child tension. A 1977 study found that the dysfunctional behavior of husbands toward their wives was directly correlated with the dysfunctional behavior of the wives toward their 5-month-old children. A mother’s negative assessment of her relationship with her spouse was correlated with negative interactions with her children and between the older siblings (28). Elbedour et al (16) pointed out that these family processes account for much of the link between polygamous families and the maladjustment of children.

The present study attempts to explore parent-adolescent conflict and its resolution in monogamous and polygamous Bedouin-Arab Families in Israel. Most of the research that has found more parent-child conflict in polygamous families has been influenced by a Western cultural bias against polygamy, and empirical evidence is lacking to refute or validate this perspective. The current study will provide the data needed to evaluate the accuracy of the previous research. It will compare patterns of parent-child conflict resolution in polygamous families with those in monogamous families. We will assess parent-child conflict resolution styles by examining nine styles of conflict resolution (integrative, avoidance, compromise, accommodating, deception, competitive, mediation, threat against others, and threat against oneself) in five domains (privacy, career orientation, physical appearance, monetary issues, and leisure pursuits). In each domain, we will examine four questions, comparing the responses for monogamous and polygamous families on each one:

- What styles of conflict resolution are used the most and the least?
- Who (mother, father, or adolescent) is most influential in the decision-making process in this domain?
- Who (mother, father, or adolescent) has the right to decide in this domain?
- How satisfied is the adolescent with the decisions made in this domain?

Compared to their peers in monogamous families, we expect that adolescents in polygamous families will experience a higher rate of parent-child conflict; we also expect them to use different patterns of conflict resolution in the five domains.

Furthermore, because of their increased exposure to marital conflict, we predict that the children in polygamous families will adopt more violent behavior as a means of problem solving. The expectation is partially supported by previous research on marital conflict, conducted in monogamous Western families, which shows that children tend to mimic their parents’ conflict resolution styles. A child who is exposed to stress and violence in the family setting will tend to express more hostility and use more violent coping methods (29,30). A chronic pattern of family violence typically leads to elevated levels of anger, aggression, and violence in the children (31).

Before we proceed to test these hypothesis, it is worth noting that some researchers challenge the fundamental concept that polygamy has a deleterious effect on children, contending that despite the multiplicity of stressors in the polygamous family unit, it does not have a negative impact on children (1,13,15,32). These authors contend that a polygamous family structure provides benefits for children, including more role models for socialization, more opportunities for receiving attention and affection, and a more secure psychological basis for dealing with stress (12,33). These authors point out that, far from having a negative

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effect, in many parts of the world polygamy is practiced by all social groups and “is an expression of a way of life which is deeply embedded in . . . religious and cultural obligation” (34). For example, in Africa polygamy is considered to be the “most distinctive feature of an African marriage” (35).

Thus, it is likely that the prevalence of parent-child conflict in polygamous families may vary as a function of the surrounding culture and its values. Culture affects children’s cognitive processes and has been found to alter the correlation between family variables and child development outcomes (17,36). It appears that the way children assess and respond to interfamily conflict depends, at least to some degree, on the values of their culture. In addition, Jouriles et al (37) found that children have the ability to differentiate between conflict that is child-related and other types of family conflict. In sum, the development of children within a polygamous marital structure may best be described as a culturally bound phenomenon, and we must take cultural values into consideration, for they may alter the direction of our hypothesis.

Our study

There were 212 participants, of whom 60 (28.3%) were male and 152 were female. About half (54.8%) of the participants were in grade 11, 41.4% were in grade 10, and 3.8% were in grade 12. The sample was drawn from four of the six Bedouin-Arab schools in a Negev Bedouin community. The sample in each school was random and subjects completed the scale with the idea that the study needed to assess the type, nature, frequency, and styles of conflicts between children and their parents. Subjects were not informed that the study intended to compare the frequency and styles of parent-child conflicts within polygamous and monogamous families. After completing the scale, subjects were instructed to complete a socio-demographic questionnaire that included items such as age, gender, family type, parental education, and occupation.

The socioeconomic status of the participants’ parents was low, as indicated by father’s education (58.2% did not finish high school; 8.2% went beyond high school), and occupation (53.0% unemployed; 22.3% in unskilled labor). Mothers’ levels of education and occupation were even lower. According to participants’ reports of their parents’ marital structure, 60.8% were monogamous, and the rest came from families in which the fathers had two wives.

The parent-child conflict management scale was designed by the first author to assess adolescent conflict management styles in conflicts with their parents. The questionnaire used in the current study was adapted from the Conflict Management Inventory (CMI) (38). The original CMI assessed five conflict management styles: compromising, avoiding, integrating, accommodating, and competing.

However, unlike the original CMI, which asks generally about the global conflict management style of the subject, the questionnaire used in the current study assessed conflict management styles in each of five specific domains: privacy, career, money, physical appearance, and leisure times. We believe that conflicts between parents and their children tend to be more domain specific in nature than global. A second modification was the addition of more conflict management styles to the assessment. In addition to the five styles included in the original CMI, we added questions to assess four other styles of conflict management: deception, mediation, threat against parents, and threat against the self. Thus,
there were nine conflict management styles assessed in each of five domains. Each style within each domain was assessed by one question, rated on a five-point scale from “Definitely not true of me” to “Clearly true in my case.” For example, the item on the compromise style within the money domain was “When you have arguments with your parents about the money issue you specified, you use ‘give and take’ so that a compromise can be made.” Styles tended to cohere across domains, as indicated by internal consistency estimates when all five items assessing the same style across the five domains were tested as a scale. Cohen’s alpha ranged from 0.60 to 0.80 for seven of the styles, but dropped to 0.54 for mediation and 0.38 for deception.

In addition to the conflict management styles, the questionnaire also asked about a number of other conflict parameters within each domain, such as the frequency of conflict, who wins, who decides, how influential each party was, and how satisfied the adolescent was with the resolution. Finally, information on several demographic variables (parent education, marital status, participant’s age, grade, and sex) was also collected.

**Findings**

The monogamous and polygamous groups did not differ significantly with respect to gender, grade, age, or father’s level of education. Table 1 displays the data for these comparisons. To test whether these groups differed on each of the continuous conflict parameters (variables other than the styles of conflict resolution), a MANOVA was conducted for each conflict parameter across the five domains. For example, the five frequencies of conflict variables, one for each domain, were entered into the MANOVA as the set of dependent variables. The dichotomous family structure variable was the independent variable. No significant differences emerged between the two groups on frequency of conflict, F(5, 163) = 1.30, p = 0.268. Table 2 displays the group means on all of the conflict parameters across all domains. There were also no group differences on the strength of the father’s influence on conflict resolution, F(5, 162) = 1.09, p = 0.366, or the strength of the mother’s influence, F(5, 160) = 0.72, p = 0.613, or the strength of the student’s influence, F(5, 157) = 0.65, p = 0.666. Students were also asked how often they “win” arguments in each domain and how satisfied they were with the outcomes of those arguments. A MANOVA on each of these sets revealed no significant group differences on either variable, F(5, 169) = 0.41, p = 0.839 and F(5, 173) = 0.78, p = 0.563, respectively.

Table 1. Demographic characteristics of each group

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Monogamous</th>
<th>Polygamous</th>
<th>p Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Male</td>
<td>27.9%</td>
<td>29.6%</td>
<td>0.788</td>
</tr>
<tr>
<td>Father’s education</td>
<td></td>
<td></td>
<td>0.908</td>
</tr>
<tr>
<td>&lt; Elementary</td>
<td>39.3%</td>
<td>40.8%</td>
<td></td>
</tr>
<tr>
<td>&lt; High school</td>
<td>17.9%</td>
<td>19.7%</td>
<td></td>
</tr>
<tr>
<td>High school graduate</td>
<td>33.3%</td>
<td>32.9%</td>
<td></td>
</tr>
<tr>
<td>&gt; High school</td>
<td>9.4%</td>
<td>6.6%</td>
<td></td>
</tr>
<tr>
<td>Mean age</td>
<td>16.4</td>
<td>16.4</td>
<td>0.716</td>
</tr>
<tr>
<td>Mean grade</td>
<td>10.6</td>
<td>10.6</td>
<td>0.682</td>
</tr>
</tbody>
</table>

Note: Chi-square tests were conducted on gender and father’s education. t-Tests were conducted on age and grade.
### Table 2. Group means in each domain on conflict parameters

<table>
<thead>
<tr>
<th>Conflict Parameter</th>
<th>Appearance</th>
<th>Career</th>
<th>Money</th>
<th>Going Out</th>
<th>Privacy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Frequency</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monogamous</td>
<td>4.21</td>
<td>3.99</td>
<td>2.72</td>
<td>4.55</td>
<td>3.96</td>
</tr>
<tr>
<td>Polygamous</td>
<td>3.12</td>
<td>3.51</td>
<td>3.08</td>
<td>4.71</td>
<td>4.00</td>
</tr>
<tr>
<td><strong>Father Influence</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monogamous</td>
<td>3.24</td>
<td>3.42</td>
<td>3.94</td>
<td>3.69</td>
<td>3.07</td>
</tr>
<tr>
<td>Polygamous</td>
<td>2.81</td>
<td>3.67</td>
<td>3.77</td>
<td>3.67</td>
<td>3.11</td>
</tr>
<tr>
<td><strong>Mother Influence</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monogamous</td>
<td>2.95</td>
<td>2.87</td>
<td>3.03</td>
<td>3.09</td>
<td>2.70</td>
</tr>
<tr>
<td>Polygamous</td>
<td>3.08</td>
<td>3.21</td>
<td>2.95</td>
<td>3.26</td>
<td>3.08</td>
</tr>
<tr>
<td><strong>Participant’s Influence</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monogamous</td>
<td>3.78</td>
<td>3.98</td>
<td>3.06</td>
<td>3.53</td>
<td>4.05</td>
</tr>
<tr>
<td>Polygamous</td>
<td>3.76</td>
<td>3.97</td>
<td>3.00</td>
<td>3.45</td>
<td>3.69</td>
</tr>
<tr>
<td><strong>Frequency participant wins</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monogamous</td>
<td>3.09</td>
<td>3.00</td>
<td>3.28</td>
<td>2.95</td>
<td>3.10</td>
</tr>
<tr>
<td>Polygamous</td>
<td>3.09</td>
<td>3.03</td>
<td>3.08</td>
<td>3.05</td>
<td>3.23</td>
</tr>
<tr>
<td><strong>Satisfaction</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monogamous</td>
<td>3.33</td>
<td>3.50</td>
<td>3.56</td>
<td>3.33</td>
<td>3.26</td>
</tr>
<tr>
<td>Polygamous</td>
<td>3.26</td>
<td>3.59</td>
<td>3.042</td>
<td>2.94</td>
<td>3.18</td>
</tr>
</tbody>
</table>

### Table 3. Percent responding in each group on question of who should have the right to decide matters in each domain

<table>
<thead>
<tr>
<th>Domain</th>
<th>Parents</th>
<th>Myself</th>
<th>Both</th>
<th>p Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td></td>
<td></td>
<td></td>
<td>0.972</td>
</tr>
<tr>
<td>Monogamy</td>
<td>10.3</td>
<td>47.6</td>
<td>42.1</td>
<td></td>
</tr>
<tr>
<td>Polygamy</td>
<td>10.0</td>
<td>46.3</td>
<td>43.8</td>
<td></td>
</tr>
<tr>
<td>Career</td>
<td></td>
<td></td>
<td></td>
<td>0.893</td>
</tr>
<tr>
<td>Monogamy</td>
<td>10.9</td>
<td>47.9</td>
<td>41.2</td>
<td></td>
</tr>
<tr>
<td>Polygamy</td>
<td>13.0</td>
<td>48.1</td>
<td>39.0</td>
<td></td>
</tr>
<tr>
<td>Money</td>
<td></td>
<td></td>
<td></td>
<td>0.472</td>
</tr>
<tr>
<td>Monogamy</td>
<td>19.2</td>
<td>42.4</td>
<td>38.4</td>
<td></td>
</tr>
<tr>
<td>Polygamy</td>
<td>14.1</td>
<td>39.7</td>
<td>46.2</td>
<td></td>
</tr>
<tr>
<td>Going out</td>
<td></td>
<td></td>
<td></td>
<td>0.600</td>
</tr>
<tr>
<td>Monogamy</td>
<td>10.5</td>
<td>49.2</td>
<td>40.3</td>
<td></td>
</tr>
<tr>
<td>Polygamy</td>
<td>13.2</td>
<td>42.1</td>
<td>44.7</td>
<td></td>
</tr>
<tr>
<td>Privacy</td>
<td></td>
<td></td>
<td></td>
<td>0.806</td>
</tr>
<tr>
<td>Monogamy</td>
<td>16.1</td>
<td>43.5</td>
<td>40.3</td>
<td></td>
</tr>
<tr>
<td>Polygamy</td>
<td>12.8</td>
<td>46.2</td>
<td>41.0</td>
<td></td>
</tr>
</tbody>
</table>

Note: p Values result from a Chi-square test with 2 degrees of freedom within each domain.

To test whether there were differences between groups in the proportions of students affirming that they (versus their parents or both) should have the right to decide matters in each domain, chi-square tests were performed on each of these variables. The results from these tests are shown in Table 3, where it can be seen that there were no significant differences on any of these variables.
Figures 1 and 2 show the mean score on each conflict resolution style within each domain for monogamous and polygamous families, respectively. A 5 (domain) × 9 (style) × 2 (family structure) MANOVA was conducted to determine whether there were differences in the degree of usage of each of the styles both within and across domains and family structures. Domain and style were within-subjects factors, whereas family structure was a between-subjects factor. There was no main effect for polygamy, F(1, 86) = 0.58, p = 0.450, nor a significant polygamy × style interaction, F(8, 79) = 1.59, p = 0.140, nor a significant three-way interaction, F(32, 55) = 0.68, p = 0.875. Thus, the two groups had an overall similar profile of styles within each domain.

**Discussion**

The last 20 years have seen a growing body of research dealing with the institution of polygamy and its effects on children (16). Most of this research, however, has examined only the family structure (polygamous or monogamous) as an explanatory variable for the effects on children, and this limited approach has led to conflicting findings. For example, in one Bedouin-Arab community, some studies have suggested that the high school students from polygamous families are doing as well as their peers in monogamous families (1,32), while other studies have identified disadvantages for those same children (11). The present authors assert that much of this uncertainty can be attributed to excessive reliance on a one-factor conceptual framework based on family structure. Family structure alone is inadequate for explaining the effects of polygamy on children. There is a need for further research that will evaluate the effects of mediating and moderating factors within the family (such as intrafamily conflict). According to Elbedour et al (16), careful attention must be given to the task of identifying and examining the mediating and moderating variables that to some extent determine child development outcomes in polygamous families.
The current study of children in the Arab community assesses one of these mediating processes — conflict between parents and children. In designing this study, we expected that polygamous family structure would be associated with a greater frequency of parent-child conflict. This expectation was drawn from previous studies that have established a correlation between polygamy and other forms of intrafamily conflict, such as competition between wives (19), rivalry between full- and half-siblings (15) and unequal treatment of wives by the husband (20). In other words, we expected that the high potential for parental conflict in polygamous families and the exposure of children to this marital stress would increase the likelihood of parent-child conflict and affect the way the children would respond to conflict. Compared with their peers from monogamous families, we expected that children from monogamous families would tend to use different styles of conflict resolution and be more likely to use violent or aggressive means for resolving conflicts.

Figure 2. Conflict styles in each domain in polygamous families.

However, the results of the study do not support either of these hypotheses. Across the five domains that we examined (privacy, career, money, appearance, and leisure pursuits), the frequency of parent-child conflict in polygamous families was not significantly different than those reported by subjects in monogamous families in the same community. The results showed no differences in the use of various conflict management styles across domains and family structures. Overall, within each domain, the two groups (children from monogamous and polygamous families) had a similar profile of conflict resolution styles.

These results raise a number of unresolved issues that require further hypothesizing. One possible explanation is that the children in polygamous families distance themselves from their parents’ quarrels. A second possibility is that the marital conflicts reported by previous investigators were based on mere assertion. Another potential explanation is that the conflicts within these families are not serious enough to spill over into the parent-child relationship.

A third explanation is that a supportive cultural context (e.g., collectivity and extended families within the Bedouin-Arab community) can moderate the stressful effects of a polygamous family structure. Cultural context affects the etiology and development of

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maladaptive behavior (39) as well as the behavior that is viewed as normal and desirable in
the culture (40). Since polygamy is common in this community, and no cultural stigmas are
associated with it, these cultural values may promote resilience or act as a positive moderator
of parent-child conflict within polygamous families.

**Conclusion**

Overall, the results of the current study demonstrate that polygamy is a complex
phenomenon. Although the results of this study do not show a conclusive association between
polygamy and parent-child conflict, they also do not eliminate the possibility that such a link
exists. The lack of exacerbated parent-child conflict in the five domains examined in this
study does not necessarily mean that polygamous families do not have a higher rate of these
conflicts. The present study relies heavily on self-reported single informants (the adolescents
themselves) and a single assessment method. Finally, it is possible that the domains that we
used were not sensitive or specific enough to capture the nature, intensity, or duration of the
conflict in these families.

**Acknowledgments**

This chapter is an adapted version of an earlier publication: Elbedour S, Hektner JM, Morad
M, Abu-Bader SH. Parent-adolescent conflict and its resolution in monogamous and
polygamous Bedouin Arab families in southern Israel. ScientificWorldJournal 2003;3:
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Poverty
Chapter XVIII

Trends in poverty in Israel

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4Kentucky Children’s Hospital, University of Kentucky, Lexington, Kentucky, US
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Abstract

Many studies have over time shown that children growing up in poverty will most likely have long lasting effects on their physical and mental health, effects on medical service utilization and criminal behavior. Poverty is even in developed countries like United States and Israel a major public health problem of a magnitude that is markedly different than for example Scandinavian countries. This paper presents data from the Israel National Insurance Institute research on poverty. The data showed the incidence of poverty at 20% of all families in 2005/6. The number of families living in poverty in 2005/6 was 404,500 with 1,630,100 persons and 775,400 children. In other words 35% of the children in Israel live in poverty. It is concluded that there is a need for further preventive work to alter the effects of poverty on child development and adaptive...
behaviors, and to find ways to make policy relevant research. Pediatricians and child health care workers should also be trained in community advocacy work in order to work as a coalition in the community towards prevention of poverty and poverty related health problems.

**Introduction**

Research on poverty is not something new, since several researchers in the past have touched on this issue. A now famous study was conducted in inner London in 1896 by Charles Booth, with his work on poverty published between 1889 and 1903 in 17 volumes under the title “Life and labour of the people of London” (1). His original survey covered over 120,000 households and resulted in the construction of detailed and exact maps of the poverty in London. A research group of scholars from the School of Geography at the Universities of Leeds, Bristol and Cardiff (1) took the data from the 1896 study of Booth and compared it with the findings of the 1991 United Kingdom census of the population. All deaths in the area between 1991-95 were identified and standardised mortality rates for various causes of death were calculated for all ages, under age 65 years and above.

They found that for many causes of death in London, measures of deprivation made around 1896 and 1991 both contributed strongly to predicting distribution. The present mortality from diseases known to be related to deprivation in early life (stomach cancer, stroke, lung cancer) was predicted more strongly by the distribution of poverty in 1896 than in 1991. Mortality of older persons (above 65 years) was slightly more strongly related to poverty in 1896 than to its present distribution. This present day study showed that today’s patterns of diseases have strong past roots and the fundamental relation between spatial patterns of social deprivation and spatial patterns of mortality is so strong that a 100 year difference in time did not make a big difference (1).

Another study published in Denmark in 1956 (2) looked at all incidences of hospitalizations for children aged 0-7 years for the period 1948-52 from different housing condition areas of Copenhagen. Thirty years later these children (original sample 2,982 children) were followed and it turned out that unfavourable housing conditions during childhood was not only a powerful predictor for later occurrence of somatic and psychiatric illness, but also for conviction of criminal offences. Compared to the general population these children from the slum areas had nine times more hospitalization for suicide, five times more for psychiatric hospitalization, three times more hospitalization for somatic disease, eight times more arrests for delinquency and five times more convictions (3).

In the United States the official poverty rate for children declined sharply between 1960-69, had an upward trend between 1969-93 with a steady figure around 20%, since 1981. In 1996, the federal government counted 20.5% of the children poor, 18.3% of those 6-17 years of age and 22.7% of all those under six years of age. In 1996, 16.3% of all White children were living in poverty, 39.9% of all Black children and 40.3% of all Hispanic children (4). The last data from the 2008 Economic Report of the President showed that in 2006 for all races and families 9.8% lived below the poverty line, a decline since 1993, when it was 12.3% (5). The 2006 data showed (6) that 39% (28.4 million) children lived in low-income families, while 18% (12.8 million) lived in poor families.
Trends in poverty in Israel

The last UNICEF report (7) on child wellbeing in rich nations showed that the Netherlands heads the table of best overall child well-being. The lowest rates of relative income poverty (under 5%) were achieved in the four Scandinavian countries, nine northern European countries had brought child poverty below 10%, while Portugal, Spain, Italy, United Kingdom, Ireland and the United States remained over the 15% mark (7).

Data on poverty in Israel

The National Insurance Institute in Israel has over the years carried out research on poverty by processing data from the Central Bureau of Statistics Income Surveys (8-10), which we reviewed.

The methods to measure poverty in Israel are based on three factors. The net income of the family as the relevant income for assessing poverty. Here the net income is defined as the market income of the family (from work or income from financial assets) and transfer payments (national insurance(social security) benefits or support from institutions or individuals in Israel or abroad) together, but income tax, national insurance and health insurance subtracted. The median net income of the population defined as the level of income which 50% of families have, while the other 50% have a higher level of income. The poverty line is defined as the level of income equivalent to 50% of the median net income. Therefore a family with a net income lower than half of the median net income is considered as poor. The third factor is the adjustment of the poverty line to family size. This principle is based on the assumption that family size involves economics of scale, so that the growth of a family by an additional member will not result in an equivalent increase, but rather a lesser proportion (8-10).

The poverty line per standard person in Israel was set at 50% of the median net income per standard person and a family in Israel was considered poor, if its net income, divided by the number of standard persons in the family was lower than the poverty line per standard person. The poverty line per family can be calculated by multiplying the poverty line per standard person by the number of standard persons in the family (8-10).

From 1998 the Central Bureau of Statistics has produced a combined Income Survey, based on both the current Income Survey and the Family Expenditure Survey. This combined Survey encompasses 95% of all households in Israel in most forms of settlements.

The poverty incidence reflects the scope of poverty by giving the percentage of poor families in the total population and the poverty gap indicates the depth of poverty. The poverty gap index or ratio can be standarized and defined as the ratio between the average poverty gap per poor family and the poverty line. The income inequality among the entire population is measured by the GINI index (8-10).

Some results from the surveys in Israel

The data from 1998, 1999, 2000 and 2005/6 are shown in table 1. Over this three year period 1998-2000 the incidence of poverty was constant with around 18% of all families, but increased to 20% in the more recent data. The number of families living in poverty in 2000 was 305,400 with 1,088,100 persons and 481,100 children. In other words 25% of the
children or every fourth child in Israel live in poverty, which in 2005/6 had increased dramatically to 35%.

Table 1. Poverty in the Israeli population. 1998, 1999, 2000 and 2005/6 (8-10)

<table>
<thead>
<tr>
<th>Poverty measure</th>
<th>Before transfer payments and direct taxes</th>
<th>After transfer payments only</th>
<th>After transfer payments and direct taxes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1998</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poor population</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Families</td>
<td>548,100</td>
<td>238,700</td>
<td>292,500</td>
</tr>
<tr>
<td>Persons</td>
<td>1,789,800</td>
<td>846,200</td>
<td>1,033,000</td>
</tr>
<tr>
<td>Children</td>
<td>705,800</td>
<td>360,700</td>
<td>439,500</td>
</tr>
<tr>
<td>Incidence of poverty (%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Families</td>
<td>32.8</td>
<td>14.3</td>
<td>17.5</td>
</tr>
<tr>
<td>Persons</td>
<td>31.5</td>
<td>14.9</td>
<td>18.2</td>
</tr>
<tr>
<td>Children</td>
<td>36.7</td>
<td>18.7</td>
<td>22.8</td>
</tr>
<tr>
<td>Poverty gap ratio (%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Families</td>
<td>59.8</td>
<td>25.7</td>
<td>25.3</td>
</tr>
<tr>
<td><strong>1999</strong></td>
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<tr>
<td>Families</td>
<td>552,800</td>
<td>258,900</td>
<td>308,300</td>
</tr>
<tr>
<td>Persons</td>
<td>1,813,300</td>
<td>947,700</td>
<td>1,133,900</td>
</tr>
<tr>
<td>Children</td>
<td>719,300</td>
<td>427,700</td>
<td>509,700</td>
</tr>
<tr>
<td>Incidence of poverty (%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Families</td>
<td>32.2</td>
<td>15.1</td>
<td>18.0</td>
</tr>
<tr>
<td>Persons</td>
<td>31.2</td>
<td>16.3</td>
<td>19.5</td>
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<tr>
<td>Children</td>
<td>36.7</td>
<td>21.8</td>
<td>26.0</td>
</tr>
<tr>
<td>Poverty gap ratio (%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Families</td>
<td>61.6</td>
<td>25.9</td>
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<tr>
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<td>Poor population</td>
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<td></td>
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<tr>
<td>Families</td>
<td>560,000</td>
<td>254,700</td>
<td>305,400</td>
</tr>
<tr>
<td>Persons</td>
<td>1,781,200</td>
<td>892,400</td>
<td>1,088,100</td>
</tr>
<tr>
<td>Children</td>
<td>683,100</td>
<td>392,200</td>
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</tr>
<tr>
<td>Incidence of poverty (%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Families</td>
<td>32.2</td>
<td>14.7</td>
<td>17.6</td>
</tr>
<tr>
<td>Persons</td>
<td>30.8</td>
<td>15.4</td>
<td>18.8</td>
</tr>
<tr>
<td>Children</td>
<td>35.7</td>
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<td>25.2</td>
</tr>
<tr>
<td>Poverty gap ratio (%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Families</td>
<td>60.7</td>
<td>25.1</td>
<td>25.6</td>
</tr>
<tr>
<td><strong>2005/6</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poor population</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Families</td>
<td>664,500</td>
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<td>404,500</td>
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<tr>
<td>Persons</td>
<td>2,238,100</td>
<td>1,428,200</td>
<td>1,630,100</td>
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<tr>
<td>Children</td>
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<td>699,700</td>
<td>775,400</td>
</tr>
<tr>
<td>Incidence of poverty (%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Families</td>
<td>33.1</td>
<td>17.0</td>
<td>20.2</td>
</tr>
<tr>
<td>Persons</td>
<td>33.5</td>
<td>21.4</td>
<td>24.4</td>
</tr>
<tr>
<td>Children</td>
<td>41.1</td>
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<td>35.2</td>
</tr>
<tr>
<td>Poverty gap ratio (%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Families</td>
<td>62.5</td>
<td>33.5</td>
<td>33.9</td>
</tr>
</tbody>
</table>

The incidence of poverty among families headed by an elderly person rose from 24.3% in 1998 to 25% in 1999 (8), which was caused by the slight erosion in the level of the basic old-age pension, but came back to 24.4 in 2000 (9) and decreased to 22.9% in 2005/6 (10). The incidence of poverty among families with children increased from 17.9% in 1998 to 19.3% in 1999 (8), which was mainly caused by the rise in poverty among large families with four or
more children, but it rose dramatically to 32.7% in 2000 (9) and decreased to 25.6% in 2005/6 (10). In 1999 the net income in 41.6% of large families (four or more children) was below the poverty line and in 2005/6 it was 58.8% (10). The incidence of poverty among large Jewish families did not change significantly, but among large non-Jewish families it rose from 50% in 1998 to 61% in 1999 due to a rise in unemployment (8) and in 2005/6 Arab families and children continue to be those with the highest poverty rates (10).

The incidence of poverty in 1999 in families headed by a working person was at the same level as 1998 (9.3%) with the same trend for families headed by a non-worker (at 62%) (8), but in 2000 it fell to 9.0% for workers and stayed at 62.4% for non-workers (9), while in 2005/6 it was 11.9% for workers and 67.9% for non-workers (10). In single parent families the rate was 23.7% in 1999 (6), 25.1% in 2000 (9) and 30.9% in 2005/6 (10) and in non-Jewish families 42.3% in 1999 (8), 42.9% in 2000 (9) and 51.2% in 2005/6 (10). The incidence in new immigrant families rose from 16.8% in 1998 to 18.0% in 1999 (8), to 18.7% in 2000 (9) and 18.6% in 2005/6 (10).

There were marked differences in the distribution of poverty, when the map of Israel was studied in 2000 (9). The Jerusalem district, the northern district and the southern district were all with a high incidence of poverty with 29% in the north, 23.3% in Jerusalem and 20% in the south. The poorest cities in Israel were Jerusalem, Bnei Brak and Ashdod with 22-33% of the families below the poverty line (9).

The income gap in Israel became worse from 1997 to 1999, when the GINI index rose from 0.509 to 0.512 (8), but a decrease to 0.509 again in 2000 (9) and 0.522 in 2005/6 (10).

In 2013 Israel was the most impoverished of the 34 economically developed countries, with a poverty rate of 20.9%, according to a report released by the Organization for Economic Cooperation and Development (OECD). Israel's poor population has grown more than in any other OECD nation, making it the country with the highest rate of poverty, having exceeding Mexico, whose poverty rate stands at 20.4%.

Israel also continues to be one of the countries with the largest income inequalities, ranking fifth, with the United States, Mexico, Chile and Turkey having larger income gaps. Between 2007 and 2011, Israel experienced almost no changes in its social gaps, which saw a tiny decline of 0.1%. Between 2007 and 2010, poverty among children and young people in Israel grew at the fourth largest rate from among the OECD countries, although among senior citizens, it declined.

As opposed to the trend in most countries, where salaries among both the richest and poorest has decreased, Israel has seen a slight increase in both. In Spain and Greece, which are suffering from recession, poverty rates are lower, at 15.4% and 14.3% respectively. The OECD report also points to an increase in inequality throughout the world, due to the global economic crisis. In almost all OECD countries incomes are in decline, while inequality is on the rise.

The relative income poverty rate in Israel – defined by the OECD as the share of people having less income than half the national median income – is larger than in countries such as Turkey, Mexico, Chile, Spain and Poland. As of 2010 it was over 20 percent. According to the OECD report, it has rocketed from 14 percent in 1995 to nearly 21 percent in 2013.

So why is Israel so low on the scale? It has to do with a concentration of poverty and high unemployment among two large minority populations—ultra-Orthodox Jews and Arab Israelis. The problem is especially acute among haredi men and Arab Israeli women. Only forty-eight per cent of ultra-Orthodox men of prime working age were employed in 2011,
according to the latest annual report by the Taub Center for Social Policy Studies. Only twenty-eight per cent of Arab Israeli women were employed and of the Arab women who did not finish high school, only five per cent had full-time jobs.

In 2011, there were 442,200 poor families in Israel (20% of all families), encompassing 1,838,600 persons (25% of all persons), of whom 860,900 were children (36% of all children). 50% of the poor families are working poor. These statistics represent an increase from ten years ago when there were 318,900 poor families in Israel (18% of all families), encompassing 1,169,000 persons (19% of all persons), of whom 530,700 were children (25% of all children).

In 2011, there were 270,200 poor Jewish households representing 61% of all poor households. There were 171,900 poor non-Jewish households representing 39% of all poor households. The percentage of Non-Jewish households in poverty significantly exceeded the percentage of Non-Jewish households in the overall population, due to the high rate of poverty among non-Jewish households.

### Other countries

When Israel was compared to some other countries with data from the 1990s (see table 2) it was found that only United States has a worse poverty incidence with Sweden, Norway and Luxembourg at the better end of the scale. The children of Scandinavia come out with the lowest percentage in the 3-4% range. Since then the situation in Israel has worsened, as the data above from 2005/6 (10) indicated.

#### Table 2. The incidence of poverty and GINI index of net income distribution in Israel compared to different countries (8)

<table>
<thead>
<tr>
<th>Country</th>
<th>Poverty incidence for</th>
<th>GINI index</th>
<th>Scale after GINI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Families</td>
<td>Persons</td>
<td>Children</td>
</tr>
<tr>
<td>United States (1997)</td>
<td>17.9</td>
<td>18.8</td>
<td>27.6</td>
</tr>
<tr>
<td>Israel (1997)</td>
<td>17.7</td>
<td>18.2</td>
<td>22.9</td>
</tr>
<tr>
<td>Australia (1994)</td>
<td>12.7</td>
<td>12.7</td>
<td>18.3</td>
</tr>
<tr>
<td>Italy (1995)</td>
<td>12.6</td>
<td>15.0</td>
<td>23.7</td>
</tr>
<tr>
<td>Germany (1994)</td>
<td>12.0</td>
<td>12.3</td>
<td>17.5</td>
</tr>
<tr>
<td>Canada (1994)</td>
<td>11.2</td>
<td>11.3</td>
<td>17.6</td>
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<tr>
<td>Sweden (1995)</td>
<td>8.8</td>
<td>5.9</td>
<td>3.3</td>
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<tr>
<td>Holland (1994)</td>
<td>8.4</td>
<td>8.7</td>
<td>9.8</td>
</tr>
<tr>
<td>France (1994)</td>
<td>8.4</td>
<td>8.6</td>
<td>11.5</td>
</tr>
<tr>
<td>Belgium (1996)</td>
<td>8.0</td>
<td>7.0</td>
<td>6.8</td>
</tr>
<tr>
<td>Norway (1995)</td>
<td>6.0</td>
<td>4.3</td>
<td>4.3</td>
</tr>
<tr>
<td>Luxembourg (1994)</td>
<td>4.5</td>
<td>5.0</td>
<td>9.0</td>
</tr>
</tbody>
</table>

The *Luxenbourg Income Study* (11), a non-profit group has over the years compared the poverty level in different countries and their latest data from 31 countries showed that poverty rates (poverty line defined as 50% of median adjusted disposable income for all persons) for all children were highest in Mexico (24.8%, 2002), followed by Russia (22.2%, 2000), the United States (21.9%, 2000) and Israel (18.0%, 2001).
Health

The studies from England (1) and Denmark (2,3) clearly showed marked long term health effects on growing up in poor neighbourhoods. Other studies (12) have also shown adverse effects on child development and health when growing up in poverty. When living in poverty, children will have less access to optimal medical care and surveillance, proper nutrition and safe environments (12). The health problems will often persist and have consequences for long-term development (1-3,12).

Discussion

In recent years there has been some discussion (13) about the definition of poverty and what it measures, as defined by the United States (US) Government (4). The US Government will consider a family poor, when its pre-taxation cash income falls below the standard poverty line. The poverty line is adjusted each year to inflation according to the minimal amount of money that is needed to maintain a nutritionally adequate diet for different family size and composition.

In 1996 the US Government found 20.5% of its children poor (4), while the 1999 results from the Combined Income Survey in Israel showed a certain degree of deterioration for the worse compared with earlier years in aspects of the scope of poverty, income gaps and more children living in poverty (26%), which has increased further in Israel to 35% in 2005/6 (10). The statistics both from the US and Israel do not however show to which degree each family is economically disadvantaged, the length of poverty time for each family or child and at what point in development time each child is affected.

Poverty can have serious effects on child development and health (12,14) and is often associated with other risk factors, such as low birthweight, single parenthood, unemployment, unsafe neighborhoods, maternal depression, low social support, welfare dependence and stressful life events (12). Poverty means less or even lack of medical services, which will influence the child already in the foetal stage. Mothers living in poverty will not be able to get the right nutrition during her pregnancy, not receive proper prenatal care and as a result have a higher incidence of low birthweight babies, higher infant mortality and therefore a higher risk for permanent neurological or developmental disease (12,14).

Growing up in poverty with inadequate living conditions, poor health service and poor nutrition will effect the development of the child, the performance in school and the health status, sometimes resulting in permanent damage that effects the quality of life and the lack of equal opportunity. Three publications from the World Bank (15-17) bring the testimony of the experiences of over 60,000 poor women and men from 14 countries in a unique research project. A comment in the British Medical Journal (18) some time ago by leading pediatricians raised the concern that children and adolescents in the United Kingdom lack political power and an inadequate voice, when new national health plans are prepared. The authors propose the following strategies for improving the status of children and adolescents:

- Children and adolescents should be seen as a defined and specific client group in all hierarchies of responsibilities
• An independent children’s commissioner or ombudsman for England working with others in Scotland, Wales and Northern Ireland should be responsible for integrating and evaluating the impact of all threads of government policy that relate to children and adolescents and for protecting their rights.

• A national strategy for children’s and young people’s health should be informed by multiprofessional strategic forums that have direct access to the management executive, chief medical officer and chief nurse and implemented by designated officials with identified responsibilities for children.

• Individuals should be appointed at regional, district and trust level to be responsible for defining local health policy, priorities and practices relating to children and adolescents. This is particularly important to ensure that the opportunities provided by the development of primary care groups and trusts are not compromised by the creation of new functional barriers between service providers.

• Authority should be given to implement change and to deliver effective services in the light of specific budgets for children and adolescents and their health needs within the framework of local health improvement programmes for young people.

• Children’s health improvement programmes should be truly intersectorial embracing other joint children’s planning devices, particularly children’s and young people’s services plans.

• Local multiprofessional forums between education, social services and health should be created to inform strategy, monitor performance and develop joint commissioning.

• Effective leadership is needed at all levels to facilitate jointed up working with effective intersectorial communication, collaboration and working practices.

• The views of parents, children and adolescents together with those of clinicians dealing with young people urgently need to be incorporated into the formulation of strategy and delivery of services.

They claim that the government in the United Kingdom has failed to monitor the implementation of existing guidance despite several reports and committees showing that some of the basic principles in the health care of children are ignored. There is therefore a need for physicians working with children and adolescents to embark upon the role of not only dealing with ailments and health, but also to become advocates for children and young people’s rights. The late pediatrician C Henry Kempe (1922-1984) from Denver, the discoverer of the battered child syndrome, was a good example of such an advocate (19) and we really need to incorporate child advocacy and community involvement in the training of future pediatricians and child health workers, who today receive most of their training in hospital based facilities, in order to become the voice for the children and young people, who are not able to vote or lobby for political gains.

**Conclusion**

Living and growing up in poverty places children and adolescents at risk for developing health problems due to inadequate health care, health insurance, improper nutrition and sometimes hazardous living environments.

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Research (12) has shown concern for the psychological effects on children living in poverty and there is a need for further research into the effects of poverty on child development, investigate resiliency, adaptive behaviors and find ways to make policy relevant research. There is no good reason for the big difference in poverty between children living in Scandinavia with the lowest rates compared to United States and Israel with the highest rates.

References

The Bedouin Woman and Family
Chapter XIX

Legal reform as a tool of development or conquest? Implications for women health improvement

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Abstract

Five decades ago the State of Israel mandated resettlement of the Bedouin of the Negev Desert in the south of Israel. The results were manifested in numerous social, economic and political changes. The major intention of the Israeli Government was to “modernize” the population while shifting away from “traditional” behaviors. As a part of this initiative, the State sought to remove the Bedouin from the land and move to organized settlements, land which had directed these behaviors for millennia. This chapter looks critically at the assumptions inherent in this initiative. We seek to address how Bedouin Arab society is changing by analyzing contested gender relationships in particular. There is no doubt that “modernization” is occurring as new behaviors are being adapted in the post-nomadic environment. But this comes at a price. As the Bedouin transitional society shifts away from indigenous legal structures and toward greater reliance on the legal culture of the State, conflict is inevitable. We show here that such does not reflect a narrative of a “traditional” society refusing to accept “modernity” and development but rather, that of a community in transition undergoing rapid change, as men and women alike seek to negotiate imposed new Westernized systems and foreign values within the broader context of land acquisition and sovereign expansion.

Introduction

Legal systems evolve and develop as organic outgrowths of the informal culture of a people. The formalization of the informal (often tribal) system sharing a common language and, most important, a legal system that supports the economic system and that in concert formulate the institutions. Together, these become the State or the Non-State nation. The family is in every society or system, the primary institutions through which evolve the socialization on each generation and the relationships between the family and the larger social organization. In those instances in which there is smooth transition from the informal to the formal system inclusiveness becomes the psychological security derived from “belonging”. In those instances in which a colonizer or foreign dominated legal system is externally imposed it is impossible for the institutions of the society to reflect the customs and beliefs of the populace. Instead there is a feeling of disconnect within the family group to the institutions, the legal system and the economic foundation. Because gender distinctions are so basic to every society, these are most frequently and extensively impacted (1,2).

In the case of the Bedouin community of the Negev Desert, this developmental path is now experiencing considerable stresses, challenges and constraints. As the Bedouin settle as part of an ongoing forced sedentarization plan induced by the State starting in the mid-twentieth century, the tribal structure of the Bedouin community in Israel and the laws and rules that for centuries governed communal behaviors – both formal and informal – are under severe stress. The alien Israeli legal system, an outgrowth of the cultural values of the latter, has been imposed on an indigenous society as in most instances of colonialism. The interaction is neither smooth nor always appropriate. Thus indigenous Bedouin family systems now appear to fall “outside the law” or “marginal to the legal systems.” Pertinent to this study, the core family and the role assignments by gender are critical and through it, the socialization of the young interacting within these institutions are either marginalized or incorporated (3). When there is a progression from the informal system to the formal one, the
family, the primary institution in every society, evolves into the socialization program for the young, from generation to generation and gender distinctions, rules and regulations are a major expression of this formalization (1,4).

Historically, a set of largely “informal,” unwritten rules governs nomadic, pastoral and agricultural social groups, serving to reinforce group cohesion, life-style and economic structure. As nomads settle and the nature of land ownership, settlement patterns, and social relationships are altered, the nature of the law also changes. Tribal law which has governed these relationships, including family law, must adapt to a new social environment. Such is the case in the Negev, where Bedouin family law is increasingly alien to conditions of life in a settled, urban, nation-state in which the law of the state mandates all of the institutions of socialization. Within the community even as state law began to supersede tribal laws, tribal law continues to reinforce ancient Family Law and traditional obligations in the tribe where state law fails (4,5). This study will consider this shift, raising questions for how one might reconcile support for the ideals reflected in the formal State legal structures with the difficult acknowledgement that such structures are imposed within a discourse which also embraces an enterprise of colonial conquest, dispossession, and cultural destruction.

**Bedouin women: A minority within a minority**

Bedouin women are a minority within a minority. If considered, as the Bedouin in fact are, a minority group in Israel, then the approximately fifty percent who are female constitute a minority within the minority, even if numerically the gender proportions are equal. First, as Israelis, they live as a minority in a non-Arab state in the region. Second, they comprise part of the Arab Palestinian minority within Israel itself, which is both politically and socially dominated by the numerical majority, namely Jewish Israelis. And finally, the Bedouin are a minority of this Arab minority within Israel, comprised of the poorest and weakest of the communities countrywide (4,6,7).

Women, lacking the power, prestige and privileges of their male counterparts, are therefore positioned into yet one more level of minority status within this nested relationship. The Bedouin have descended from militaristic, pastoral and nomadic tribes that valued males for their function in protecting and providing the communal food supply (5). In a desert environment with little access to irrigation and harsh climate characterized by sand, dust, unshaded heat from the sun reflecting on the sand, wind untamed by structural impediments and food supplies and life itself becomes precarious. The historical political condition of competition for scarce resources to ensure survival, makes the political climate no less threatening than the environmental conditions and survival largely depending on their ability to exercise their dominance over nature (2,4).

Historically the authoritarian structure and extended family composition of the Bedouin community had clearly delineated familial roles and expectations (8) requiring all family members to be receptive to their traditional roles and ascribed status. Traditionally, family structure in such societies formed the protective framework (morally and legally), with strong emotional and geographic bonds between the nuclear and the extended family.

The Bedouin cherish their strong connections with tribal membership with its natural connectivity in networks. Within the Bedouin community there is a strong allegiance to the
tribe with a particular emphasis on connectivity and intra-familial networks rather than individualism. A key role performed by women in this socio-economic system was the ability to bear sons who supported the family unit (9) and whose patrilineal descent was of absolute probity. Identity of the individual was within the nuclear family, the extended family, the clan and the tribe (5). As such it is not only a larger unit, but also necessarily more stable and internally consistent (10).

Transition from tribal or “traditional” law to more formalized “modern” law, in theory at least, meets the demands of contemporary life, specifically as it affects gender roles and relationships in a recently settled society. This is dramatically evidenced in the present condition of Bedouin women in the Negev. Tribal Law purported to safeguard women’s interests, which was necessitated by the conditions of nomadic life throughout the south rim of the Mediterranean and in land from Libya through the Arabian peninsula. Conditions for survival were harsh. The weakest members of the tribe were considered to be those who were aged, and those who were neither warriors nor prospectively producing warriors. As trading and a pastoral life style replaced the hunter-gatherer mode, women became valuable and productive members of the tribe insofar as they could herd and feed livestock that had become domesticated and provide food and shelter for the tribe. Their contribution extended from producing the next generations of warriors/hunters to extending the wealth through their care of the livestock that was traded as well as protecting the vulnerable with shelter they constructed.

Modern Israeli family law, a partial product of universal human rights law is based in a settled, primarily urban society in which the legal system is formalized on gender equality. Modern Israeli family law, thus originated and extended the family and gender equity legal systems that were established across Europe, the United States and beyond in the post-WWII era. Contrary to Tribal Law, modern family law focuses on the family as the primary group within a larger society. Its function is to incorporate the new generations into the established social institutions and thus strengthen the state.

The systems conflict on the issues of gender role. While the old, traditional Bedouin tribal system emphasizes the necessity to protect the woman as the weaker more vulnerable members, modern legal institutions protect women’s status and promise gender equity. That this promise or premise is not always realized has become the nub of the current international concern for establishing a legal code that would place women as a protected class (4).

Protection in the tribal legal system presumes gender inequity and is based in assuring continuity of the family and tribe as well as the culture in contrast to modern family law or the formal legal system that facilitate gender equity. This contrast places women in the center of the conflict between these two assumptions.

The Khamsa versus the recognized village

Since the establishment of Israel in 1948, the State has actively sought to alter the socio-economic structures of the community through compelled residence in established seven settlements. That is to say, a village or town exists within established borders, providing basic infrastructure and amenities within its perimeters. Although paralleling the traditional settlement structure, this new town environment is not designed for and cannot provide the
same social protections and linkages facilitated in the vernacular settlement. Indeed, the very geographic design and nature of the traditional Bedouin encampment was to ensure that family structures were supported, sustained, and reified over time, replicated from generation to generation without disruption:

Bedouin society had devised the Khamsa (or clan) to protect its isolated and vulnerable members. The kinship group, or the revenge group, depending on the context is an institution intended to bind all the related members of the Khamsa to aid each other in conflict or distress and to act so as to redress violations against any of its members (5). As Bailey noted (5) non-membership in a khamsa was a dangerous condition historically and indeed, might be equated with geographic distancing between community members insofar as both might contribute to insecurity and vulnerability. The point to be emphasized here is that traditional Bedouin law and custom was by its very design concerned with the protection of all members, most especially those perceived to be its most vulnerable – and, we might add, valuable members.

Thus, State law should not only be seen as a challenge to Bedouin land rights but may, to a certain degree, be perceived as a threat to community cohesion, solidarity, strength, and sustainability. In terms of land rights, where the State does not recognize Bedouin tribal land ownership and therefore does not offer substantial legal protections, Bedouin tribal law continues to recognize Bedouin tribal land and seeks to protect it, even in cases where the state has confiscated land and denied ownership rights. From a Bedouin communal perspective, the State has sought to forcibly settle the population into recognized villages (6,9).

Of the approximately 200,000 Bedouin, half live in nineteen recognized villages. The other half live in 36 unrecognized villages. Of these, seven towns were built and developed by the State from the ground up, while an additional twelve were existing, informal, spontaneous villages, which were officially recognized between 2000 and 2010 and placed in the “planning phase.”

In the process of resettlement the Bedouin population has undergone considerable social, cultural and economic change (11). These permanent towns incorporate modern community services previously lacking electricity, running water, sewerage, and easily accessible schools, healthcare facilities, and social welfare services. These amenities present both challenges and opportunities particularly for women (12).

For example, Israeli law requires that Bedouin girls receive equal educational and vocational opportunities to their male counterparts, as well as freedom of choice regarding marriage, divorce, dress code and choice of marital partner. The “modern,” resettled urbanized Bedouin girl is, according to Israeli law, free from compulsory genital mutilation, early arranged marriage, or from being a co-wife in a polygamous marital relationship. In other words, Israeli law reflects the values of the global society at large and as such, Israeli law strives for equality, whereas Tribal Bedouin Law emphasizes “protection” – both the protection of women from men, but indeed protection of men from women as well. Still, there is clearly a very fine line between “protection,” “separation,” and “control.”

At the same time the imposition of Israeli legal standards represents the westernization of an ancient Middle Eastern civilization. This initiative is often (if not always) perceived by members of the Bedouin community as an attack or affront, which weakens the family ties of the community. According to Abu-Rabia-Queder (12), prior to the move to geographically-fixed abodes, women’s extensive participation in pastoral and agrarian tasks as well as their

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physical involvement in setting up tents and other temporary shelters became obsolete. There is no genuine replacement. When the Bedouin of the Negev began to reside in recognized villages women’s role definitions became even more limited than ever before despite the initial opportunities suggested by Israeli law. Women were responsible for family tasks, such as preparing all meals and caring for the children as well as the health and safety of the family. Living in these small communities with the extended family, the women were also responsible for maintaining the social ties and cultural dynamics of their traditions, as well as caring for the home.

Even while the movement into settled villages in the Negev changed the gender roles particularly for women the protective function of the khamsa had no corollary in the new settlements. For many decades the issue of enforcement of state law was unresolved insofar as Family Law or equality of genders was concerned. Relatively recently (since the late 1970s and early 1980s) as a new generation of Bedouins were born and raised in a settled environment with new values, interests and expectations the enforcement of the tribal legal system has come in conflict with the new life style for the Bedouin of the Negev.

These new changes suggest the diminution of the significance of family constraints along with other social relationships, styming intergenerational transmission of cultural practices and values, but as these “traditional” values and beliefs transform, what replaces them? While on the one hand, one is hard pressed to bemoan the loss of some of the “traditional” practices or beliefs noted above, to a large degree formal education has assumed the function of transmitters for what had been intergenerational culture, values and standards. It is now more often, that education and the media bring new ideas, values and attitudes superimposed upon this population (4).

**Female employment and education in the resettled Bedouin community**

As noted, the “traditional” lifestyle of the Bedouin was pastoral nomadic, combined with a limited level of agricultural engagement (13). In this context, women played a key role economically, because they cared for the sheep, goats and other livestock. In addition, women took a very active part in setting up tents (preparing habitation) and caring for the interior of the home (tent), including the food preparation, repair of tent and clothing and cleaning needs.

But even more physically demanding was their role in farming, harvesting and storing grain and other commodities. They were thus very active participants in the economic life of the family and together with other women, of the clan and ultimately, of the tribe. Gender role segregation, required of women (and possibly preferred by women) mandated the active outdoor life, except when required by modesty to retire within the private space (12).

Upon settlement and the loss of their traditional lands, women’s economic roles underwent change. Increasingly, women have pursued wage labor positions outside of the traditional family home, but due to the constraints of “family honor” many Bedouin females have been restricted by fathers or husbands to work outside their home. These views originates in the tradition where the male functioned as the guardians of their women,
protecting them and providing financially for all members of the household. We can immediately see, in this paradigm how easily “protection” then becomes control.

This tradition prevails despite the fact that they are in contradiction with the prophet Muhammad’s injunction that women can pursue careers in commerce (4). In fact, where there is a contradiction or conflict between Islamic law and the tribal codes, it is not uncommon for the latter to prevail. Thus, only a small percentage of Bedouin women have succeeded in overcoming these barriers to participate in the larger economic life. Although a large number of Israeli women work outside of their homes, only much smaller percentage of Bedouin women are thus employed (14). Of those who do work, it has been found that married women are also less likely to work outside of the home than single women, and that working women overall tend to work in the Bedouin villages, rather than the Jewish, economic sector (15).

The new urbanized lifestyle has completely changed the way Bedouin men and women conceive their economic alternatives. Men have gone into the building trades and become entrepreneurs, shop keepers, auto-repair workers, truck and taxi drivers (4). Their children have now sought higher education, through which they became teachers, doctors and other professionals.

The primary conductor of female participation in the wage labor workforce is access to formal education. With enforcement of Israeli law, Bedouin females accessing formal education at unprecedented levels, and these rates are steadily increasing (15). Many educated Bedouin women become teachers in the public schools and some work as nurses and, increasingly, aspire to careers as doctors and lawyers. Although these numbers are increasing and appear likely to increase further along with access to education and higher education, Bedouin women, considered collectively, are at the bottom of the wage pool when compared to the more widely employed Jewish women and even to women of other Arab communities in Israel. Some of this financial gap can be attributed to traditional family honor restrictions on female mobility (14).

Predictably too, formalized educational practices in this developing community are no longer limited to the training and cultural transmission of informal or traditional mores, morals, and codes. Rather, formal education is a major institution of the new Israeli society. The legal codes of this westernized social system assumes the same mission as did the traditional family law — protection of women but further, equalization of gender roles, power structures and opportunities within the society. It is fair to say that in the past, opportunities were parcelled out first to males. Today, the imposition of State law – as well as lifestyle changes brought on by the forced communal resettlement off of the Land – requires that girls have equal educational opportunities and attend gender-integrated schools. Within a span of thirty years female attendance and graduation rates from high school increased exponentially (16). Dinero (15) found that in recent years, girls who do not access formal education has dropped precipitously from two-thirds of the population to about 10%, while simultaneously rates of those attending college is ascending. Public educational policies of inclusion mandate that girls attend school as well as boys. The result is that girls who might previously have married in early adolescence and been mothers by their mid-teens instead are continuing with their studies.

When the first author attended secondary school in 1976, only two of the 28 students in his class were girls, while today in most Bedouin classrooms one will find more girls than boys in attendance. While the first Bedouin to attend Ben-Gurion University School of Social Work 1986, was a woman, today Bedouin women are studying medicine, engineering,
As formal education has become increasingly important in Bedouin society (16). Bedouin men and women have begun to attend institutes of higher education at a larger rate than previously. For instance, at Ben Gurion University, they have experienced an increase in the rates of Bedouin students with a current total number of approximately 400 students (250 female and 120 male) (17). The increase in the number of women as opposed to male enrollment is also observed in different colleges in southern Israel. As in other societies around the world, education is critical in the empowerment of women and as Abu-Rabia-Queder (12) posits that the role of education, for Bedouin Women, is a tool for social mobility, progress, and personal and social change.

This change over the course of only a single generation is indicative of the social changes being experienced throughout Bedouin society as a whole. By implication, traditional male leadership may perceive these changes not only as an invasion of their authority, but as an assault on the honor of their community. Older women too have been affected by these changes. They experience the educational achievements of their daughters and granddaughters as a challenge to their traditional way of life and to their authority.

For some Bedouin families success in maintaining traditional values in the private sphere is more highly prized than professional achievement and therefore women’s presence in the public sphere can be perceived as a risk of family honor (18,19). This change has also provoked uneasiness between generations of women in particular. Older generations of women, missing a previous sense of honor and respect, not only may experience feeling of displacement, but my also feel useless and depressed. There is an active movement in some Negev Bedouin villages for promoting adult literacy in order to address this concern.

As wage labor and formal education take on greater import for Bedouin women this, in turn, impacts on Bedouin marriage patterns in the Negev as well. In “modern” Israeli society formal education and the loss of traditional sustenance has become an alternative to early marriage. As for its impact upon polygamy rates, the results, conversely, are somewhat mixed, and provide yet an addition arena for potential conflict. It is to this set of concerns that we now turn.

The institution of marriage

There is, perhaps, no issue which is more controversial in Bedouin society today – both within the community as well as from the perspective of the outsider – than the changing institution of marriage and, especially, the role of polygamy, outlawed by the State of Israel. According to Muslim tradition, the prophet Muhammad formally instituted polygamy due to the fact that after battle many men are slain and in order to protect widowed, unmarried and divorced women polygamy was introduced (20). This shortage of men has been primary not only in polygamy, but also in female infanticide. But Muhammad prohibited female infanticide, which further intensified the necessity to “care for” unmarried women.

Polygamous marriage under Islamic Law also seeks to provide conditions for good treatment of wives by encouraging inter-familial connections, as well as assuring care for widows and orphans, the infertile and the disabled (21). Culturally as well as economically,
polygamy maximizes progeny. Again, such values emanate from the harsh geography and lifestyle of the Bedouin, which by definition contributed to a high rate of infant and child mortality of 15-20% (22), a high mortality rate for women in pregnancy and childbirth, and the relatively short life expectancy for men.

In order to conform to Israeli law dictating monogamy the Bedouin, in practice, “divorce” the first (or second or third) wife as they take on additional wives. This divorce-remarriage process does not in any way necessitate casting out the divorced wife, but rather, is an adaptation utilized in order to follow the letter – though obviously not the spirit – of Israeli State law. Meantime, a Bedouin man typically will financially sustain each co-wife and her children in the same or an adjacent household. In contrast to the western practice of serial monogamy, divorced wives and their children are provided for by the marriage contract itself and by family agreements (23). Indeed, recent studies suggest that increasingly, Bedouin women are embracing a more Victorian, romantic love model of marriage (15), which strongly conflicts with traditional polygamous practices.

Despite these views, many Bedouin men continue to value this practice, albeit for reasons which appear to differ from those of men of previous generations. Thus, this “traditional” practice is also changing, and is no longer being undertaken according to the rules and expectations once expressed in Muslim legal teachings. As a result, one can find examples of instances in which this practice is both on the decrease, as well as where it is increasing. In part, Israeli legal barriers, as well as economic barriers, serve to discourage the practice (15). These legal restrictions against polygamy are enforceable by the State even when a family imposes the union. A woman who objects to this arrangement can and sometimes does seek help and shelter from the legal institutions in defiance of Bedouin family law.

When it comes to other aspects of their lives, however – namely the donning of modesty dress – many Bedouin women are resistant to adapt to new Western dress codes. Like many other Bedouin practices, the wearing of modesty dress has become a highly charged icon of contested space between the “modern” and “traditional” worlds in the post-nomadic era. And yet, interpretations of the meanings of this behavior are almost as varied as the numbers of women who wear/do not wear these various garments.

At its most basic level, modesty dress creates separation between the sexes. The traditional and ethical system of the Quran includes the injunction that women remain modest and that their virginity be protected until marriage. Dressing in an understated fashion is a centerpiece of this ideal. Besides providing protection for hair and skin in the harsh desert climate, the veil has become a symbol of preserver of honor. The veil itself is, like the abaya covering from neck to feet, proscribe viewing a woman’s sexuality from anyone, but her husband.

Modesty behaviors includes not only sexual propriety, but also requires modest demeanor and dress (covering the hair, the arms to the wrists, and the legs to the ankles) for both sexes. The modest person looks down, sits or stands formally and does not eat, smoke, talk, laugh, or joke in certain types of social situations. But the practices and interpretations by the Bedouin of the Negev are in many ways distinct even amongst Muslims and other Arabs. The separation of women from men became even more emphatic through the symbolism of the veil. As a practical matter, the first Bedouin dentists in Beer-Sheva following Israeli independence, noted that they had to struggle to find space on the faces of their Bedouin female patients to examine their mouths (4). These women were genuinely fearful of displaying their faces to a Bedouin man not of their immediate family. Dentists, like all other
male health professionals had to carry out their work on women wearing Hijabs and Abayass, which all but completely covered their faces. Indeed, for a Bedouin woman to show her face to a Bedouin man – any man – was an insult to family honor code. Bedouin women at that time would have preferred to be “seen” (in this case in the literal sense) by an Israeli Jewish dentist given local communal mores. Bedouin husbands were complicit in reinforcing such strictures, and would take their wives to visit a Jewish doctor rather than to risk communal sanction resulting from having had one’s wife being treated by a Bedouin man. As the availability of doctors and dentists in the community has increased in recent years (and several of them are women professionals) this aversion has become less problematic.

Over time and with resettlement, modesty clothing has taken on new meanings, sometimes known only to the wearer of the garment. While from a developmental perspective, the continued donning of the veil quite clearly may be viewed as a method of social control and subordination of women, recent studies argue that today, its wearers seek to accomplish quite the opposite. Rather than regulate their behavior, it gives women freedom for exploration under the mask of modesty (24).

In the Negev Bedouin case, such struggles take on even greater magnitude. As both a minority within their Bedouin community and as Arab Muslims living in a dominant Jewish State (26) confers upon them a doubly marginal status. While few of the young women today wear the ornately embroidered gowns their mothers and grandmothers made by hand and wore, they cover their blue jeans with abayas (purchased) and their hair with matching scarves or hijabs. In this way, they distinguish themselves as Muslim women and as Bedouin in the Negev living as minorities in a Jewish/Western State (4).

Clearly these practices vary greatly between families, tribes, and generations and within families. They have been abandoned by some women who, one might contend, have in part been “Israelized” by the surrounding culture. And yet today, the donning of modesty dress appears to be on the rise throughout the Negev, most especially – and significantly – among the younger generations (15). This return to traditional garb became evident in the early 1980s among Palestinian Arabs, when politicized Islam became more entrenched. Although more research is needed in order to further investigate how and why this phenomenon is now under way, what is certain is that this is one “tradition”, which is now taking on new form and expression in the ever evolving society that now comprises the post-nomadic, urbanized Negev Bedouin community.

Family conflict, violence and resolution in a changing Bedouin community

To this point, we have demonstrated that the lives of Bedouin women of the Negev have changed considerably as the community has undergone the resettlement process. There are some aspects of Bedouin society, however which, though increasingly rare and difficult to document, continue to impact the social development of women specifically, not to mention the community at large.

For example, honor killing is not new to the Negev Bedouin community (9,26). Changing attitudes in the community, however, as well as increased access to social welfare services to
address these changing ideals now contributes to the development of an entirely new set of expectations for Bedouin daughters, sisters and wives.

Indeed, because Bedouin societies are “shame cultures” in which the invasion of family honor represents a direct insult to the community’s collective self-esteem and reputation (25), violence directed against women emanates from the Tribal Law legacy of “family honor” (25). Among the Bedouin the revelation that a woman has been sexually abused (including all varieties of sexual contact—whether of a verbal or physical nature) or has had a sexual relationship of any kind dishonors, disgraces, and shames the entire community (25). Acts that impinge on the sexual purity of women are perceived as crimes against the family and community honor code. It is not the predator who is killed, it is the woman who may be the entirely unwilling and unwitting target of predation, who is charged with dishonoring the family. Therefore she becomes the target for honor killing (25). There is a saying, not entirely untrue in Bedouin social history: “If another man insults my horse, I will kill him. If he insults my wife, I will have to kill her” (4).

Family honor killing is reinforced by honor codes that contradict the laws of the State of Israel. The concept of “family honor” is itself embedded in some traditional societies – especially in shame-based societies such as that of the Bedouin. This kind of thinking legitimizes blood revenge by the male kin against not only the perpetrator involved in an act, but against the woman victim as well. These killings are committed in situations in which a woman’s actions or the actions taken against her by a third party are perceived as an affront to the honor of her male relatives. The blaming the victim reasoning is rationalized, because it would be too “expensive” to retaliate against the man or a male relative, because that would set off a series of revenge killings or vendetta. Therefore it is simpler to kill the woman who “attracted” the dishonor—even if she was an unwilling victim of rape (25). There is a lack of reliable data on the number of cases that could be defined as honor killings in the Bedouin community and it is uncertain whether such crimes have actually diminished as a consequence of Israeli law or if they are just underreported and misrepresented as deaths by suicide or accidental causes (25,26).

Under-reporting is related to other issues as well. In many instances the killings are rationalized on the belief that family honor needed to be restored (19). Perpetrators are often exonerated, usually avoiding a thorough investigation and prosecution. In one study (26), women who had experienced abuse within the home exhibited signs of helplessness and trauma; as such this both impacts and inhibits the number of reported cases, especially if the fear stems from the abuse and from the victim’s anticipated belief that the family or community may take additional actions against her once the abuse is discussed openly.

In Israel the attention of secular authorities and judicial proceedings are hampered by these fears and influenced by the denial of the facts. In Jordan and many other Arab countries the laws themselves identify circumstances and practices that legitimize honor killing and the penalties under the law seem to have little effect on decreasing the incidence or diminishing the extent of abuse of women generally. As a result in Israel, where it is not only illegal, but there are institutional alternatives for women seeking asylum from abusive spouses or fathers, the incidence has decreased, but many secular judges, as well as the police, continue to regard this problem as the private concern of the family and as a phenomenon that stems from the social norms and values of traditional Bedouin society (27).

The Israeli judicial system is codified, written and has evolved from precedent and legislation. As one of the major institutions of the society, it incorporates adjudication with
enforcement. There is an obvious disparity between the state legal system and tribal law enforcement. This is personified in the existence of the police as the enforcement institution of the state and the judicial system as the state authority. This disparity is clearly evidenced in the most basic legal relationship—that of husband and wife.

Traditionally then, communal Bedouin justice is more concerned with the restoration of group harmony, family honor or of a woman’s reputation than on the punishment or penalty. The Bedouin family honor code actually forbids using force against a woman regardless of the legitimacy of her wrongdoing. There is not really a conflict between state law and tribal law in this instance. Furthermore the tribal law that prohibits a man from insulting his wife or demeaning her in public is not in conflict with state law.

Since the establishment of the State of Israel and the onset of resettlement, conflict resolution increasingly is sought through the Israeli court system. Some Bedouin men have been jailed for domestic violence. Such episodes might have an entirely different resolution through the traditional tribal system. In tribal Bedouin law, the financial penalty and potential threat to his life and his extended family are effective deterrents from thoughtless or malevolent violence towards his wife. Sometimes this contradiction between the mores of the two systems has exacerbated failures of enforcement of either system.

According to Bailey (5), Israel has sought to make its legal system more effective in the Bedouin population by trying to work with instead of against them. Israeli police found that working within Bedouin culture rather than around it allows a more effective enforcement of Israeli law. Even so, sometimes the police will take the case back to the tribal system to more appropriately handle the resolution of the conflict, especially if these are mild disputes.

Among the Bedouin of the Negev the incidence of divorce is low (28), with the noted exception of marriages which occur with women originating from outside of the Bedouin community (29). This may be attributable to the frequency of cousin marriage and includes many tribal and caste strictures or it may be attributable to the fact that whole families and sometimes clans are involved in the mate selection, the marriage contract and even the living arrangements of the married couple. Therefore divorce has disruptive implications and consequences for an entire extended family or tribes.

Growing economic participation and steady increases in education of Bedouin women are changing the gender role dynamics within families (16). Bedouin women are experiencing higher levels of financial independence and more autonomous decision making, as well as developing higher expectations for their home environments (15). But this does not necessarily mean that the rate of family conflict and divorce will increase. On the contrary, it can also signify acquisition of the means for happier, fulfilling marriages, which are advantaged from their access to Israeli laws governing marriage and divorce and tribal laws that can facilitate protection for women. Tribal law and Muslim family courts in Beer-Sheva, do in fact seek to facilitate the genuine protection of women from domestic violence – albeit via a model which may be viewed by some as anachronistic.

Historically, early marriage of girls provided benefits by relieving families of the responsibily of caring for their daughters beyond their early teens. Socially, early marriages also served to protect family honor, which became increasingly difficult to maintain. However, with compulsory education now imposed by the State of Israel, marriage age is increasingly delayed. Further, early marriage and forced arranged marriage have been outlawed. And yet, as these signs of development would, one might think, be embraced universally by the Bedouin, the simultaneous decline in female fertility rates has raised

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Legal reform as a tool of development or conquest?

Concern among some that social controls are weakening and that the values and behaviors of the past are abandoned to the detriment of the community.

New attitudes appear to prevail with regard to “female circumcision,” just as they prevailed against facial tattooing 20 years ago. Female genital mutilation (FGM) has become an international issue that is declared in violation of the rights of women and constitutes violence against women (4). A recent study (30) has shown a significant drop in FGM practice as compared to previous studies, but also assesses other morbidity and mortality data for this population including infant mortality, maternal mortality, mean birth weight and educational variables. This may also reflect that in 2009 an increasing proportion of Bedouin babies were born in hospitals and the study (30) suggests that women’s lives improved over the years from 1995 to 2009. Indeed, there is no comparable decrease in FGM in any other population surveyed by the World Health Organization.

The Arab Spring brought political change to surrounding countries, but only in the governing class. As for gender equity, while women stood shoulder to shoulder with their brothers and husbands in demanding change in governance, the social status and political participation of women has diminished in both Egypt and Libya. It seems that change represents threat to established behaviors, patterns and relationships.

Discussion

This examination of the transition of an indigenous society from a nomadic tribal system into a settled society has some parallels globally. While no two cases are alike, what is clear is that the Bedouin woman’s shift from a position of “protected” subject to a position of equality in a geo-political space that ensures protection from the elements and from “predators,” be they animal or human, demands new institutions, policies and role relationships. As we have shown, the foundation in law, especially family law, has been reoriented from its historic roots, replaced by a new, imposed (and quite alien) system based on values, mores, and cultural history which reflects another’s cultural values, and not its own.

In the case of the Bedouin of the Negev Desert, the community has indeed moved away from the traditional, pastoral-nomadic lifestyle and into a sedentary, wage-labor society (31). But this change carries challenges. The lure of participating in the cash economy—often a necessity for contributing to family support given the loss of historic land holdings, has encouraged boys to drop out of school and get jobs in the building trades or auto repair. They can go to Beer-Sheva, the major regional city, or neighboring towns like Arad and compete for these jobs with new immigrants from throughout the globe, (most recently including an influx from Black African countries), as well as better educated Israeli-born Jews. The Bedouin face high unemployment rates as they struggle to find wage-labor employment. Their way of life is constantly challenged, and the status of women in this hierarchal society is changing along with it.

Bedouin women, now more educated, determined and ambitious than ever in history, yearn for the life of their educated Jewish peers even as they live in the shadow of a persistent family honor system and patriarchal absolute authority. The emergence of this new, educated generation of women is a direct result of the process of forced urbanization and development. With this weakening of traditional strictures, many western values and expectations are being...
adopted, but on the other hand there is a “pendulum” reaction towards preservation of culture and tradition.

The spaces upon which the push-pull tensions are contested is on issues of gender relations. Men struggle to maintain traditional practices especially in the arena of family honor in general and to maintain women’s places within the tribe in particular (28).

New communication systems including social media such as Facebook or WhatsApp now disseminate new ideas about freedom, human rights, and Western dress. Even more than their male counterparts, Bedouin women are making new choices and moving in heretofore unexplored directions. They want to uphold their traditional values, which entail aspects of family honor, while also wish to pursue self-empowerment. The return to the donning of modesty clothing is just one way in which young women in particular are seeking to stand alone as individuals, yet also embrace and celebrate their indigenous identities. They strive to negotiate through a new path of uncertainty which is yet constrained and segregated, and that also offers new possibilities and opportunities their mothers or grandmothers might never have thought possible.

This balancing act is difficult, stressful, and not at all a simple one to master. Bedouin women and girls confront the contradictions and constraints between contemporary law and family law on a daily basis. They are qualified to enter any university or technical school program in Israel, yet most still wish to respect their family’s sense of honor and modesty. Many still seek a modicum of flexibility in the new millennia, something which not every family patriarch is willing to extend to his daughters, grand-daughters and nieces. Yet, at the same time, these Patriarchs recognize the importance of maternal and infant health, even more than they do educational parity. In 2013, nearly every baby born to a Bedouin woman is born in a hospital and the maternal and infant mortality rate reflects that advantage.

In the final analysis, the Bedouin girl of the Negev today (as well as her mother), still remains subject to a family legal system which continues to give her father (or husband) the prerogative to permit or disallow her from taking advantage of the opportunities afforded by the Israeli legal code. Unless and until these bonds are loosened, her ultimate empowerment and individualization remains elusive. Bedouin women’s development will surely remain elusive so long as the subjugation of the Bedouin community as a whole within the broader context of Jewish Israeli society remains unchallenged, unaltered, and unbending. We contend that this change is coming, as it has become apparent slowly but surely. More than any other community member, Bedouin women show their resilience as the synthesis and embodiment of the future Bedouin community of the Negev Desert.

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References


Chapter XX

Consanguineous marriage: Intellectual and developmental disabilities

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Abstract

In this chapter we present data from two special education schools among the Arab Bedouin population in the Negev region in southern Israel. Data were collected on 221 children (53.8% female, and 46.2% male) with moderate and severe intellectual and developmental disability (IDD) in order to assess the extent of consanguineous background in these children. Findings showed that 61.5% of all the participants were inbred offspring (children of parents who were biologically related, both first and second cousins). About seventy percent (69.7%) of the participants were diagnosed with moderate IDD, twenty percent severely IDD and ten percent diagnosed with developmental disorders.

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Introduction

The vast majority of the behavioral genetics studies, which for the most part have focused on twins and adoptees (1,2) have been conducted in highly industrialized western societies such as the United States and Northern European countries.

Despite the important and influential research that has been undertaken on the impact of genetics and consanguineous marriage and the extent to which public awareness has been raised by these finding only a limited number of investigations have been carried out in collective, non-western societies (like Africa, Asia, and the Middle East) and there is scant empirical evidence regarding the genetic influence of consanguineous marriage in these societies. In these societies, consanguineous marriage is a commonplace occurrence. For example, there is a long tradition of such marriage in Japan, India, Sudani tribes and Arab societies (3-8). This type of marriage is commonplace in the population of about 200,000 Bedouin Arabs living in the Negev desert in south Israel.

Consanguineous mating is a mating in which two individuals are related to some extent and share one or more common ancestors. The intensity of the inbreeding effect in the offspring is a function of the relatedness of the parents. A genetic consequence of inbreeding is a higher probability of increased homozygosity (9). The nature and proportion of the different kinds of consanguineous marriages and the magnitude of the average levels of inbreeding constitute three fundamental estimates that enable us to understand some aspects of the genetic structure of a population. Theoretically, inbred offspring are expected to score less than outbreed offspring on cognitive ability tests, and the size of the effect depends on the degree of the genetic relationship between the parents (5,10). The highest risk case is that of father-daughter and brother-sister relationship and within this context, the preferred marriage, in non-western societies is marriage between cousins.

Cousin marriage is the most common form of inbreeding among different populations in the world (e.g., Arabs, Sudanese, Indians, Japanese, and Chinese) (3,7,11). Preference for cousin marriages, especially between first-cousins, is associated with populations with strong and deep-rooted socio-cultural patterns and with economies based on agriculture in Muslim countries of Northern Africa, Western Asia, and Southern Asia (11-15) among a large portion of the populations, mating occurs between persons who are related as second cousins or closer to each other. These marriages account for between 20-55% of the total marriages.

First cousins marriage the predominant with the partners having one set of grandparents in common. Occasionally a double first cousins' marriage is also arranged (the couple share two sets of common grandparents). In the case of a double first cousins marriage, the coefficient of inbreeding is $F = 0.125$. Parallel first cousins marriages, with a father's brother's daughter, are also common in Muslim society. Genetically, the progeny of such a marriage would have a coefficient of inbreeding of $F = 0.0625$. That is, at 6.25% of autosomal loci, they would be predicted to have inherited copies of a gene from both parents, who, in turn, would have inherited it from a common ancestor or ancestors.

Some studies conducted in Indian rural and urban populations have shown a higher frequency of consanguineous marriages among rural than urban community (16,17). One study (18) showed that about 50% of all marriages in the rural population were consanguineous marriages with 52.6% of these consanguineous marriages involving first cousin mating; whereas, in the urban area, consanguineous marriages accounted for about...
30% of the total number of marriages, with 60.9% of these marriages involving first cousin relationships.

Research indicates that a large segment of the world population practices certain forms of inbreeding. According to Alan H Bittles (5) of King's College at the University of London, 20-50% of all marriages occur between biologically related people in parts of Central, South, and West Asia and North Africa. The most popular matches are between first cousins, double first cousins (where the spouses share both sets of grandparents), or uncles and nieces. Although less than 1% of marriages are consanguineous in North America and Europe, between 1% and 10% of marriages are between kin in East and West Africa and South America. The percentages also could be high for rapidly growing populations in Middle Africa, the Caribbean, Central America, East Asia, and Southeast Asia, for which no reliable figures exist. Bittles (5) noted that, in China, little information on kin marriages has been collected since the formation of the People's Republic, but before the rise of Communism, marriages between first cousins were common among the Han, who make up most of the population. He also noted that India has banned marriages between uncles and nieces, for example, but cousin marriages are still quite common, particularly among Hindus, Muslims, and Christians in the southern Indian provinces. He has found that local marriage customs often override political and religious dictates.

Changes in culture and the influence of the Western World also affect the number of consanguineous marriage resulting today in a decrease (19). Among parents of 14,237 newborns in Bahrain in 2008-2009, the total consanguinity and first cousin marriage rates over a period of four months in 2008 were 10.9% and 6.9% respectively, while during all of 2009 the rates were 11.4% and 6.8% respectively (19). So over a ten-year period first cousin marriage rates in Bahrain declined from 24% to nearly 7% (19).

Genetic link to disabilities

Although most researchers accept the causal role of genetics, the exact genetic link and how it operates needs more investigations. In studying the link between attention deficit hyperactivity disorder (ADHD) and learning disabilities the authors (20) assessed a sample of 140 children with attention deficit hyperactivity disorder and in normal comparison children. They also assessed a sample of the 822 first-degree relatives and found the risk for learning disabilities highest among relatives of probands with both attention deficit hyperactivity disorder and learning disabilities. The two disorders were transmitted independently in families and their co-occurrence may be due to nonrandom mating.

Researchers in Israel (21) identified a protein-truncating mutation, G408fsX437, in the gene CC2D1A on chromosome 19p13.12 in nine consanguineous Israeli Arab families with severe autosomal recessive disease and intellectual disability. The subjects tested were healthy women who were invited to undergo the genetic screening test as a part of their routine pregnancy monitoring and 117 reported a family history positive for intellectual disability. 524 pregnant or preconceptional women were tested and found 47 carriers (approximately 1/11), whose spouses were then recommended to undergo testing. We identified eight carrier couples, who were given genetic counseling and offered prenatal diagnosis. Of all the marriages, 28.6% were consanguineous; 16.5% of the total were between
first cousins. The high prevalence of the mutation can be explained both by the founder effect owing to the generally high consanguinity rate among the inhabitants of the village, and also because two families with excessive numbers of offspring with intellectual disability were unacceptable as marriage partners by the rest of the families.

In Jordan (22) 20-30% of all marriages are cousins mating and 69% of these are first cousin. Among families of first cousin mating about 30% had the highest rate of autosomal recessive conditions for different genetic disorders such as sporadic undiagnosed cases of intellectual disability, congenital anomalies and dimorphism in which they may have autosomal recessive etiology (22).

In Qatar (23) a study of 1,515 women found 54% consanguineous marriage and the most common first cousins mating. Inbred children of these women has asthma, intellectual disability, epilepsy and diabetes significantly higher than among children of non-consanguineous couples.

A recent study (24) from Brazil in a house-to-house population based-survey in the state of Paraíba, 20,462 couples were interviewed regarding kinship relation, number of siblings and offspring affected by intellectual or physical disabilities. The rate of consanguineous unions in the communities ranged from 6-41%. The overall average inbreeding coefficient (F) was 0.00602 ± 0.00253, ranging from 0.00134 to 0.01182. Communities situated on the backlands had an increased average value of F compared to those closer to the seashore (P = 0.024). The average rate of disabled offspring varied from 2.96% ± 0.68% for unrelated unions to 10.44% ± 16.86% for related couples at the level of double first cousins or uncle-niece.

The above research examples show that inbreeding increases the risk of disability.

A pilot study

The Arabs of the Negev in southern Israel have practiced cousin-mating for generations as a part of their cultural tradition. According to behavioral genetics theory, this type of mating puts the offspring at risk for a variety of genetically influenced disorders. Consequently, such children are likely to have lower cognitive ability including different degrees of intellectual and developmental disabilities (IDD) in addition to genetic disease along with these disorders.

The pilot study was conducted in two special education schools in the south of Israel and included 221 children with moderate and severe intellectual disability (aged 6-18 years). The data collection was conducted via records from the schools on age, gender, genetic relation between parents and the degree of intellectual disability.

What we found

The sample size included all children enrolled in both schools (n= 221) with 54% (119) male and 46% female (102). All children were diagnosed with intellectual disability and no borderline children enrolled in both schools. About seventy percent of the children had moderate intellectual disability (69.7%), about twenty percent (20.4%) severe and ten percent of the participants with other developmental disorder. 61.5% (136 cases were children of a consanguineous marriage.
Discussion

This initial screening clearly indicate that the vast majority of the study population were children of consanguineous couples. This puts the offspring’s health at risk, and raise the question about the public awareness of the genetic risks of consanguineous mating for cultural and socio-economic motives. Since this part of the Arab population (Arab Beduins of the Negev) is a traditional population, it is important to work on public health efforts to decrease the incidence consanguineous mating.

The findings from the present study are similar to findings from different other studies (20,21,23) indicating that intellectual and developmental disabilities in addition to other genetic disorders are most likely to appear among inbred offspring, significantly higher than non-consanguineous families.

It is recommended to further investigate this population in order to get more details on their disorders and also the circumstances around the mating in order to gain knowledge that can be used in public health efforts to decrease marriage among genetically close relatives.

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Chapter XXI

Parenting a child with an intellectual disability in Bedouin families

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Abstract

In this chapter we examine the meaning of parenting of a child with intellectual disability in the Bedouin-Arab society of the Negev and in particularly to understand parental perceptions of intellectual disabilities, family functioning, and social support networks. Between 2007-2009, nine couples (18 respondents consisting of nine mothers and nine fathers) were randomly selected from a survey pool of 300 Bedouin-Arab parents in various Negev communities with one or more children with intellectual disability. Semi-structured interviews of two hours’ duration were conducted in Arabic by two trained
social workers who were gender matched with informants. The parents presented four themes (each with corresponding sub-themes): perception of their child’s intellectual disability, the subjective experience of parenting a child with intellectual disability, the perceived influence on the family, and perceived coping strategies and bases of support. The discussion and conclusion consider implications for professional intervention and future research.

**Introduction**

The effects of having a child with an intellectual disability can be profound on families’ economic, social and emotional functioning (1,2). Care giving and restrictive time demands for family members are numerous. Daily stresses can be cumulative and influence family and parental functioning. Parents of children with intellectual disability are at risk for guilt, emotional and familial difficulties (3,4). Parents, in turn, may be overprotective of intellectually disabled children, impairing their children’s skill development (5).

Family-centred interventions have been strongly encouraged in the area of intellectual disability and yet there remains limited scholarship on the nature of family coping and family constructs of intellectual disability from a cross cultural perspective (4). While a promising and growing scholarship examines the significance of intellectual disability on Arab families in northern Israel (6,7) and the United Arab Emirates (4), to date, no scholars have considered the significance of intellectual disability to Bedouin-Arab families of the Negev. As a corrective, the present paper is the first to consider family members’ experiences of intellectual disability amongst Arab communities in the Negev, Israel. It thereby joins a growing scholarship on intellectual disability in the Arab world (8,9) and among Muslim communities world-wide (10). Based on qualitative interviews with 18 parents of intellectually disabled children in Bedouin-Arab communities of the Negev, it joins an emerging scholarship on the subjective experiences of parental caregivers of intellectually disabled children in for example the United Arab Emirates.

As the following pages point out, although the needs of the identified population – Arab families living in Negev Israel – are profound, they may be quite similar to those of other populations that are educationally and economically disadvantaged, often lacking sufficient resources to help the child and the family. These include family members’ understanding of the disability, the impact on family relationships (marital, sibling, extended) and family functioning. Partner reactions can vary from support to blame, conflict or withdrawal; parental shame and guilt; and lack of attention to the typical sibling. At the same time, there are some unique features of these families that warrant inquiry (stigma, collective worldview, and polygamous society) in terms of their impact on family relationships and children’s integration in the community.

**Intellectual disability in Muslim and Arab societies**

A long scholarship confirms that Western notions of “independent living and self-advocacy are of questionable relevance” to many non-Western societies. There are profound differences across cultures in relation to literacy levels, livelihood structures, individualist versus
collectivist norms and values. Most cultures recognize some type of intellectual disability; however, the level at which functional disability is determined is strongly culturally influenced. Much depends on what is demanded of an individual by his family or the community, and the social and cultural contexts in which these subjectivities occur (4).

Islamic thought emphasizes that material and spiritual well-being are achievable only through submission to the will of God. Those who fail to submit are in a state of conflict and it is thought their personalities begin to disintegrate (12). According to the Koran, a life without faith is a state of spiritual non-being in which one loses touch with his/her true self (Koran, Surah 49, v. 19). From some Islamic points of view, the concepts of well-being, satisfaction, salvation, self-realization, and achievement are linked to the belief that an individual’s performance in this life determines the ultimate outcome in the hereafter (12).

The manuscript analyses specific Muslim peoples in the Arab world, and amongst some Arab peoples, a sense of collective responsibility may be further reinforced by how the Muslim views his or her place within society. Arab communities may be highly concerned with the group – identifying the family, extended family, tribe and collective; people may seek not just the welfare of the individual alone; but a wider societal well-being (13). Among such collectivist circumstances: much of social life aspires to mutual responsibility. This principle, in turn, is two-dimensional. The individual achieves a balance between internal thoughts and feelings, while caring for the collective (external) welfare of society (14).

This manuscript focuses on a particular Bedouin-Arab community in the southern part of Israel (the Negev). A traditionally Muslim and semi-nomadic society, the Bedouin constitute a significant proportion of the 20% of Arab population in present day Israel. Some continue to hold values that are communal, and for some, decision making regarding major life events, like an individual’s conception of self, may be strongly oriented to the group (15). Patriarchal and hierarchical values may be present, and in some instances major decisions may be made by forums of male elders, and deference to elders may be prevalent. Traditionally, extended families belong to larger collectivities known as hamula; several hamula form a tribe, in which sheikhs provide leadership. Modernization has influenced all aspects of Arab life, encompassing changes in settlement from nomadic to sedentary, in economics from traditional to integration in the modern. Traditional conceptions of gender hold women responsible for rearing children and domestic responsibilities, and men for familial, tribal, and economic leadership (14). Consisting of 25% of the Negev’s population, the Arab of the Negev are a minority within the Arab minority in Israel (16), with lower state per capita expenditures on, and lower rates of access and availability to, educational, health, and social welfare services (14).

Our study

The study examines the meanings of parenting a child with intellectual disability in an Arab society, in particular, parental perceptions of intellectual disabilities, family functioning, and social support networks.

The present sample is part of a larger longitudinal project. Between 2007 and 2009, nine couples (18 respondents consisting of nine mothers and nine fathers) were randomly selected from a survey pool of 300 Arab parents in various Negev communities with one or more
children with intellectual disability. Semi-structured interviews of two hours’ duration were conducted in Arabic by two trained social workers and carried out in a private place to ensure no influence or participation of other people in the family; the data collectors were trained to ensure respondent-interviewer rapport, privacy, and anonymity. Respondents were gender matched with interviewers.

Because of cultural sensitivities and the need to collect data from female respondents in a safe environment: respondents were interviewed separately so that answers would not be affected from his/her partner. Interviewers were trained to collect data in culturally appropriate ways, and were gender matched with respondents. Confidentiality and anonymity were ensured, following ethical review protocols of the lead author’s university. Questions were in two thematic categories. The first, perception and experiences of the intellectually disabled child, included: 1) feelings and emotions associated with raising a child with intellectual disability, 2) child care, and 3) family and parental relations. The second thematic category, coping and support strategies, included 4) faith in God, 5) parents’ involvement in the child's development, 6) extended family and community support, and 7) social welfare and educational services.

Data were transcribed and analyzed using qualitative methods. Analytic induction and constant comparison strategies were used to detect patterns of behaviour, interactions, strategies, and resources in the family associated with success or failure. Analytic induction is carried out by scanning data for common themes, developing categories, and combining the categories into typologies (17-19).

Constant comparison involves combining inductive categories with a simultaneous comparison of all observed cases (20). Specifically, 1) the researchers read through all the transcribed material with the objective of identifying common themes; 2) the themes were coded; 3) data were searched for similar instances of the same phenomenon so that categories of behavioural and interaction patterns could be identified; 4) a constant comparison was conducted by comparing all interviews with one another and 5) data were translated into working assumptions that were refined continually until all instances of contradictions, similarities, and differences were explained.

**Findings**

Of the nine families, each had not more than one child with an intellectual disability, three reported a child with mild intellectual disability, three a child with moderate intellectual disability and three a child with severe intellectual disability. In each of the families the mother and the father of the child were interviewed. Children ranged from 6-18 years old. The parents presented four themes (each with corresponding sub-themes): perception of their child’s intellectual disability, the subjective experience of parenting an intellectually disabled child, the perceived influence on the family and perceived coping strategies and bases of support.
Theme 1: Parents’ perception of their child’s intellectual disability

- Sub-theme 1: what is an intellectual disability? Prior to their own child’s diagnosis, most respondents had little concept of intellectual disability, nor the implications to their child, them, their family and community. Several noted that their culture made little distinction between intellectual disability, autism, behavioural problems, or psychiatric illness. A number complained that the child's diagnosis took a long time, because they and their families had no prior knowledge of the diagnosis, and some thought that the child would outgrow the problems associated with it. Many did not want to entertain the possibility of their child having an intellectual disability. One of the mothers said "Everybody said he was still small and I shouldn't compare him with other children…but something inside me did not agree with these sayings…one day I was watching a television show about intellectual disability and then I knew…"

Even after the diagnosis some of the parents – frequently the fathers - did not have a clear understanding of their child's condition and its effects on the child. In addition all of the parents came to regard their child's condition as an illness. Many wanted the illness to be healed; some who understood this impossibility still hoped for it. As one of the mothers said: "In the beginning I hoped that my child would recover. Today I still have this hope but not as much as before".

- Sub-theme 2: Stigma. All participants mentioned the stigma attached to the intellectually disabled child and family in the Arab society. One mother remarked: "the children of the extended family picked on my children and told them their brother is crazy". One of the fathers said "the neighbours used to make fun of her behind her back, saying no one will agree to marry her sons or daughters…" The fear of stigma is a constant and dominant characteristic of respondent lives. Many talked about feelings of shame raising an intellectually disabled child. Most wished the public would not know about the child's condition, so that they could avoid having the stigma. Several told interviewers that they wished the child would be taken from them to heaven.

Theme 2: The perception of parenting an intellectually disabled child in the Arab community

- Sub-theme 1: The perception of the intellectually disabled child. There were differences between parents of children with mild versus those with medium or severe intellectual disability. The former tended to see their child as "normal", or treat the child as they did their siblings. Some of these parents also believed that their child will recover and be cured. Some likewise stressed more firmly that those outside the immediate family do not know of their child's condition, and that they wish it would stay that way. In contrast, parents of medium/severe intellectually disabled children described their child in such terms as “unfortunate”, “poor”, “suffering” and “pitiful”.

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Sub-theme 2: feelings and emotions associated with raising an intellectually disabled child. Most parents had little previous experience sharing their feelings about parenting a child with a disability. All emphasized that they love their child, but that the latter’s condition can be hard on them and cause the family grief, anger and frustration. Mothers particularly experienced an element of blame. Most talked about men in their families (their husbands included) accusing them for the child’s disabilities. As one mother said: "I feel that I am to blame in my child's intellectual disability, because I did not take care of him like I should have. When he was a baby I would leave him at home when he was asleep, and go to visit my neighbours". Some parents reported that their child's condition became publically known, making them apprehensive and ashamed. All said that since the child was borne they leave the home much less frequently. Many expressed anxiety when their child is around people, and therefore they prefer staying with the child at home.

Sub-theme 3: child care. Child care in this culture tends to fall to the mothers (21). Many stated that their husbands do not help or support them, and do not support or agree with the steps they are taking in order to advance their child's development. As one commented: "my husband doesn't understand what I am going through. He always tells me to send our son to an institution". Nonetheless, a small number of mothers stated that their partner supports and assists in child care. Among these families the father's role includes taking care of logistics of visiting health clinics, social security payments, family finances, and related instrumental tasks. Some fathers likewise provided their families with emotional support. As one mother commented: "especially from an emotional aspect and in difficult situations he gives me strength and helps me relax… without my husband's support, I couldn't have held on".

All participants talked about an enormous burden associated with raising an intellectually disabled child. Parents of mildly intellectually disabled children described the associated burden mainly as the product of having to run around between many treatments and programs that are meant to help the child, and the time they have to put in order to see progress in their child’s condition. Parents of medium or severely intellectually disabled children, in contrast, talked about feelings of burden as a result of the 24 hour a day supervision their child requires. Some were afraid that the child will get hurt or injured if not constantly supervised. These parents described lack of sleep and rest, because of constant supervision and taking care of the child's daily needs like feeding and dressing. Dealing with these children could be difficult. One mother stated “the child destroys everything he comes across”, another “he has tantrums, hits and hurts others”. Another mother revealed that she used to tie her son up whenever she had to leave him by himself: "I did not have any other choice but to tie him up, because if I would have left him untied … he would either go in to the fire or go to our neighbours, and therefore hurt himself or another…". Some mothers regarded taking care of the intellectually disabled child as detracting them from their other children: "I saw that most of my time is devoted to taking care of [the child] and I do not give enough attention to my other children". Feelings of burden, desperation, and hopelessness among parents of medium or severely intellectually disabled children tended to be greater than parents of a child with a mild diagnosis.
Theme 3: Influence on the family

- Sub-theme 1: family atmosphere. As one respondent remarked, “since he was born, our entire lives have changed.” Family dynamics alter significantly with the birth of a disabled child, and to most respondents it was for the worse. There could be parental arguments regarding care for the intellectually disabled child: including financial costs of the intellectually disabled child's care, the need to look after and care for the child, the shame and the need to hide the child and the blame for having the child. Likewise, siblings of the disabled child would complain to parents that the latter might annoy and hit them, be a source of ridicule in public and at school, and take attention away from them and towards the disabled child.

- Sub-theme 2: parents relationships. Many women described their husbands as uninterested and unfamiliar with the child's condition: "He and I are always fighting… he doesn’t appreciate the time and energy I put in..." Others complained that the couple now does fewer social activities in and outside of the home; in most cases the mother stays at home with the child and the father goes out with friends and family. Some complained about domestic violence, psychological and physical: “he became nervous, yelled at me and sometimes beat me physically, he said that you brought shame to the family”.

Polygamy is a prevalent in this Arab community (14). In some families, the father had more than one wife, and in some instances he took a second wife as a result of the birth of the intellectually disabled child. Some male respondents, in a polygamous marriage, stated that they married a second wife because of the dissatisfaction they experienced in their marriage and the many hardships they encountered with the mother of the intellectually disabled child after the birth. In other instances, the sheer threat of a second wedding was all present: "my wife became very suspicious, and she has all kind of thoughts about me marring again...because of all of our problems lately, yes I did start to contemplate this option”. Both mothers and fathers living in polygamous families said that the husband tends to spend most of his time with the other wife/wives of those who do not have intellectually disabled children; thus neglecting the mother of the intellectually disabled child and her children. Having stated the above, it is also significant that for a small cohort of parents, the need to look after the intellectually disabled child had contributed to the marital relationship and made it stronger and better.

Theme four: Coping strategies and bases of support

Parents’ stories included various means and strategies of coping with the intellectual, emotional and physical difficulties they encounter daily.

- Sub-theme 1: faith in God. Some parents expressed strength for raising and caring for their intellectually disabled child as a by-product of faith. These respondents often ascribed the birth of the intellectually disabled child to god's will: "this is god's will
and praise the lord for every thing that happens”. Acceptance was likewise reinforced by participants praying and thanking Allah for all blessings; some mentioned turned to religious leaders and traditional healers for assistance. Many described praying to God that their child will be healed: "only God can help and forgive them."

- Sub-theme 2: active involvement of parents' in the child's progress. Parents' involvement in their child's progress could be described on two polarities: active and non-active. Active parents cope better with the reality of parenting an intellectually disabled child. Even though only a minor part of our participants were active parents, their point of view tended to emphasize the child's needs and rights. Active parents were aware of breaching cultural norms of stigma and shame of intellectually disabled family members; but they insisted that their child's needs were more important than those cultural principles. Active parents likewise tended to have less conflict in their family and marriage, and greater capacity to seek out resources outside the family.

- Sub-theme 3: extended family's support. Participants expressed varying levels of frustration regarding extended family and community support. Some perceived no support and minimal between their extended family/community and their disabled child; others modest interactions; and a minority experienced concrete offers of assistance and support in child care. Some attributed lack of outside support to stigma, and not wanting outsiders to know, and others stigma leading to minimal discussion of the child. In other instances, it was those outside the family who were minimally interested in supporting or discussing the child.

- Sub-theme 4: social and educational services' support. Parents reported services from social workers, teachers and school principals, physiotherapists, speech therapists, doctors, neurologists, psychologists, and physicians. Several parents of mildly intellectually disabled children talked about their children receiving alternative medicine treatments such as hydrotherapy and horse back riding. Support that parents wished to receive from educational and social services fell into two categories: 1) Advice regarding their child's specific needs and problems, and structured work plan and assignments assisting parents, child, and siblings to function effectively and 2) Information on existing programs that can help the parents, family, and child (for which most parents felt ill informed).

Some resorted to care of their child in hostel, group home or boarding house. Others saw this as an option: a last resort should circumstances deteriorate. Fathers in particular saw those options as useful temporary relief; as one explained: "I decided to send (my child) to a hostel because I care for my family". Some parents were unwilling to receive help from social and educational services, and many of these do not agree with strategies and methods of professional caregivers. Others resisted the authority of these caregivers and insisted upon parental rights in declaring all best strategies of care. Others, in turn, sought cooperation between parent and professional; one stated “in order to create good cooperation, parents need to be able to listen and have a calm nature.”
Discussion

The present study’s major contributions are the profound implications, for such collectivist families, of family and relational changes with the birth of a disabled child. Domestic violence, marital stress, polygamy, and reduced resources to some wives and some siblings is said to have occurred. There appears, likewise, to be a greater intensity of problems with the greater severity of the illness. Interviews tended to be highly emotional – and the process of data collection was for some respondents a form of catharsis and the first opportunity to talk freely about the problems and feelings associated with raising a disabled child. As the following paragraphs point out, there are some distinctive, cross cultural explanations for some of the themes such as stigma; collectivist norms, values and responsibilities; impact of external locus of control on coping strategies; religious explanations for making meaning of the disability.

Many researchers refer to parents' crises resulting from the birth of an intellectually disabled child (22,23). One major theme is the stigma of intellectual disability. Stigma results in direct discrimination from individuals (24,25) and a process of looking glass self may occur (26), wherein negative attitudes may be absorbed by individuals or family members, who expect to be devalued because of such attitudes (27,28). In an attempt to avoid rejection, the family system may utilize varying coping strategies such as secrecy or withdrawing from social networks, thereby reducing supports resources – which in turn may increase stress and impaired health and social functioning (29,30). Stigmatized individuals may not be aware of the ways in which they are stigmatized or they may not disclose stigma experiences if they feel it is too threatening (31-33). They may seek fewer formal sources of care, or these same sources may deny access to care (34).

These facets are constructed through the prism of being in a collectivist, Arab context, where external loci of control, and religiously based explanations for meaning making, are paramount (14). The perception of disability, and its relationship to individual and family identity, is closely intertwined. Krauss & Seltzer (22) found deep meaning and significance in the intellectually disabled child upbringing as one of the more effective strategies of dealing with their lives. This may be expressed religiously, through such things as the Muslim conception of Qader, a fatalistic belief that all that occurs is God’s will. Moreover, as the Prophet Muhammad noted "For every illness that Allah created, he also created its treatment" (p. 365). The Koran itself is described as ‘a healing and mercy to the believers’ (Koran, Surah 17, v. 17). Seen in this light, one’s familial responsibility, and one’s individual experiences occur in the sense of the immediate temporal and spatial context of experience, but also in the transcendence of time and space and in the encounter with an omnipotent and omnipresent Deity. These same principles may reflect, and reinforce, the external locus of control – the idea that forces external to the individual have important sway on that person’s norms and behaviours (35).

Typical coping strategies in this collectivist society therefore involve the family, extended family, and community (7,36). The sheer frequency, intensity, and duration of active involvement of parents in the child's development creates a deep change in parents' values and perceptions, and tightens their relationships with their child – potentially decreasing the nuclear family broader networks as well as the child's chance of integrating into main society (37,38). Given the intensity of stigma, it could be that community norms
may inhibit assimilation into the broader community. This is a vital issue for a collectivist community, emphasizing the collective over the individual. Its opposite is a low-context society, frequently found in the West: one which reveres the individual over the collective (39). Again, these norms are reinforced through religious concepts: a mutually responsive brother- and sisterhood extending a bond to a global level. As the Hadith points out: ‘Every one of you is a shepherd and each one of you is responsible for his flock’ (40).

Stigma may likewise be experienced via gender – with husbands, or other family members wrongly asserting that a mother brought a particular shame to the family. The patriarchal nature of Arab society status is therefore a factor (41,42) and as our data shows, it is reinforced by this blaming the victim, stigmatizing process. Further problems may result, among them domestic violence and polygamy. Previous research confirms the risk of violence to children who have a disability (43Westat, 1993). Polygamy has been shown to be a great burden on women and children by reducing the husband’s social and material support. Previous research confirms that polygamy may increase mental health symptoms amongst family members, familial tensions, reduce children’s access to material and social support (14).

Prevention and service treatment need to be considered; and both, moreover, need to take culturally constructed ways of understanding intellectual disability into account (44). Likewise, the cultural and religious contexts need to be properly incorporated to ensure maximum effective intervention (14). And yet there may be limited services for these families, and service utilization rates may be low to begin with (14) – which, in turn, is further compromised by the stigma of the children’s diagnosis.

**Conclusion**

The present study joins other more quantitative recent work (4) and to the best of our knowledge the first to examine in depth the subjective experiences of families with a disabled child in Arab communities in Israel. It underscores the need for a greater scope and quality of formal services, including adequately funded services and culturally respectful service delivery. As the data points out, there is an interaction between intellectual disability and other things such as polygamy, violence, and lower community and service assistance for the very families who require these greatly. The implications for training and policy are therefore profound. Further research could fruitfully consider strategies of intervention of Arab families with an intellectually disabled child, in the contextualized circumstances in which parents and families experience that phenomenon. Certain ethnographic details remain unclear, such as parental stress versus distress, changing experiences as the disabled child grows older, and the impact of parental employment on subjective experiences, all require further research (4).

There is a lack of evaluation research, as well as basic epidemiology to outline the scope of the phenomenon in this community. Likewise, further scholarship could understand the community in historical perspective, delving into whether there has been some progress on issues such as education, community awareness, and services. Further work, likewise, could delve into nuanced differences between individual and community factors that explain attitudes and behaviours, as well as couples’ and families’ understanding (as distinct from individual respondents). Our research has started to delve into the significance of polygamous...
family structure both as a factor in marital relations in families with a disabled child, and further research could occur. The present article is a beginning to these ends, and much more can and should be done.

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Acknowledgments
Chapter XXII

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Salman Elbedour, PhD, is a professor of school psychology at Howard University, and has been involved in psychology and education programs for 16 years as a teacher, researcher, and administrator both in America, the Middle East and Israel. He is the coordinator of the school psychology program at Howard University since 2001. He graduated from the University of Minnesota with a PhD in educational and school psychology in 1993, with focus on abuse, neglect and developmental psychopathology. He earned two masters degrees from the University of Minnesota: one in school psychology and one in the psychological foundations of education. He also holds a school psychologist license in the state of Minnesota, Pre-k-12, and also a licensed school psychologist in Israel. He is nationally and internationally known for his work on psychological trauma (e.g. political violence, home, school and community violence), abuse and maltreatment of children. His background in clinical school psychology, professional experience in clinical child psychology, and his educational training in school have provided a breadth of knowledge to undertake multiple research projects that address a variety of questions. Over the past few years produced 60 scholarly articles that examine the fields of clinical psychology, school psychology, educational psychology and social-cross-cultural psychology. He has published extensively on the impact of the Middle-East conflict on the mental health of Israeli and Palestinian children as well as on disadvantaged groups who are placed at risk, and have produced an array of publications that have appeared in reputable, refereed journals. His research has not only helped researchers understand the cross-cultural perspective on development, but also proved important as guidelines for human rights organizations, such as Human Rights Watch and Doctors without borders, to learn conceptual implications about children and mental health that go beyond setting and subject populations. E-mail: selbedour@howard.edu
The National Institute of Child Health and Human Development (NICHD) in Israel was established in 1998 as a virtual institute under the auspices of the Medical Director, Ministry of Social Affairs and Social Services in order to function as the research arm for the Office of the Medical Director. In 1998 the National Council for Child Health and Pediatrics, Ministry of Health and in 1999 the Director General and Deputy Director General of the Ministry of Health endorsed the establishment of the NICHD.

Mission

The mission of a National Institute for Child Health and Human Development in Israel is to provide an academic focal point for the scholarly interdisciplinary study of child life, health, public health, welfare, disability, rehabilitation, intellectual disability and related aspects of human development. This mission includes research, teaching, clinical work, information and public service activities in the field of child health and human development.

Service and academic activities

Over the years many activities became focused in the south of Israel due to collaboration with various professionals at the Faculty of Health Sciences (FOHS) at the Ben Gurion University of the Negev (BGU). Since 2000 an affiliation with the Zusman Child Development Center at the Pediatric Division of Soroka University Medical Center has resulted in collaboration around the establishment of the Down Syndrome Clinic at that center. In 2002 a full course on “Disability” was established at the Recanati School for Allied Professions in the Community, FOHS, BGU and in 2005 collaboration was started with the Primary Care Unit of the faculty and disability became part of the master of public health course on “Children
and society”. In the academic year 2005-2006 a one semester course on “Aging with disability” was started as part of the master of science program in gerontology in our collaboration with the Center for Multidisciplinary Research in Aging. In 2010 collaborations with the Division of Pediatrics, Hadassah Hebrew University Medical Center, Jerusalem, Israel around the National Down Syndrome Center and teaching students and residents about intellectual and developmental disabilities as part of their training at this campus.

**Research activities**

The affiliated staff have over the years published work from projects and research activities in this national and international collaboration. In the year 2000 the International Journal of Adolescent Medicine and Health and in 2005 the International Journal on Disability and Human Development of De Gruyter Publishing House (Berlin and New York) were affiliated with the National Institute of Child Health and Human Development. From 2008 also the International Journal of Child Health and Human Development (Nova Science, New York), the International Journal of Child and Adolescent Health (Nova Science) and the Journal of Pain Management (Nova Science) affiliated and from 2009 the International Public Health Journal (Nova Science) and Journal of Alternative Medicine Research (Nova Science). All peer-reviewed international journals.

**National collaborations**

Nationally the NICHD works in collaboration with the Faculty of Health Sciences, Ben Gurion University of the Negev; Department of Physical Therapy, Sackler School of Medicine, Tel Aviv University; Autism Center, Assaf HaRofeh Medical Center; National Rett and PKU Centers at Chaim Sheba Medical Center, Tel HaShomer; Department of Physiotherapy, Haifa University; Department of Education, Bar Ilan University, Ramat Gan, Faculty of Social Sciences and Health Sciences; College of Judea and Samaria in Ariel and in 2011 affiliation with Center for Pediatric Chronic Diseases and National Center for Down Syndrome, Department of Pediatrics, Hadassah Hebrew University Medical Center, Mount Scopus Campus, Jerusalem.

**International collaborations**

Internationally with the Department of Disability and Human Development, College of Applied Health Sciences, University of Illinois at Chicago; Strong Center for Developmental Disabilities, Golisano Children's Hospital at Strong, University of Rochester School of Medicine and Dentistry, New York; Centre on Intellectual Disabilities, University of Albany, New York; Centre for Chronic Disease Prevention and Control, Health Canada, Ottawa; Chandler Medical Center and Children’s Hospital, Kentucky Children’s Hospital, Section of Adolescent Medicine, University of Kentucky, Lexington; Chronic Disease Prevention and
Control Research Center, Baylor College of Medicine, Houston, Texas; Division of Neuroscience, Department of Psychiatry, Columbia University, New York; Institute for the Study of Disadvantage and Disability, Atlanta; Center for Autism and Related Disorders, Department Psychiatry, Children’s Hospital Boston, Boston; Department of Paediatrics, Child Health and Adolescent Medicine, Children’s Hospital at Westmead, Westmead, Australia; International Centre for the Study of Occupational and Mental Health, Düsseldorf, Germany; Centre for Advanced Studies in Nursing, Department of General Practice and Primary Care, University of Aberdeen, Aberdeen, United Kingdom; Quality of Life Research Center, Copenhagen, Denmark; Nordic School of Public Health, Gottenburg, Sweden, Scandinavian Institute of Quality of Working Life, Oslo, Norway; The Department of Applied Social Sciences (APSS) of The Hong Kong Polytechnic University Hong Kong.

**Targets**

Our focus is on research, international collaborations, clinical work, teaching and policy in health, disability and human development and to establish the NICHD as a permanent institute at one of the residential care centers for persons with intellectual disability in Israel in order to conduct model research and together with the four university schools of public health/medicine in Israel establish a national master and doctoral program in disability and human development at the institute to secure the next generation of professionals working in this often non-prestigious/low-status field of work.

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About Achva Academic College in Israel

Achva Academic College was established in 1971 as a teachers training college and has developed over the years into a fully-fledged academic college endeavoring to upgrade the teaching profession by offering programs that provide an opportunity to acquire an academic degree alongside a thorough pedagogical training. The College comprises 3,500 students and 321 members of faculty drawn mainly from localities in the Negev desert area and in the southern coastal region of Israel. The college has an active and vibrant research community developing workable pedagogical models for the benefit of the Israeli educational system. The College also pays great attention to social and environmental concerns, encouraging engagement by its students in neighboring communities, providing advanced technological facilities for the disabled throughout the campus and using ecologically sound procedures in the running of its facilities.

Mission

Achva Academic College is at the forefront of revolutionizing the teaching profession in Israel. The College is offering its growing body of students a unique opportunity to combine advanced academic studies with a thorough pedagogical training and a hands-on practicum experience. In this way, graduates acquire skills that allow them to enrich and empower the teaching staff in their communities and to offer their future pupils an improved educational environment. Additionally, the applied Research Authority of the College endeavors to develop innovative workable models of instruction for the benefit of educational practitioners. These efforts are supplemented by the work of the Achva School of Sciences which aims to equip the College’s graduates with a solid scientific education that will further enhance their professional expertise.
Reaching out to underprivileged communities

The College is well known for catering to very diverse populations which are normally marginalized in Israeli academia. Orthodox Jews and Bedouin Arabs are among the direct beneficiaries of Achva’s inclusive admission policy as are adults over 30 years of age who wish to complete their education. All students on campus enjoy a convivial social and intellectual environment based on tolerance and pluralism and are actively engaged in voluntary activities in the neighboring communities. Drawing these populations into the world of academic study and research helps to open new opportunities for them to escape the cycle of poverty and unemployment and to set out on a successful career.

Respecting the needs of the disabled

The College places much emphasis on the special needs of the disabled. Our technological learning center is equipped with innovative software to help these populations cope successfully with academic studies and special guiding systems have been installed around the campus for the benefit of sight-impaired students.

Protecting the environment

In 2007, Achva Academic College was declared a Green Campus by the Ministry for Environmental Protection. We are proud to be the first academic institution in the country to use a photovoltaic (PV) system for the production of solar energy. The college is now in the process of consolidating the final plans for the construction of a new section to be dedicated to environmental studies.

Programs

The College comprises three main schools:

- The School of Education: Prepares teaching personnel and awards its graduates the BEd degree and a Teaching Certificate in the subjects of Special Education, Mathematics, English, Primary Education, History, Literature and other disciplines. The School of Education also offers retraining programs in teaching for academics and awards Teacher Certification.
- The School of Graduate Studies: Offers a MEd degree in four disciplinary fields: Educational Organization Administration, Israeli Culture and its Instruction, Special Education and Mathematical Education for Primary Schools.

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The School of Sciences: Awards a BSc, in the Natural Sciences and a B.A., in Psychology. It also provides preparation for B.A studies, under the auspices of Ben Gurion University, in Economics, Administration, Behavioral Sciences, Computer Sciences, Geography, Literature, Middle Eastern Studies and other subjects. Students completing this program go on to pursue their undergraduate studies at the Ben-Gurion University.

Contact

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About Department of Human Development and Psychoeducational Studies, Howard University

The School of Education, which houses the School Psychology Program where Salman Elbedour has been teaching since 2001, is sponsored by Howard University.

Historically, Howard was chartered on March 2, 1867, by an act of Congress. The University was established as a means of opening the doors of higher education to the nation’s newly emancipated slaves and their descendants. While the University was established to meet the special needs of the nation’s black citizenry, it sought from the outset to foster an environment that would appeal to any individual interested in obtaining a quality education, regardless of race, religion, gender, or national and ethnic origins.

It is a comprehensive, research-oriented, private university providing an educational experience of exceptional quality to students of high academic potential. Consistent with the mission of Howard University, the central mission of the School of Education is to significantly influence the national education agenda for African-Americans and other culturally diverse children and to prepare school and counseling psychologists, teachers, administrators, researchers, evaluators, and human development professionals for leadership in urban and diverse educational settings.

The School of Education is one of the seven schools within the research oriented Graduate School of Arts and Sciences at Howard University, an accredited institution of higher education. The faculty in the School of Education serves the BA, BS, MA, MAT, MEd, MS, EdD and PhD and CAGS programs, as well as the nonlicensure programs and centers (e.g., Center for Academic Reinforcement, Center for Disability and Socioeconomic Policy Studies, Center for Drug Abuse Research, Center for Research on the Education of Students Placed at Risk, Family Life Center, Howard University Early Learning Programs, and the Journal of Negro Education). These centers and programs conduct research or provide education-related services, as well as employment opportunities for our students.

The School of Education is organized into three departments: Human Development and Psycho-Educational Studies (HD/PES), Curriculum and Instruction, and Educational Administration and Policy. Website: http://www.howard.edu/schooleducation/departments/hdpes/HDPES_Overview.html

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Chapter XXVI

About the book series

“Health and human development”

Health and human development is a book series with publications from a multidisciplinary group of researchers, practitioners and clinicians for an international professional forum interested in the broad spectrum of health and human development. Books already published:


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