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ORIGINAL RESEARCH

Role of Grassroots Public Health Leadership in Bedouin Society in Israel in Reducing Health Disparities

Keren Dopelt[1,2], Einat Krispel[1], Nadav Davidovitch[1]

[1]School of Public Health, Faculty of Health Sciences, Ben Gurion University of the Negev, Beer Sheva, Israel; [2]Department of Public Health, Ashkelon Academic College, Ashkelon, Israel

Correspondence: Keren Dopelt, Department of Public Health, Ashkelon Academic College, Ben Zvi 12, Ashkelon, Israel, Tel +972-8-6789503, Email dopelt@bgu.ac.il

Introduction: Negev Bedouin settlements suffer from poor infrastructure, and the population's health status is low across all indicators. While it is difficult for Bedouin citizens of Israel to integrate into the Israeli employment market, integrating this population into the health system is far-reaching. The aim of this study is to analyze the barriers and motivational factors experienced by Bedouin doctors to promote public health in the Bedouin community in southern Israel and to examine the perceptions these doctors have around the concept of leadership in a public health setting.

Methods: We conducted semi-structured interviews with Bedouin doctors from the Negev Bedouin community and analyzed them using thematic analysis.

Results: Most interviewees saw themselves as leaders whose role was to improve public health in their community. They stressed the need for health leadership in Negev Bedouin society, and their desire to lead change in the community from within. All interviewees had grown used to a different way of life and a higher standard of living, and as a result, had difficulty returning home. Interviewees presented that trust in the health system is a critical factor for the success of health promotion programs. However, they noted the evolving trends of general mistrust in the government and its institutions that form the infrastructure for mistrust in the health system. Lack of time and workload were barriers to exercising leadership. Interviewees reported their perception of how socioeconomic status, the standard of living, and lack of infrastructure, education, and training affect health outcomes and collaboration potential.

Discussion: This study presents a unique perspective on the views of doctors from the Negev Bedouin population on their involvement with grassroots leadership as a strategy to reduce health disparities in this community.

Keywords: socioecological model, under-represented minorities, Negev Bedouin, health leadership, health policy, health inequalities

Introduction

Some 272,578 Bedouins live in the Negev region of Israel (as of May 2020).[1] Bedouins are Sunni Arab Muslims, and the Negev Bedouin community is one of the most disadvantaged populations in Israel. Negev Bedouin settlements suffer from poor infrastructure, and the health status of the population is low across all indicators (life expectancy at birth, infant mortality, birth defects, self-assessment of health status, and health behaviors) in comparison to Jewish and Arab populations in Israel. Further, the population growth rate of the Negev Bedouin community is high compared to Jewish Israelis and to other Arab populations in Israel.[1] Bedouin society has undergone major transformations in the last two decades. Fertility rates that were among the highest in the world (above 10) were cut by 50%, accompanied by a rise in education, especially among Bedouin women.[1] These changes are not universal and create gaps within the Bedouin society, especially among city dwellers and those living still in unrecognized villages. The reduction in fertility rates presents more options for some women to seek higher education and participate in the workforce. These changes are still ongoing and sometimes create conflicts within the Bedouin society.

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While it is difficult for Arab citizens of Israel to integrate into the Israeli employment market, the integration of this population (including Bedouins) into the health system is far-reaching. As of 2020, Arab doctors comprise 16% of all doctors, 34% of dentists, and 48% of pharmacists in Israel.[2] The reasons for the high entry into health professions in Arab society in Israel include that it provides a stable and secure livelihood, status, and social prestige in the Arab population.[2] There has also been a significant increase in the rate of entry into health professions among the Bedouin population.[3] More young Bedouins are pursuing medical studies, and with difficulties entering Israeli medical academic institutions, many Bedouins are seeking education in Eastern Europe, Jordan, and the Palestinian Authority.

A variety of factors influence an individual's choice of medicine as a career, including belonging to an ethnic group. Popper-Giveon[3] found several main motives to be significant among Arab doctors in Israel regarding their choice of profession, including 1) their perception of a medical career as a path to excellence; 2) a desire to contribute to reducing disparities between the minority and majority populations and increasing awareness of the health profession among the Arab population in Israel; 3) socioeconomic mobility, social leadership, status, and prestige in both Arab and Jewish society; 4) inclusion within Israeli society and striving for integration; and 5) influence of family—choosing medicine not just as a personal dream, but a family one as well. Relatedly, interviewees in a recent study examining the attitudes of Israeli doctors in senior management positions toward the unique characteristics and roles of leaders in the Israeli health system viewed doctors as leaders and changemakers, and most agreed that doctors should act as social leaders and promote public health and health equality beyond clinical practice.[4]

Community leadership is a very important factor in driving change within minority groups. Leaders work for their community and are at the forefront of social action based on voluntary activity within it.[5] How to empower people from underprivileged communities to transition from being helpless and powerless in poor living conditions to seeing themselves as leaders is a key issue faced by community leaders and activists.[6] One of the most common forms of intervention to reduce disparities is the development of local leadership, based on the assumption that empowering community representatives to develop a sense of competence and leadership skills will lead to a process of change within the community.[7] A community leader's ability to influence others is reflected in their "awakening" as an activist and their desire to create—and lead—change in the community. It includes factors relating to motivation, ability, and leadership.[8] Transformational leadership[9] inspires positive changes in those led and is invested in the success of every member involved in the process. Transformational leaders are full of energy, passion, and drive. It is also important for professionals from the community to work together, identify common interests, define goals for change that can advance the community, reduce disparities, and solve problems.[10] The Social Identity Theory[11] explains the cognitive processes and social conditions underlying intergroup behaviors. According to the theory, the groups people belong to are important sources of pride and self-esteem. Social identity groups give an individual a sense of Belonging (Being part of a group can instill feelings of connection and unity), Purpose, Self-worth (individuals derive pride from group achievements and a positive group image), and Identity.

The Arab Bedouin population in Israel has experienced far-reaching changes in the last century. In the 1970s, Negev Bedouins began to undergo urbanization, moving from small village settlements in the desert to large towns. This change gave rise to new forms of local leadership, from tribal leadership to modern leadership.[12] There is a clear tension between these two forms of leadership. The sheik is seen as the authentic, traditional leader of the tribe. His role is inherited and based on family affiliation and corresponds with the definition of traditional leadership. Unlike the traditional leadership that led the population in the first decades of the State of Israel, a young, educated leadership has emerged among the Bedouins, that is more aware of the community's health needs. As in other countries, local minorities' leadership knows better how to articulate and address the needs of the society from which it comes and to represent the interests of this population.[13]

The aim of this study is to bridge this gap by analyzing the barriers and motivational factors experienced by Bedouin doctors to work in promoting public health in the Bedouin community in southern Israel and to examine the perceptions these doctors have around the concept of leadership in a public health setting. The research questions that emerged from the research objective are: How do Bedouin physicians perceive their role as health leaders in the community? What motivating factors drive them to bring about health changes in their communities? What obstacles do they face to lead health changes in their communities? To date, studies have yet to address the issue of public health leadership in Bedouin Negev society.

Materials and Methods

Participants, Procedure, and Tool

We conducted a qualitative interview study. After receiving approval from the Ethics Committee of the Faculty of Health Sciences at Ben Gurion University of the Negev (approval #12-2021), we contacted and interviewed five doctors from the Negev Bedouin community via colleagues from our faculty. The remainder of the participants were recruited using the snowball method by asking the original interviewees for contact details of additional Negev Bedouin doctors upon completion of their interviews. A total of 31 Bedouin doctors were contacted, of whom two refused to participate, and 14 were unable to find time to conduct the interview or did not answer. The research team included health sociologists, a public health physician, and a master's student in health policy and management. There was no relationship between the researchers and the participants, though two researchers (K.D., N.D.) are working on health inequities in the Negev, thus interacting for the last decade with the Bedouin medical and public health community.

We recruited and interviewed 15 doctors from the Negev Bedouin community (four women and 11 men), ages 30–76 (mean = 42.4). Two interviewees were single (13.3%), and 13 were married with children (86.67%). All were born in the Negev except one; six had moved to live in Jewish settlements or abroad, and nine lived in Bedouin settlements in the Negev. Twelve had studied medicine abroad, and three had studied in Israel. All had done their specializations in Israel, and two had done a subspecialty abroad. Currently, eight work in hospitals, six in the community, and one in the Ministry of Health. All 15 interviewees cooperated and answered the questions in detail.

We conducted semi-structured, in-depth interviews that allowed for flexibility and for questions to be raised in addition to those formulated in advance (see the interview guide in Appendix 1 below). Interviews were conducted in Hebrew over the Zoom platform at a time convenient for the participants during August–September 2021. All interviews were conducted by EK, who has a BA in public health and an MA in health systems management, trained to conduct the interviews by two highly experienced qualitative researchers (KD and ND). The authors wrote the interview guide in advance in accordance with the study goals. Two professors at Ben Gurion University, experts in leadership and public health, validated the interview guide using the content validity method. This method is based on the relevancy and coherency of a framework's elements and the degree to which they represent a specific goal.[14] Three questions that were not clear were revised, and one new question was added to the Interview Guide. In the second round of review, there was a consensus among the professors regarding the suitability of the interview guide. In the next stage, two Bedouin pharmacists, with whom pilot interviews were also conducted for validation and practice, validated the interview guide to ensure cultural competency. According to their comments, we revised one question.

The interviews ranged from 20–80 minutes (mean 44.8 minutes, SD 17.75). At the start of the interviews, the essence of the study and its goals were explained to the interviewees, and they were asked to sign a consent form for the interview to be conducted and recorded. The interviews were recorded and transcribed. The first section of the interview addressed general, demographic, and professional details relating to the interviewees. The second section addressed the interviewees' work for their community and the driving factors behind this in terms of their subjective feelings and experiences. The third section dealt with interviewees' perceptions of the term "leadership" and the qualities they thought were important in a leader. The fourth section addressed challenges, barriers, or encouraging factors involved in driving change, as interviewees recalled from their experiences (see the interview guide, Appendix 1).

Data Analysis

The interviews were analyzed using thematic analysis in several stages according to Shakadi's method.[15] A theme expresses a broad central idea that repeatedly appears in different forms of expression in the materials.[15] We initially focused on obtaining an in-depth and comprehensive understanding of the data through a lateral reading of all the interviews by the authors. Ideas, categories, and themes relating to the research questions were identified in the following stages. After the authors validated the themes, in the third stage, characterizations and ideas were discussed, during which time the interview transcripts were re-read until the final themes were formulated. In the first stage, KD and EK read all the interviews to familiarize themselves with the data. In the next step, ideas, categories, and themes related to the research questions were identified by each reader. After the themes were agreed upon and validated, the characterizations

and ideas were discussed while rereading the transcripts until the final themes were formulated with exemplar quotes. The themes and quotes were translated and documented in English at the final stage. We used a standardized codebook to ensure the validity of the translations from Hebrew to English. The themes were sorted using the socioecological model according to the research goals. The model assists with mapping the factors affecting an individual's health and offers strategies to improve health. The premise is that health is mutually influenced by environmental, organizational, and personal factors.[16] According to the socioecological approach, individual health is affected by various factors at different levels. At the micro-personal (intra-personal) level, these include demographics, psychological perceptions, and attitudes, which can be found in an individual's immediate environment, such as family, friends, and work. At the meso-community-cultural level, these factors influence the broader environment in which the individual lives. In addition, the culture and norms in the society are also being studied, such as accessibility, belonging to the community, culture, gender, and health disparities. At the macro level (aggregate population), these are state-level factors, such as legislation, public policy, budgets, and inequality.[17]

Results

Table 1 illustrates the themes and sub-themes according to the levels of the socio-ecological model.

Theme 1: The Development of Leadership in Health

We sought to understand whether the participants perceived themselves as healthcare leaders and, if so, what the circumstances were for the development of that leadership.

Micro (personal) Level

Self-Perception/Self-Image as Leaders

Eight participants saw themselves as leaders (53%):

Table 1 Themes and Sub-Themes According to the Socio-Ecological Model

Themes	Level	Sub-themes
The development of leadership in health	Micro (personal)	1. Self-perception/self-image as leaders 2. "Me in the mirror"
	Micro (intrapersonal)	1. The causes of leadership growth
	Meso	1. Leaving the village versus staying
Motivating/encouraging factors for activity in the community	Micro (personal)	1. Perceptions of the doctor's role and professional ethics 2. Desire to make a difference and sense of mission
	Micro (intrapersonal)	1. Personal and professional experiences
	Meso	1. Responsibility, commitment, and belonging to the community 2. Cultural understanding 3. Health disparities
Barriers/challenges in leading projects in the community	Micro (personal)	1. Lack of time and stress
	Meso	1. Barriers related to Bedouin culture 2. Social/ community barriers 3. Cultural and gender barriers
	Macro	1. Health disparities and inequality 2. Policy

> I define myself as a leader. I define myself as a person who has influence and has responsibility in the same context. But a leader is not just what you think—but what others think about you. (13)

The remainder did not answer unequivocally. Some described leadership as a field that went hand-in-hand with the medical profession:

> I think it goes together. It is impossible to practice medicine without practicing leadership. (4)

Some participants were modest and answered negatively but described leadership actions and doing much for the community:

> [Laughs]. It's a difficult question. I don't like to flatter myself. Maybe the others will tell me who I am. I'm trying to make a change. How much of a leader [am I]? I don't know. But I try and try, and I make an effort to really make a change and improve and advance. To follow my faith to a healthier society. But how am I perceived? I don't know. (5)

Me in the Mirror

Society's perception of medicine as a prestigious profession affects their self-image. Doctors can exert influence by the respect that society has for them. Interviewer 5 said:

> When you are a doctor, it adds to your personal value and the value of society's perception of you, and how society views you. It is a great advantage to be a doctor. An advantage that can also contribute to you as a leader.

Interviewer 13 added:

> The doctor has his respect and word in the community and ability to convince and bring about change. You shouldn't take that lightly.

Micro (Intrapersonal) Level

The Causes of Leadership Growth

The education and values they receive from home, and their desire to give back and give to the community, as interviewer 3 shared:

> There are quite a few doctors who saw fit to give of themselves to improve the population. If leadership doesn't grow from within society, it won't come from the outside. Even at the level of my childhood education, I was given a lot of values whose goal was first to think and ask myself, what can I give before I say, what do I deserve and what do I get? I'm an optimistic person, but it will take us a lot, lot, lot of time until we grow a leader of stature in the Bedouin population who will capture the imagination of this generation to make that long-awaited change in this society. It hurts, but that's the reality.

Interviewer 4 reinforced:

> I grew up in a home where my parents constantly told us that we should not forget where we came from, and that family should always be our priority. My parents were like that. They left, studied, and returned to give to their society.

Meso Level

Leaving the Village versus Staying

All the participants had to leave their villages during their medical studies, whether they studied in Israel or overseas. Out of 15 interviewees, 9 chose to return to their place of birth (60%), and 6 moved to live in Jewish communities or abroad (40%). The dissonance between the desire to lead change in the community from the outside and the desire to be part of it emerged in the interviews. The doctors who left the Bedouin villages felt the need to "apologize" for this and explain why they did so. For Example, interviewer 1 explained:

> When people ask where I'm from, I don't say Beersheba [Jewish city] because I feel like I'm from Lakiya [Bedouin village]. I live close to the hospital in the hope that I can return to the village. Today, it's common for many educated people to leave and

> live in the nearby Jewish towns. There is criticism of this. The educated are advancing themselves, and instead of staying in the villages and advancing them, they flee to the Jewish towns. I can understand the criticism.

Interviewer 10 shared his difficulties in returning to the Bedouin village:

> I was in Europe, Tel Aviv, Beersheba, America, and from there to Lehavim. Living in the 'diaspora' [the term "diaspora" is used in Hebrew to refer to Bedouin tribes whose residential communities have not yet been officially recognized by the government and are termed "unrecognized villages"] (40) is a problem after all these places. If you stay connected to your roots, people will respect and accept you as you are…I come with the attitude of, I am one of you, and I keep in touch, I also visit my parents every weekend. My parents are very simple people, I know exactly where I come from and where I'm going. At some point in life, you say enough! How much can you take? And you have the financial possibility to move. Some doctors live in the 'diaspora', and good for them. For me personally, it's hard.

Those who chose to return to their village after graduation were proud of the fact and noted how important it was for them to stay in the place where they were born, like interviewer 7:

> It's impossible to advance a population if all the academics or successful people run away from it. It is easier for a doctor today to live in a Jewish town. It's much more convenient. But is it convenient for your people? In my opinion, it isn't. It is important to return, to be like a candle within your population, which is full of dark things, and you must uproot and enlighten them. I think that you must have a commitment to society, and you can't turn your back on the society that raised you and where you grew up…Many of my colleagues moved away to Jewish towns. Then, they and their children have a serious conflict. My kids lived for a while in Beersheba, but they speak Arabic perfectly. I make sure they only speak Arabic at home. They know their religion because I ensure a teacher comes and teaches them. They know the tradition very well. I don't feel this conflict because I make sure it doesn't arise.

Interviewer 3 summed it up:

> I don't want to escape; I want to change reality

Theme 2: Motivating/Encouraging Factors for Activity in the Community

This theme includes internal motivations related to the doctors themselves and external motivations related to the community and the doctors' environments.

Micro (Personal) Level

Perceptions of the Doctor's Role and Professional Ethics

Being a doctor is a driving factor for promoting health within the Bedouin community:

> As the Lebanese writer Khalil Gibran said, when you give from your possessions, you give nothing, but when you give from yourself, it's true giving. During your medical education and internship, you learn to give. Learn to connect with the weakest links in society. Then, you also learn to give and listen. For the weak, for the needy. (3)

Interviewer 4 added:

> My perception of the profession, even if lots of my colleagues don't agree with me, is that the very choice of the medical profession is a choice to be a leader. Our job is to help people live better lives, so we are expected to be public figures. The coronavirus pandemic reflected this in the clearest way possible. People expected doctors to say what they thought about public policy, whether that was lockdowns or vaccinations.

Desire to Make a Difference and Sense of Mission

All the participants expressed a desire to lead change as a driving factor for their activity, and half expressed a sense of satisfaction and mission. Interviewer 7 mentioned:

> We started supporting mothers and young girls, hoping that when the day comes, we can say that we did our bit and even changed things a little for the next generation. Because even if you plant the most beautiful plant in the desert, it won't grow. It needs care. Watering. I know it's a drop in the ocean, but that's what we're called to do. Not just to hope. I want to make a change. I'm in almost daily contact with the heads of local councils and religious leaders in Bedouin settlements because I think cooperation with the local leadership is the key to change.

Interviewer 4 clarified:

> Instead of constantly crying and saying that they're not doing anything for us, they're not advancing us, let's get up and do it. For example, genetic problems result from all consanguineous marriages. The Bedouins know this exists yet continue to marry within the family. So, you say, Good Lord! It's possible to prevent this, so why don't we prevent it?

Micro (Interpersonal) Level

Personal and Professional Experiences

Interviewer 9 talked about their experience:

> I grew up in Kuseife [Bedouin village], where there was no pediatrician available; there was a doctor who came from time to time, and it was very hard to get to see him. I saw the community's difficulty and lack of awareness about treatment methods. For example, when a child has a fever, a Jewish mother knows the red lines for when she needs to go to the doctor and have a medical intervention, but a Bedouin mother thinks that antibiotics should be given. During your specialization in pediatrics, you see many cases of congenital diseases that could have been avoided. And you tell yourself how you're going to change it. Many things and experiences make you do what you do.

Interviewer 4 also shared:

> When I was doing my internship, a 19-year-old Bedouin girl from the "diaspora" came to us with chest pains. It was clear that there was an element of mental anxiety. We did all the investigations and asked the psychiatrist to come to check her. She didn't speak Hebrew, so he asked me to translate. We took the parents out of the room. Then she started crying and said her dream was to study medicine, but her father wouldn't let her, so much so that she even had suicidal thoughts. This story stayed with me. Because when we left the room, the psychiatrist asked me, what did your parents say about you going to study medicine? I said they danced for joy. Suddenly, I realized how incomprehensible it was. She was a mirror for me, for an alternative life. This is the experience I had. I could easily have been her… At that moment, I felt that the luck I had in life, I should channel myself to a place that helps other people less fortunate than me.

Meso Level

Responsibility, Commitment, and Belonging to the Community

Interviewer 8 thinks:

> The community gave you everything to succeed. You were born there. Now you have to give back a little bit of what you got.

Interviewer 7 strengthened:

> I think that anyone who grows up in a certain society- if he doesn't go back to give in that society, personally, I have a problem with him. He grows up to take and not to give.

Cultural Understanding

There are advantages for those from the community regarding cultural and linguistic understanding, as this encourages responsiveness to treatment and community cooperation. There is an understanding of the living conditions and environments in which members of the community live (social determinants):

> In Israel, there is a desire to help the Bedouin population, and there is a need among the Bedouin people; what is missing is the bridge. Many super professionals want to help, but people like me have an advantage. We come from the population and the

community and understand it, not just on a professional level, but culturally as well". (1) "If you're going to be a leader in health, you must understand the population, its needs, the barriers. When you are from that population, it gives you more tools. It's an added value beyond the medical profession itself. During coronavirus, when they started doing the vaccination campaign and brought in Arab doctors, I think it made a difference, and people got vaccinated. (5)

Interviewer 15 illustrated:

There are different customs—like the sensitive cases of unmarried women getting pregnant, where if the family finds out, they'll kill her. As a Bedouin, I am obligated to maintain Bedouin honor, but as a doctor, I want to help them. Another example—we'd give lectures on diabetes, and because the women would come earlier, they sat in the front, and the men sat in the back. One of the sheikhs got up and said, 'How can you agree to have the men sitting behind women? It's not respectable!' I learned from that, and the next time, I made four rows for men and four for women that were next to each other, and that's how I got cooperation because I took culture into account. We adapted ourselves to the leaders and tradition, it's not easy to do that. Today, Bedouin patients prefer Bedouin doctors because they understand the mentality and behave towards the patients according to what is important to them within their tradition.

Health Disparities

Interviewer 13 complained:

We see neglect over many years and in many areas. Everything eventually converges in the context of awareness. To leverage awareness in the Bedouin population. For new treatments, for illnesses, for rights.

Theme 3: Barriers/Challenges in Leading Projects in the Community

The interviewees' desire to advance the Bedouin community in the Negev is set within the context of a society in transition, which gives rise to many conflicts, as interviewee 2 explained:

This whole transition of society to modern life causes many conflicts. It is a crazy transition, from a very primitive life in a tent and fetching water from a well to moving to a settlement with running water and electricity. The tribal structure is falling apart, and there are the state's laws, and these worlds always collide with each other.

Micro (Personal) Level

Lack of Time and Stress

Because of time pressures, the interviewees do not contribute as much as they would like:

It puts us in a position of having a very big responsibility that I am not enthusiastic about. Because on the one hand it's a responsibility, and on the other we're volunteers, and we really don't have time. It's so much work. Both me and the others are very busy and stressed, yet we have limited time and a lot of tasks. (6)

Meso Level

Barriers Related to Bedouin Culture

Culture, tradition, and belief in Bedouin society dictate people's behaviors and are a decisive factor in health decisions. Interviewer 4 indicated:

It's estimated that around 25–30% of women and slightly fewer men are illiterate. They can't read or write. So, if all the information comes in writing, what can we do about it.

Interviewer 2 added:

The whole issue of consanguineous marriages, they know that the fact they are getting married can cause disease. And they still do it because of culture and tradition. I know a school principal, an educated man, who has daughters with a rare syndrome. He doesn't want it to be monitored and treated. In his view, he wants to protect his daughters, so they don't have a bad name…The

whole issue of women's health and its meanings, tradition has a lot of influence on that". "When there were medical conditions that could be treated, sometimes they would refuse treatment on the grounds that Allah (god) determines when a person will die, and it doesn't matter if they get treatment because they will die on that day. (15)

Social/ Community Barriers

This sub-theme includes lack of trust in the health system:

"I think there is a problem with trust in all government institutions, part of that is in the health system. I can't understand it. You come to Soroka Hospital [in Beersheba] and are [a Bedouin]; I don't think you receive less good treatment than the Jewish population. I don't think you are treated differently. I think they give you the maximum of the maximum, and this is the only place in Israel, in my opinion, where you get the same treatment no matter where you are from. (10)

Socioeconomic status:

We are talking about a population that has a very low socioeconomic status, living far below the poverty line in shanty towns, with no infrastructure, no services. A child comes home after school, walks 4 kilometers, he is exhausted. He has no electricity at home, no refrigerator, no cold water, there isn't much-running water. What kind of adulthood will he have? Where will he go? He will grow up either to criminality and delinquency, or manual labor. Low income, can't support his kids, and there's another generation of poor people. We need to break this vicious cycle. You need to have basic needs fulfilled to seek out higher values in life. (3)

Lack of education and awareness:

Inadequate and poor education where people are indifferent and don't take the initiative or take responsibility for their fates. This is exactly one of the things we are facing right now. For example, the COVID vaccination, in Bedouin society, people don't come forward to get vaccinated, not because it's not available or accessible and not because they actively oppose vaccination. There is a kind of indifference…One of the things that makes leadership in Bedouin society very different is the very, very, very failed education system. A successful education system will grow leaders, and a successful society will grow. Bedouin society is a society in transition. I remember, as a small child when the sheikh said something, everyone listened. There was no crime, no delinquency, there were no fights, there was no violence because there was a leader who had SAY. (3)

Influence of tribalism:

That part where there are tribes and clans and problems between families, and then you can't promote what you want to everyone. You can promote it in a limited way in your family, or in families who can or are acceptable to your family. This is a problem that will take a long time to eradicate. (9)

You can't only blame the state. I think that the Arab leaders don't care that much about the Bedouin. It seems to me that they care more about themselves. We, as a population, are also very difficult. We have tribalism, violence is celebrated. Look at what is happening in the Arab population, it's a disaster. (10)

Cultural and Gender Barriers

The inferior status of women in Bedouin society is a significant barrier to promoting health in the community. Bedouin women are primarily uneducated and are subject to strict rules that limit their mobility. For instance,

The mothers don't know how to read or write, they don't know how to feed their kids, there are domestic accidents, nutrition problems, neglect. The person who raises the children and educates them is the mother. When the mother is uneducated, without means or power, we cannot raise a generation that can rise from the ashes. (14)

The issue of gender also arose in the context of medical studies. In this study, we interviewed four female doctors, who had managed to break cultural and gender barriers and study medicine. In the interviews, they related the difficulties they faced and still face due to their decision to study medicine. Interviewer 5 shared:

> There are few women who study medicine. Our society is traditional and does not allow women to go outside, work freely, or live somewhere else in Israel. Only a few families do that not everyone agrees that their daughter should attend school. It's a complex issue. There are restrictions around women.

Interviewer 8 added:

> When I left our village, no girls went to Europe. That was the biggest barrier, everyone was against it. At the time, three or four girls were allowed to go to Jordan. I'm the first girl who went to Europe alone. It was hard to accept that. Sometimes, Bedouin doctors would ask me when I was on the duty roster, what are you doing here at this hour?

Interviewer 1 explained:

> This is a super challenging population. Even as a woman, speaking in a patriarchal society is difficult. Even if I speak professionally, men often see it as threatening. Who is this woman who has come to preach at us and the fact that I don't cover my head.

Macro Level

Health Disparities and Inequality

Most interviewees (n=11, 73.3%) mentioned inequality and health disparities as obstacles. They also described the lack of accessibility as a significant challenge in promoting health in Bedouin society:

> There is a lack of accessibility and a cultural incompatibility of the services provided to the Bedouin population. There are the unrecognized settlements in the south. We are talking about almost half of the Bedouins in the south, and these people live in settlements where we don't talk about the fact that there is no clean water or electricity, which also determines health indicators. Also, at the level of accessibility to clinics and their ability to see a doctor when needed, they don't have public transport to get to a doctor. This is also in terms of accessibility of services and understanding what the population is entitled to regarding rights. So, there is very little use of the services that are available to them. (1)

Policy

The interviewees protested against budget cuts and discrimination:

> The health care system is like moving a ship. It's hard to change the tenure of people working in the same profession for 40 years. The last time there was a budget, they approved a serious plan to improve health services for the Arab community in Israel, including the Bedouin community. Of course, when cuts had to be made, this was the first thing that was reduced. It's a matter of policy. (4)

Interviewer 1 added:

> I want to change things at the policy level. The whole situation that the Bedouins have ended up in has come about because of structural racism in the administration and how they see the Bedouins and the treatment of them and the unrecognized villages. The language itself that is used when talking about Bedouin does not change. They still talk about the 'diaspora' and the lack of responsiveness.

Discussion

This is the first study examining attitudes toward public health leadership within the Negev Bedouin community among native Bedouin doctors in Israel. The results, therefore, offer a novel and unique perspective into the experiences of doctors from and within this under-researched, underprivileged minority population. The study complements other recent studies on leadership among educated Bedouins, showing the challenges for Bedouins in a society in transition and the need to apply social identity concepts, including the conflicting demands that these doctors face. Thus, as emerged from our results, we show how the social identity of the Bedouin community, as represented in our interviews with those who

chose to study and work as physicians, is inter-related with behavioral and cognitive complexities presented in their experiences, leading to much flexible and versatile leadership modes in real life.[18]

At a micro level, most interviewees saw themselves as leaders whose role was to improve public health in their community. On an interpersonal level, interviewees discussed the need for health leadership in Negev Bedouin society because it is a disadvantaged population. They also described their desire to lead change in the community from within and how this desire faces real life challenges that emerge within their communities and social identity as well in professional spheres.

At a meso level, all the interviewees had left their villages to pursue their medical studies. They admitted that they had grown used to a different way of life and a higher standard of living and, as a result, had difficulty returning home. Various studies have examined the phenomenon of young doctors migrating from developing to developed countries, where salaries are higher, professional options are wider, and living standards are higher.[19] A similar phenomenon is experienced by young Bedouin doctors, who strive for higher living standards and quality of life. This study revealed a deep dissonance and a dilemma between the interviewees' desire to remain connected to their roots and their wish to enjoy higher living standards and provide a better education for their children. However, place of residence was not a factor for them when choosing whether to promote public health within the Bedouin community. It is also possible that the issue of residing outside their community was a catalyst for them to act on its behalf, perhaps to reduce the intensity of the dissonance they experienced, and so as not to be considered "traitors" by their community.

When analyzing the factors that encouraged them to engage in public health activism in the Bedouin community, the interviewees talked about their need as doctors to improve health within their community. A recent study found that doctors view reducing health disparities as part of their role and believe that the most important feature of a "good doctor" is related to the humanitarian aspects of their work and concern for patients.[20] An earlier study found that, for doctors in roles that include reducing health disparities, the chances of becoming socially involved and adding to the benefit of the community are 2.5 times greater. This sense of mission is strengthened when doctors come from an underprivileged community and seek to take care of its well-being.[21]

All the interviewees expressed a sense of belonging and commitment to their community. They reported that this was a decisive factor that encouraged them to act on its behalf in promoting health in the community. According to Snyder and Omoto,[22] volunteering builds and strengthens relationships between the volunteers and the members of the surrounding community and promotes social cohesion and connection between people. The interviewees reported that working for their community resulted in feelings of self-realization and satisfaction, which intensified when their work brought great benefit to the community and improved its health outcomes. The cultural aspects of Negev Bedouin society were found to be both a barrier to promoting public health and a factor that drove the interviewees to try to work to promote public health. When trying to initiate such processes to improve health access and outcomes within disadvantaged, minority communities, cultural and linguistical accessibility must be ensured and adjustments made to encourage cooperation and increase chances of success.[23,24] Several studies have shown that is important to cooperate with community members and leaders when leading and fostering support for change among a target population.[25–27]

Public trust, or lack of trust, in the health system has a great impact on responsiveness to public health messages.[27–29] Therefore, there is a need for people from the community who are seen as reliable mediators between the authorities and the community. Studies have shown that, as the ethnic diversity of medical staff increases, it is possible to reduce health disparities and increase patient trust[30] through culturally and linguistically appropriate care, which increases understanding and cooperation.[31,32] Furthermore, when patients and doctors share a common language and customs, the interpersonal relationship in the therapeutic session improves, increasing the chance that patients will attend a follow-up.[33] The Bedouin doctors we interviewed presented us with a complex reality of living in different worlds, being raised in a Bedouin village, learning medicine either in Israel or abroad, including fellowship periods, moving to non-Bedouin residence while still interacting with a family that is still mostly living in a much more traditional setting.

The interviewees cited health disparities in the Negev as being both an obstacle to the doctors working to improve community health and a driving factor for doctors seeking to improve the community's public health. The interviewees referred to factors including the poor health status of the population, their responses to this, and their desire to lead change in the community as factors that drove them to try to improve public health among Negev Bedouin. However, the

complicated cultural and infrastructure issues around public health and accessibility to services in Negev Bedouin communities pose a challenge to improving public health, and public health programs will fail if these issues are not taken on board.

In analyzing the personal micro-level barriers and challenges to promoting public health, lack of time was noted to be a significant issue for the interviewees. Several described having similar reactions, whereby they would like to volunteer more but did not have time because of workload and work intensity, and their desire to spend more time with their families.

At the meso level, barriers, as perceived by the interviewees, were divided into four main issues: lack of trust in the health system, lack of education and awareness, the influence of tribalism, and socioeconomic status. Lack of trust in the health system among the Negev Bedouin population was mentioned frequently in the interviews. Satran el al[34] examined stress levels among the Arab minority in Israel (Bedouins, non-Bedouin Muslims, and Christians) during the first wave of the coronavirus pandemic and found that the Bedouin population reported significantly higher levels of stress compared to other minority groups. The Bedouin community also reported a moderate to high level of discrimination, a moderate level of trust in the health system, and a relatively low level of compliance with guidelines. According to Bacher et al, cultural differences may create friction between service providers and patients.[35] These frictions may explain the tendency of some Bedouins to turn to traditional healers. Similarly, the level of trust Bedouin parents place in service providers is significantly lower than that reported among Jewish parents in Israel.[36] Thus, cultural adaptation and cultivating doctors from within the community are essential to strengthening trust in the health system among the Negev Bedouin population.

In terms of socioeconomic factors, all Bedouin settlements in the Negev belong to the lowest socioeconomic level in Israel. The interviewees described how this situation affects the health of the population in terms of infrastructure and living standards and in terms of their willingness to turn to healthcare since their concerns are more focused on their economic situation and family livelihood. The literature supports this finding since low socioeconomic status is often associated with excess morbidity and premature mortality. These disparities have a high economic cost both for the population and for society as a whole.[37]

Bedouin society suffers from a lack of education. The educational dropout rate among the Arab population of Israel is one of the highest in the country, reaching high as 25% in some cases. In the southern region, the rate is even higher.[38] Frimt, Goldberger and Hakai found that educational level strongly correlates with mortality factors such as respiratory diseases, diabetes, infectious diseases, and even murder.[39] Educated people enjoy healthier lifestyles, and have fewer risk factors, likely due to improved knowledge and better financial ability to make healthier choices. They smoked less, ate healthier foods, drank less sugary drinks, and did more physical activity, which was reflected in rates of preventable diseases like Type 2 diabetes and cardiovascular disease. In addition, the educational level has economic consequences since higher education leads to better employment opportunities, impacting on income, housing, and access to health services.[39]

The influence of tribalism on public health is evident mainly from lifestyles, decision-making patterns, and commitment to the tribe. Alongside this, the religious aspect of Bedouin culture is very important, and religion and religious leaders play a key role in the daily lives of the Negev Bedouin population. Religion dictates tribal norms and is key to understanding the identity, decision-making, and cooperation of Negev Bedouin with state-led processes.[40] Tribal rules governing daily life include a collection of behavioral patterns and customs that have been assimilated over a long period of time and dictate what is allowed and forbidden within the tribal structure, such as relationships within and between families, customs around receiving guests, weddings, and funerals.[41,42] These rules can pose difficulties when seeking to make a change or drive processes that may be even slightly contrary to traditional norms, especially to Bedouin religious and cultural norms. According to the interviewees, tribalism is reflected in power relations between families, the influence of tribal leaders and religious figures in all areas of life, and inaction on the part of tribal leaders. The key figures in the tribe are the *sheikhs*, the imams, and senior members of the tribe's judicial system.[43] Opposing these powerful individuals can greatly impact cooperation from wider Bedouin society while obtaining their cooperation, or coopting them, for joint efforts, such as occurred during the coronavirus pandemic, can be immensely helpful.[44] Gender barriers stem from the inferior status of women in the Bedouin community, which affects their health and that of their children. Most Bedouin women are uneducated and sometimes illiterate, and are subject to strict rules, including

limitations on mobility outside the home. Sometimes they lack status, and are denied medical treatment, or it is difficult for them to access it. These characteristics that emerged in most of our interviews are consistent with the literature, which argues that gender segregation in Bedouin society prevents women from accessing information and training and even from receiving medical treatment.[24]

Gender barriers also arose in connection with the difficulties faced by the female interviewees during their medical studies, and in working with community members, both patients and colleagues. This finding is consistent with those of Abu-Rabia-Queder, who described the challenges, both inside and outside the home, faced by Bedouin women when they leave home to pursue an education.[45] According to Rudnicki and Abu Ras, women's education in Bedouin society is given high priority in official and local civil society bodies, with the number of women graduating from higher education increasing from 12 in 1995 to 303 in 2010.[46] However, there is still disagreement on the part of entire tribes regarding the issue of integrating women into the labor market or allowing them to study outside of the scope of the tribe. In fact, this is a conflict between the desire to preserve the traditional role of women in maintaining the family, and the recognition of the strong potential to improve the everyday quality of life for women in the local public space and for them to act as an agency for change.[45] This shift in perception is reflected in the increasing proportion of Bedouin women acquiring education, entering the labor market, holding key positions, and enjoying increased mobility, despite the fear of unwanted outcomes and harm to tradition and culture.[38] However, there is also a continued presence of excessive supervision and elements of patriarchal control (polygyny, family honor, and so on) that limit and regulate women, and men remain in control of deciding whether women can study outside the home.[12,47–49] Women studying or working in academia often choose to move with their families to mixed cities to escape from the strict rules and permit themselves greater space and freedom.[49]

At the macro level, the interviewees presented that the state plays a significant role in everything related to policy around public health, resources, budgets, infrastructure, and reducing disparities in Negev Bedouin society. The interviewees claimed that the state avoids taking responsibility for the situation of Negev Bedouin society, for example, through budget cuts, insufficient funding, disregard and neglect for Bedouins and the unrecognized villages, and lack of investment in education and young people. At the same time, we found studies that testify to the state's aspirations and attempts to improve the condition of the Arab population in general and the Negev Bedouin in particular, in all areas of life, including the health sector.[46] During the coronavirus pandemic, many efforts were made by the state, municipalities, health institutes and other civic society organizations to undertake linguistically and culturally appropriate activities in the media, on social networks, and even on billboards featuring religious figures and opinion leaders from the Negev Bedouin community.

Limitations

The sample is relatively small and includes only 15 doctors from the Negev Bedouin population. It is possible that there are differences between doctors from different minority populations and from different parts of the country. Also, only doctors were interviewed for the study, and representatives from other health professions did not participate.

Conclusions

This study presents a unique perspective on the views of doctors from the Negev Bedouin population on their involvement with grassroots leadership as a strategy to reduce health disparities in this community. The medical profession is viewed as prestigious in the Bedouin community, and doctors from the community view themselves as leaders, which increases public cooperation and responsiveness to public health messages given by these doctors.

Experiences on a personal and professional level left a mark on the Bedouin doctors interviewed for the study. They presented a complex interaction between the different spheres of their lives, personal, family, community, and professional, leading many times to tensions in their social identity. They reported that health inequalities and disparities in their community increased their motivation to lead public health programs and their desire to drive change and improve health outcomes. They presented a complex interaction between the different spheres of their lives, personal, family, community, and professional, leading many times to tensions in their social identity.

The interviewees reported that a significant barrier to carrying out public health work was lack of time. Lack of education and awareness within the community have significant impacts on public health. Tribalism and tribal power

structures play a key role in behavior patterns and decision-making. Further, there are gender barriers resulting from the inferior status of women, which affect women's and children's health, as well as women's personal development and education. Despite the many efforts of the state to lead change, greater budget allocations and resources are still required to advance the Negev Bedouin community.

In light of the findings, we recommend developing training programs on leadership and public health for Bedouin doctors. These programs could be integrated into their specialization and in continuing education. Cultural understanding, knowledge of the unique characteristics of the community, and the local language are advantages for doctors who seek to introduce public health programs into his or her community. Bedouin doctors are better positioned to make the voice of the Bedouin community heard and to place community issues on the political agenda.

At the same time, work must be done to raise awareness of health among the Negev Bedouin population. Bedouin doctors should be given incentives and a portion of their duties allocated to encouraging healthy lifestyles and education among the Bedouin population. In parallel, there is a need for similar research to be carried out among other Bedouin health professionals, such as nursing and pharmacy. Studies conducted among the Bedouin population itself could examine how various community members and stakeholders perceive health leaders and the barriers and catalysts that affect their cooperation in public health programs.

Institutional Review Board Statement

The study was conducted according to the guidelines of the Declaration of Helsinki and approved by the Ethics Committee of Ben Gurion University of the Negev (Approval #12-2021). Written informed consent was obtained from all participants in the study. No personal information of participants is published in the paper.

Data Sharing Statement

The datasets used and/or analyzed during the current study are available from the corresponding author upon reasonable request.

Informed Consent Statement

Written informed consent for publication was obtained.

Author Contributions

All authors made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis, and interpretation, or in all these areas; took part in drafting, revising, or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

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