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The relationship between stress and stigma, somatization and parental self-efficacy among fathers of adolescents with developmental disabilities in the Bedouin community in Israel

Fars Kabiyea, Iris Manor-Binyamini*

Department of Special Education, University of Haifa, 199 Aba Khoushy Ave. Mount Carmel, Haifa 3498838, Israel

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ABSTRACT

Background: Although children across the world experience Developmental Disabilities, most research on DD has been conducted using Western cultural perspectives and has primarily focused on mothers, leaving significant gaps in the literature. This study intends to fill some of these gaps by exploring and gaining an understanding of the experiences of fathers raising children with DD. Thus, the aim of this study was: to examine whether stigma, somatization, and parental self-efficacy were associated with stress among Bedouin fathers of adolescents with DD. Besides, the relationship between somatization and stress was examined in this study, as it is mediated by the sense of stigma, as well as the intensity of the mediation of the knowledge of shame, between paternal self-efficacy and stress.

Methodology: Notably, ninety Bedouin fathers of adolescents with DD completed five questionnaires. These questionnaires included demographic, stigma, parental self-efficacy, and stress and somatization questionnaires.

Results: Significantly, the study findings indicate significant negative relationships between general stress and parental self-efficacy, parental and economic stress and parental self-efficacy, and sense of stigma and parental self-efficacy. Also, the findings indicate significant positive relationships between stigma and anxiety, fear and somatization, and stigma and somatization.

Conclusions: Arguably, concerning the findings of the study, intervention programs that are culturally tailored and that concern cognitive-behavioral foundations are recommended to help fathers cope with their sense of stigma. Further, the intervention programs help to deal with stress and somatization and to increase their understanding of parental self-efficacy in raising their child. Therefore, these cultural intervention programs should take into account the individual and his extended family, and place of the family in his life, considering the cultural values and the honor of the family. Further, the programs should take into account the centrality of religion and an awareness of the impact of the social hierarchy and the status of the fathers in the community and on the child with disabilities. In essence, these areas are focal points of power that can assist in providing solutions for the intervention program. Also, it is essential to refer to the living and economic conditions of this community.

* Corresponding author.
E-mail addresses: fars.1300@gmail.com (F. Kabiyea), Iris.manorbinyamini@gmail.com (I. Manor-Binyamini).

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1. What this paper adds

Significantly, the Bedouin community in Israel is a subgroup within the Arab minority and is cultural, historically, socially and politically unique. Hence, these factors distinguish it from other subsets and set it apart from them. Additionally, the unique characteristics of this community emphasize the importance of the coping of parents of children with disabilities in this community. This study is the first to examine the relationship and directionality of the variables of stigma, somatization, and parental self-efficacy and stress among Bedouin fathers of adolescents with developmental disabilities. Further, this examination enables the deepening of our understanding of the coping of Bedouin fathers of adolescents through the emic approach, the purpose of which is the investigation of a culture from the inside, i.e., from the people living within the society.

In essence, the findings of the current study are the first to show relationships between stress, parental self-efficacy, stigma, and somatization. Even though some of the conclusions of this study were also found in studies that were carried out in Western societies, this study adds findings regarding family and environmental components. Specifically, a meaningful outcome is Somatization can result from factors related to the family environment and socio-economic conditions, which increase the tendency for somatization. Also, there are familial and cultural factors that may explain this relationship; for example, unlike in Western societies, Arab societies perceive disabilities more negatively. In other words, society's attitude toward a person with disabilities is primarily influenced by cultural beliefs, negative attitudes, and stereotypes, which may cause an increase in the sense of stigma and somatic expressions for the fathers.

More importantly, the findings of this study point to the need for culturally-based intervention programs that reflect the consideration of the professional, the connection between the individual and his extended family, and its place in his life, taking into account the cultural values and the honor of the family (the El Sutra). Also, taking into account the centrality of religion and an awareness of the impact of the social hierarchy, the status of the fathers in the community and on the child with disabilities are focal points of power that can assist in providing solutions for the intervention program while using culturally relevant terms and expressions. It is also important to refer to the living and economic conditions of this community as well as directions for further research, that are important to carry out in this field. Therefore, this study contributes to the limited literature on fathers of children with disabilities in non-Western communities.

2. The Bedouin Community in Northern Israel

Significantly, the Bedouin community in Israel is a subgroup within the Arab minority and is culturally, historically, socially and politically unique, which distinguishes it from other subsets and sets it apart from them. Additionally, today the Bedouin community in Israel lives in the north and south ends of the country and includes approximately 270,000 people. Further, nearly 200,000 of these people reside in the Negev, and the rest of this population, about 70,000, lies in the north (Ben Ari, 2013). The vast majority of Bedouins in the north live in recognized permanent villages, rural or urban, usually in separate Bedouin neighborhoods. Also, the Bedouin community emphasizes the value of the collective over the value of the individual. Its collective nature is coherent with Arab society as a whole.

Additionally, the family maintains a hierarchical order, so that the age and gender of the family members influence roles, rules, and norms (Ruti, 2008). Hence, the Bedouin community is similar to other Arab Bedouin communities in the Middle East in terms of some socio-demographic and cultural characteristics, such as intermarriage, polygamy, and the family. Primarily, the extended clan serves as the most basic social unit (Manor-Binyamini, 2014).

Among its essential socio-demographic characteristics, its patriarchal feature stands out, as patriarchs head the entire family, in which the status of men is considered to be higher than the status of women (Dwairy, 2004). Therefore, based on these values, a Bedouin woman is responsible for all the housework, childbirth, and childrearing. Further, in standard treatment such as cleaning, eating and taking a shower the involvement of father is minimal. It is important to emphasize that as the head of the family, a Bedouin man makes all the decisions concerning daily life in the family. Additionally, as the father, he is the family's link to the outside community.

Further, the definition of Parental Self-efficacy is a parent's assessment of himself as capable of functioning in a variety of tasks related to the requirements of his role as a parent. These perceptions and beliefs are the main cognitive “key” of adjustment and parental competence in functioning with a child (Coleman & Karraker, 2003; Jones & Prinz, 2005). Further, the definition of parental self-efficacy among parents of adolescents is a parent's belief in his abilities to influence his children in such a way as to encourage the positive development of his children (Glatz & Buchanan, 2015). Also, the researchers Learkes and Burney (2007) emphasize that the parent's gender is the main contributor to his or her perceived parental self-efficacy.

Significantly, raising a child with disabilities involves coping with many challenges and demands in everyday life, which has an impact on parents’ sense of stress. For example, Ahmad and Dardas (2015) note that fathers of children with disabilities may experience a sense of personal failure and a decline in their self-worth and develop doubts regarding their ability to provide care for their children and fulfill their obligations as fathers. In general, being the father of a child with a disability means experiencing additional stress, on top of the parental role, which is already a demanding role. However, there seems to be a relationship between the father's sense of parental self-efficacy and his child's behavior, which in turn, affects the father's sense of parental self-efficacy (García-López, Sarriá, & Pozo, 2016).

Importantly, fathers who raise children with DD feel stressed concerning building social relationships because of their demanding roles as caregivers or because of a lack of public understanding of their particular circumstances, which creates continuous stress on the fathers (Lewis, Skirton, & Jones, 2010). This situation appears to also be true of fathers in non-Western communities.

Additionally, in the study by Kabat (2018) on fathers of adolescents with DD in the Bedouin community in Israel, the researcher was the first to find positive relationships between stress and somatization and stress and stigma.

On the other hand, Mak et al., 2007 believe that stress is a broad and multidimensional concept that includes physical, psychological, social, and economic aspects. Also, Turkel (2002) and Abikasis (2009) argue that parental stress is a condition that mostly appears in a parent's sense of fulfilling his role due to the daily tasks of childcare, emotional burdens, burnout and burdens of everyday life. Hence, the continuous nature of parental stress indicates that there are significant short-term and long-term risks that affect the mental and physical health of fathers who care for children with DD. These findings are replicated in a variety of studies, for example, in a survey by Dardas and Ahmad (2014).

Also, recent studies such as Manor-Binyamini's (2011) review, show that parents of children with intellectual disabilities experience higher levels of stress than parents of typical children. This situation is also right for parents of children with ASD and parents of children with DD (Schieve, Blumberg, Rice, Visser, & Boyle, 2008). Therefore, the stress experienced by fathers of children with DD is continuous and has economic, emotional and physical aspects, which could harm fathers' ability to manage their lives and cope with the many challenges they face in their daily lives (Oelofsen & Richardson, 2006).

Significantly, one of the most common claims in the literature is that fathers of children with DD do not advance professionally as much as they could have. Also, they have less occupational mobility than fathers of children without DD. Importantly, these fathers spend more money raising children with DD (Parish, Seltzer, Greenberg, & Floyd, 2004), and also, these fathers have to address stigma.

Primarily, the word "stigma" is derived from Greek and refers to physical signals aimed at emphasizing something negative and unusual that attests to the inferior status of the individual (Hinshaw, 2005). Werner and Shulman (2015) refer to the concept of stigma as a social and personal rejection that stems from being labeled or suffering from a profoundly shameful characteristic. Further, which has become a signal of negative experiences, such as shame, discrimination and stereotyping, loneliness, as well as a variety of prejudices that are widely visible toward another group. Additionally, Werner and Shulman's (2015) study focused on the extent of the internalized family stigma among family members who are caring for people with DD in Israel and the relationship between the internalized family stigma and demographic characteristics of the parent and child, especially in the comparison between different types of DD.

Also, the researchers in the study examined a variety of demographic variables, which included: gender, income, religious affiliation, and age, education, and background variables of the child with the disability. These variables included gender, primary diagnosis, and schooling framework. Further, the results of the research showed that affiliate stigma was not related to any of the caregiver background variables. Primarily, concerning child related variables, affiliate stigma was found to be higher among caregivers of individuals with ASD as compared with PD or ID. Greater stigma among caregivers of individuals with ASD was related to feeling embarrassed by the child's behavior, feeling a negative impact on the parent, reducing going out with the child, minimizing contact with friends and relatives and not telling others that the child has ASD. Also, the study showed a relationship between internalized family stigma and family demographic measures; also, the study indicated low levels of internalized family stigma were. In essence, the mean level of affiliate stigma reported by the participants in Werner and Shulman's research was relatively low in all the individual items comprising the Affiliate Stigma Scale.

Further, Al-Krenawi and Slonim (2009) emphasize the importance of culture, noting that the Bedouin population in Israel views people with DD as abnormal, and labels them with negative stigmas that are also seen to apply to their parents for having had the child with the disability. This stigma makes it even more difficult for fathers to cope. Nagata emphasizes that attitudes toward people with disabilities are the result of cultural values, family environments, and levels of exposure to people with disabilities (Nagata, 2014). Similarly, society's attitudes toward a person with a disability are mainly as a result of adverse reactions, cultural beliefs, and stereotypes (Karni, Reiter, & Bryen, 2011). Significantly, stigma may lead to somatization.

Additionally, a somatization disorder and its various aspects pose a tremendous and complex diagnostic and therapeutic challenge because it is borrowed from the worlds of physical and psychiatric medicine and sharpens the question of the boundary between the two. Somatization has different definitions, which are often multidimensional, that combine models from diverse fields to try to address the central problem of a physical symptom without any identified pathology. The American Psychiatric Diagnostic Book (DSM, 2013) defines a Somatic Symptom Disorder as a multi-symptomatic disorder, similar to the symptoms the person experiences that interfere with his functioning, most of which are complaints of significant pain. The symptoms can be specific or general, but they have no evidence-based medical explanation. Somatization is characterized by exaggerated thoughts, feelings, or behaviors, directly or indirectly related to the physical symptoms, or concern about one's health situation, as it refers to these symptoms.

Another definition of somatization is the tendency to experience somatic distress (related to the body) in response to psychological stress, for which the person seeks medical assistance (Mai, 2004). Alongside these definitions, the ICD-10 (2010) classifies somatization as both a mental disorder and a physical illness. According to Busch (2014), somatization is an expression of emotional distress through physical symptoms, so that somatization can be conceptualized as an emotional state that would not have been represented symbolically, or as a protection against extreme emotions and fantasies. Today, the number of people who suffer from somatization among those seeking help from their family doctor is higher than that any other disorder (Garralda, 2011). In the context of the study of somatization among parents of children with disabilities, the study is notable (Hodge, Hoffman, & Sweeney, 2011). This notability is for having found that parents of children with autism are more sensitive to their child's mental disorders than parents of typical children. Therefore, there is increased somatization in mothers of children with ASD than parents of typical children.

Additionally, in a collectivist society, such as the Bedouin society, in which disability is perceived more negatively than in Western societies (Nagata, 2014), and fathers of adolescents with developmental disabilities are categorized in a stigmatizing way

(Ali, Hassiotis, Strydom, & King, 2012). Fathers of children with disabilities are characterized as having characteristic somatic symptoms. Mainly, in the Middle East, there is very little research on somatization in women or men in the general population, and to the best of our knowledge, there are no studies of somatization among parents of children with DD.

3. The purpose of the study

Specifically, the present study has two main objectives: first, to investigate whether stigma, somatization, and parental self-efficacy are related to stress among Bedouin fathers and adolescents with DD. The second objective is to examine the relationship between somatization and stress, which is mediated by the sense of stigma. Additionally, there was an examination of the strength of the mediating role of the knowledge of shame between paternal competence and stress.

4. Method

4.1. Research procedure and sample

Importantly, this study was carried out in several stages: First, approval was received from the Ethics Committee of the University of Haifa and the Office of the Chief Scientist in the Ministry of Education. In the second stage, the first author appealed to individual education schools in the Northern District of Israel, and meetings were held with the school principals and teachers, during which great information mina was conveyed about the nature and procedure of the study. After receiving consent from them to conduct the investigation, the teachers passed the research questionnaires to fathers, along with an explanation form that detailed the research and an informed consent form that the fathers were asked to sign. The teachers also collected the questionnaires after they were filled out. One hundred-twenty questionnaire was given out from November–March 2017–2018, of which only 90 returned to the researchers.

4.2. The research participants

Further, ninety Bedouin fathers of adolescents with DD from the Northern region of Israel were selected. The criteria for choosing fathers for participation in the study were, fathers of adolescents with DD who attend the school within the particular education system, fathers from the Bedouin community in the north and fathers of children aged 9–23.

4.3. Research tools

Four self-report questionnaires applied in this study: stigma (ASS), somatization (PSQ – 15), parental stress (PSI) and parental self-efficacy (PSOC). All became subject to translation into Arabic. Additionally, the statements in the questionnaires were translated from English into Arabic by two bilingual translators, who worked separately, from the Bedouin community. Both versions later went through evaluation by a Ph.D. student of Arabic who chose the most culturally appropriate translation. The focus of the interpretation was on adapting the questionnaires to the culture not only a linguistic/verbal translation.

In essence, the culturally appropriate translation criteria in this study were, official Arabic was used instead of spoken Arabic, which differs between villages. Also, relevance applied where a conceptually equivalent translation of the word or phrase (instead of verbatim), that is, there was a consideration of a context-based translation. Also, there was the consideration of simplicity, clarity, and conciseness while consideration of cultural issues of gender and age and avoiding the use of terms that would offend the target population applied.

4.3.1. Demographic questionnaire

The demographic questionnaire included questions regarding the following personal details: age, gender, education, income, and religious definition. Additionally, there was the inclusion of demographic information of the child with DD: age, gender, type of treatment framework and date of diagnosis.

4.3.2. Stigma questionnaire – (Scale Stigma A – ASS) (Mak & Cheung, 2008)

A self-reporting questionnaire that evaluates internalized family stigma in families raising a child with intellectual/developmental/mental disabilities. Significantly, the questionnaire contains 19 statements on a Likert scale that range from 1–4, in which "1" indicates "does not describe me" and "4" indicates "describes me very well." All of the statements in the questionnaire appear in the same direction, and a high score indicates a high level of internalized stigma. The questionnaire examines subjects such as feelings of inferiority, discrimination, abuse, shame, social interaction and the attitudes of the family. Some examples of the statements: "I try to leave the house as little as possible with my child with a disability," "I feel sad because I have a child with a disability," "and I feel under great stress because I have a child with a disability." High internal reliability was found in the original study, $\alpha = 0.94$ (Mak & Cheung, 2008).

4.3.3. Parental self-efficacy questionnaire (PSOC – Johnston and Mash, 1978)

Essentially, this questionnaire measures parents' perception of their parenting sense of self-efficacy and satisfaction with the role of parent and consists of 17 items on a Likert scale that ranges from 6–1. The items refer to topics such as a sense of mastery as a good

and skilled parent, difficulties and successes with parental self-efficacy, motivation in the role of father, skills necessary to be a good father, and so on. For some of the items, a high score means high parental self-efficacy, and some of the items seem to appear in the opposite direction – a high score means low parenting self-efficacy. Some examples of the items: "Although being a parent can be rewarding, I am currently frustrated by my child's behavioral state" and "I go to sleep the same way I wake up, with a feeling that I haven't' gotten a lot done." Cutrona and Troutman (1986) found the reliability (Cronbach's alpha) of the questionnaire on re-tests to be 0.72.

4.3.4. Parental stress questionnaire (Emotional stress – Pearlin & Schooler, 1978)

Also, a self-report questionnaire was given that examines parents' sense of stress in three areas of functioning: marital, parental, and economic. Pearlin and Schooler (1978) developed the questionnaire. The questionnaire consists of 24 items on a Likert scale that range from 1–4 on a continuum that ranges from "not at all" (1) to "to a large extent" (4). The questionnaire was weighted using the average of each field, that is, the higher the score, the higher the level of stress reported. The structural validity of this research tool was tested using factor analysis, and an analysis of the relationship between parental stress and other stress in other roles, and between these types of stress and coping measures. Also, the translation of the questionnaire into Arabic was evident in the study of Ya'acob-Abud (2002), which presented high levels of reliability – $\alpha = 0.91$.

4.3.5. Somatization questionnaire: (Patient-health questionnaire 0 Phq-1)

Importantly, this was a self-reporting questionnaire that examines 15 somatic symptoms using a Likert scale that ranges from 0–2, with 0 indicating "does not intrude at all" and two indicating "very intrusive." The subjects were asked to indicate how much they have suffered in the past four weeks from symptoms such as dizziness, headache, shortness of breath and nausea. A high score on the questionnaire indicates a high prevalence of somatic symptoms among the subjects. The questionnaire was found to be valid and useful for screening and monitoring of somatization, showing high levels of reliability of 0.80 in the Kroenke, Spitzer, and Williams (2002) study.

4.4. Data analysis

Further, before data entry and analysis, basic tests were conducted on the questionnaires, such as making sure that they were filled out, rounding up numbers, and delimiting categories into ranges that allowed for the calculation of the data, basic averages, and filtering out unusual questionnaires. During the analysis of the research data, there was the use of the SPS program, and statistical models and tests, such as Pearson tests and regression analysis, were used to examine the mediation of path analysis linear regression (Tables 1 and 2).

Table 1
Demographic variables of fathers of children with a developmental disability ($N = 90$).

Variable	Value	Number	%	Mean	Standard deviation	Range
Fathers age				50.71	6.71	34–65
Fathers age when he married				25.22	2.47	19–35
Education	Primary	37	41.1			
	High	39	43.3			
	Tertiary	8	8.9			
	Academic		4.4			
	Another	2	2.2			
Employment	Employees	62	68.9			
	Self-employment	8	8.9			
	Unemployed	20	22.2			
Type of work	Temporary	26	35.6			
	Work	47	64.4			
Family status	Married	88	98.1			
	Widower	1	1.1			
Economic status	Below average	38	42.7			
	Average	50	56.2			
	Above average	1	1.1			
Health condition	Poor health	7	7.8			
	Moderate	52	57.8			
	Good	31	34.4			
Residential	Urban settlement	32	35.6			
	Rural settlement	58	64.4			
Number of persons living in home				6.29	1.44	3–12
Religious	Secular	52	57.8			
	Traditional	38	42.2			

Table 2
Demographic variables of adolescents with a developmental disability (N = 90).

Variable	Value	Number	%
Gender	Boys	63	70
	Girls	27	30
Age	9–12	31	34.4
	13–16	37	41.1
	17–23	22	24.4
Number of children with disability	1	80	89.9
	2	5	5.6
	3	4	4.5
Primary disability	Intellectual disability	86	95.5
	Autism	4	4.4
Diagnosed age*	0–12 months	45	50
	1–3 years	22	24.4
	3 years +	23	25.6
Assistance	independent	8	8.9
	Minimal assistance	22	24.4
	Moderate assistance	30	33.3
	Great assistance	30	33.3

* The information about the diagnose child's diagnosis based on parental report.

5. Findings

Table 3 shows that both positive and negative relationships were found. Significant positive relationships were found between all levels of stress (marital, parental, economic and general) and stigma among fathers of adolescents with developmental disabilities, in addition, positive relationships were found between all levels of stress (marital, parental, economic and general) and somatization among fathers of adolescents with developmental disabilities and stigma among fathers of adolescents with developmental disabilities. Significant negative relationships were found between stigma and parental self-efficacy, parental stress, economic stress, and general stress and parental self-efficacy.

5.1. Steps of regression analyses that examine the sense of stigma as a mediator between somatization and stress

Significantly the study involve performance of four regressions were. In the first regression model, the somatization variable (independent) was introduced and the dependent variable was general stress. Further, in the second regression model, the somatization variable (independent) was introduced and the dependent variable was stigma. In the third regression model the stigma variable (independent) was introduced and the dependent variable was general stress. In the fourth and final model, the somatization and stigma variables (independent) were introduced and the dependent variable was general stress. Hence, the results of these regressions, using the Enter method, are presented in Table 4.

Table 4 shows that the model was found to be significant [F (1, 88) = 42.942, $p < .001$, $R = .73$, $R^2 = .328$, R^2adj = .320]. A significant contribution to the somatization variable was found, and the explained variance was 32.8%. The second model was found to be significant [F (1.88) = 49.074, $p < .01$, $R = .598$, $R^2 = .358$, R^2adj = .351]. A significant contribution to the somatization variable was found, and the explained variance was 35.8%. The third model was also found to be significant [F (1, 88) = 55.852, $p < .001$, $R = .623$, $R^2 = .388$, R^2adj = .381]. A significant contribution to the stigma variable was found, and the explained variance was 38.8%. The fourth and final model was also found to be significant [F (2, 87) = 35.658, $p < .001$, $R = .671$, $R^2 = .505$, R^2adj = .388]. A significant contribution to the two independent variables: somatization and stigma was found, and the explained variance was 45%.

Conclusion: The relationship between somatization and general stress is partially mediated by a sense of stigma.

Table 3
Correlations between the measures in the entire sample.

	Marital stress	Parental stress	Economic stress	Overall stress	Stigma	Somatization	Self-efficacy
Marital stress	–	.662***	.470***	.815***	.434***	.425***	−.155
Parental stress		–	.729***	.922***	.588***	.575***	−.256*
Economic stress			–	.856***	.587***	.481***	−.325**
Overall stress				–	.623***	.573***	−.287**
Stigma					–	.598***	−.319**
Somatization						–	−.136
Self-efficacy							–

Table 4
Hierarchical linear regression to test for a sense of stigma as a mediator between somatization and stress.

Independent variable	Dependent variable sigma											
	B	SE B	β	B	SE B	β	B	SE B	β	B	SE B	β
Somatization	0.863	0.132	0.573***	0.821	0.117	0.598***				0.469	0.15	0.311
Sigma							0.685	0.092	0.623***	0.48	0.109	0.437
R^2		0.328			0.358			0.388			0.45	
F		42.942			49.074***			55.852***			35.658***	

**$p < .01$.
*** $p < .001$.

5.2. Steps of regression analyses that examine the sense of stigma as a mediator between parental competence and stress

Essentially, there was a performance of four regressions were. In the first regression model, the parental self-efficacy variable (independent) was introduced and the dependent variable was general stress. Additionally, in the second regression model, the parental self-efficacy variable (independent) was introduced and the dependent variable was stigma. On the other hand, in the third regression model the stigma variable (independent) was introduced and the dependent variable was general stress. In the fourth and final model, the parental self-efficacy and stigma variables (independent) were introduce, and the dependent variable was general stress. The results of these regressions, using the Enter method, are presented in Table 5.

Table 5 shows that the first model was found to be significant [$F(1, 88) = 7.874$, $p < .01$, $R = .287$, $R^2 = .082$, R^2adj = .072]. A significant contribution of the parental self-efficacy variable was found, and the explained variance was 8.2%. The second model was also found to be significant [$F(1, 88) = 9.953$, $p < .01$, $R = .319$, $R^2 = .102$, R^2adj = .091]. A significant contribution was parental self-efficacy, and the explained variance was 10.2%. The third model was also found to be significant [$F(1.88) = 55.852$, $p < .001$, $R = .623$, $R^2 = .388$, R^2adj = .381]. A significant contribution to the stigma variable was found, and the explained variance was 38.8%. The fourth model was also found to be significant [$F(2, 87) = 28.624$, $p < .001$, $R = .630$, $R^2 = .397$, R^2adj = .383]. A significant contribution was found from the Stigma variable, and the explained variance was 39.7%. The parental self-efficacy variable was not significant (*P*-value = 0.268).

Conclusion: Arguably, the relationship between parental competence and general stress is entirely the mediation of sense of stigma.

6. Discussion

Essentially, this is the first study of its kind in its examination of the relationship and influence of the variables of stigma, somatization, and parental self-efficacy to the stress experienced by Bedouin fathers of adolescents with DD. Further, this study was from self-reports of fathers, thus renewing and providing additional exciting angles to the field of research examining the involvement of fathers raising adolescents with DD. Specifically, this current study is unique in that it focuses on the Bedouin community in the north of the country and a challenging age group while addressing the gender index that focuses on the fathers as central figures in the wide circle in which families raise adolescents with DD. The findings of the study pointed to similarities and differences in the intensity of the relationships between the independent variables, stigma, somatization and parental self-efficacy, and the dependent variable, stress.

Significantly, the relationship between parental competence and stress involves an indication of a negative correlation between general anxiety and parental self-efficacy. This negative correlation also appeared in the regression analysis, and it was found that beyond the level of stigma experienced by fathers, the contribution of the general stress variable in predicting the sense of self-efficacy was significant. Indeed, it was argued above that a sense of parental self-efficacy is indicative of high-quality performance (Hilton & Kopera-Frye, 2006) and that the parental stress component reflects, for example, an experience of frustration in one's performance, mental exhaustion, concern, and insecurity. High levels of these types of experiences can lead to a sense of low parental

Table 5
Hierarchical linear regression to test for a sense of stigma as a mediator between parental self-efficacy and stress.

Independent variable	First model Dependent variable stress			Second model Dependent variable sigma			Model third Dependent variable stress			Fourth model Dependent variable stress		
	B	SE B	B	B	SE B	B	B	SE B	β	B	SE B	B
Parental self-efficacy	−0.377	0.134	−0.287	−0.381	0.121	−0.319				−0.129	0.115	−0.098
Sigma							0.685	0.092	0.623	0.651	0.097	0.592
R^2		0.082			0.102			0.388			0.397	
F		7.874			9.953			55.852			28.624	

**$p < .01$, ***$p < .001$.

self-efficacy. It is notable that the experiences of stress, anxiety, and exhaustion may indicate relatively low levels of coping resources among fathers with their child's disability.

Also, the findings show that parental stress and economic stress were found to be strongly negatively related to fathers' sense of parental self-efficacy. This negative relationship may also result from the disruption to the way of life and from the economic distress that affects the ability to function efficiently and adequately as a parent. Further, Raikes and Thompson (2005) support these findings where these researchers note that living with economic distress affects parenting behaviors. For example, the characteristics of these parents include more rigidity and inconsistency in their responses. Additionally, these researchers argue that families living under these conditions are characterized by a high degree of economic stress, resulting in fairly negative interactions among family members and negative consequences in raising children, all of which may undermine fathers' belief in their ability to cope adequately with the challenges of their child's disability. Particularly, this conclusion may be relevant to the Bedouin community, in which fathers are the primary breadwinners in the family, and therefore, high levels of economic stress may have a significant effect on their functioning. Also, the relationship between marital stress and parental self-efficacy was not found to be significant. This finding is illustratable by the patriarchal family structure that characterizes the Bedouin community in Israel. Tsedek (2015) noted that in a patriarchal family structure, in which men are the decision-makers and policymakers in the lives of the women and the children, men are considered to be the dominant figures, and therefore, they are responsible for the entire family, economically and socially. In such a community, men's ability to function in the household and make decisions depends little on the quality of their relationships with their partners. Moreover, the status of men within the family produces relatively high levels of submissiveness on the part of the women, and therefore, the likelihood that marital conflict will arise from the woman disagreeing with her husband is quite low.

Significantly, in the relationship between parental self-efficacy and stigma, this study found a significant negative correlation between stigma and parental self-efficacy. This finding can is illustratable from the Neely-Barnes and Dia (2008) study, which found that the cultural context may produce different levels of social stigma associated with the disability. Thus, along with the sense of stigma, these researchers found that families with a child with DD tended to experience discrimination, limited educational opportunities, and low social support. These experiences may result in low availability of social resources and a low level of social support, which are essential for parents as coping resources. Werner and Shulman (2015) note that in a situation in which the disability is negatively perceived by the social environment as well as by the family members themselves, feelings of shame and loneliness may develop. The emotional experiences of guilt and loneliness may impair fathers' willingness to reveal their child's disability to different therapeutic factors and therefore harm parents' sense of self-efficacy in coping with the disability.

Further, on Stress and Stigma, the findings of this study revealed a significant positive relationship between stigma and stress for all its components (marital stress, parental stress, and economic stress) among fathers. Al-Krenawi and Slonim (2009) found that Bedouin parents of children with DD reported that they wanted to avoid exposing their child with disabilities to their social environment so that the child and entire family do not become stigmatized. Also, the parents reported that they tended to avoid looking for frameworks outside the family that might help them cope with the care of the child because of the stigma that might be attached to them. Werner and Shulman (2015)'s study also suggests a positive relationship between stigma and stress among parents of children with DD. Also, family members of people with disabilities report more feelings of shame, embarrassment, and distress and even feel marginalized by society (Ali et al., 2012). Therefore, fathers feel that the burden on them becomes heavier since the sense of stigma affects the level of stress more frequently. Additional research findings support the findings of the current study (Samuel, Rillotta, & Brown, 2012).

Arguably, on Stress and somatization, the findings of this study revealed a significant positive relationship between stress and somatization. This finding is illustratable by the fact that raising an adolescent with a disability requires physical and mental effort, which creates a burden on parental functioning (Tomasello, Manning, & Dulums, 2010). The weight on the fathers causes marital stress, parental stress, and economic stress. These persistent stresses may lead to a deterioration in the parents' sense of mental well-being (Singer, 2006). The findings of other studies have validated the positive relationship between stress and somatization; for example, studies by Beresford, Rabiee, and Sloper (2007) and Ha, Hong, Seltzer, and Greenberg (2008). Peer and Hillman (2014) emphasize that parenting children with disabilities is a source of significant stress and at a higher intensity than parenting typically developed children.

Further, a recent study of Bedouin fathers in southern Israel, which examined the relationship between stress and somatization, also found a significant positive correlation between stress and somatization (Kabat, 2018). Kabat found that raising a child with a developmental disability in a traditional and collectivist society, such as the Bedouin society, causes an increase of all types of stress (marital, parental and economic) in fathers, and these stresses may negatively affect the father's health, which becomes evident through somatic symptoms.

Additionally, the examination of the relationship between the sense of stigma and somatization among the fathers showed a positive and significant correlation between the two variables. Further, Somatization is more common among people from lower social strata (Neeleman et al., 2001). This characteristic exists in the Bedouin community, which includes difficult socio-economic conditions, such as the absence of any permanent economic-employment infrastructure, low income, and high unemployment rates (Litvak, 2002). Somatization can result from factors related to the family environment and socio-economic conditions, which increase the tendency for somatization. Also, there are familial and cultural factors that may explain this relationship; for example, unlike in Western societies, Arab societies perceive disabilities more negatively (Al Thani, 2006; Gharaibeh, 2009; Haboush, 2007; Nagata, 2007). In other words, society's attitude toward a person with disabilities is primarily a result of cultural beliefs, negative attitudes, and stereotypes (Karni et al., 2011), which may cause an increase in the sense of stigma and somatic expressions for the fathers.

6.1. Limitations of the study and recommendations for further research

Notably, this study had several limitations. First, the findings were from fathers' self-reports, with no additional perspectives by people who came into contact with adolescents with developmental disabilities, such as other family members and professionals.

Secondly, the focus of this study, on some research variables (stigma, somatization, stress, and parental self-efficacy), ignored other key measures that may shed light on the coping of fathers with children with DD, such as depression, self-esteem, faith, optimism, and happiness. Also, the fathers in this study were fathers of adolescents, which may be significant, for example, in terms of the experience of social stigma associated with their child's disability along the developmental continuum. Also, the current study included only fathers from families in which the parents live together in marriage, with no reference to fathers from single-parent families, divorced fathers or widowers. Finally, the study was reliant on a small sample in light of this, studies with a larger sample would enable a broader generalization of the findings of this study.

Despite the limitations of this study, it constitutes an initial exposure to the world of parents of adolescents with DD in the Bedouin community, and its findings indicate the importance of the subject and the need for further studies. Explicitly, the results and limitations of this study suggest that it is recommended to conduct longitudinal studies with heterogeneous samples. Significantly, these samples will include fathers of younger and older children concerning central and significant figures who come in direct contact with the fathers, for example, professionals, and an examination of the research variables of parents of children with other DD, such as autism and physical disabilities. Because of the use of self-report questionnaires, it is also important that future studies deepen our understanding of the relationships between the variables of the current study, for example, through interviews and observations.

6.2. Implications and conclusions

Arguably, this study has practical implications that need addressing. Given the impact of the experiences of stigma and stress on paternal self-efficacy, as well as the positive relationships among stigma, stress, and somatization, it is recommendable that there should be the development of tailored intervention programs based on cognitive-behavioral foundations. In addition, the purpose of these programs would be to assist fathers of adolescents with DD in the Bedouin community in reducing their sense of stigma, stress, and somatization and increasing their competence in coping with raising a child with DD.

Also, the other recommendation relates to the promotion of workshops and professional forums as part of psycho-educational intervention programs that may increase the parents' sense of awareness and provide them with sources of information that would help them to cope with their child's disability at various stages. Also, working with the parent to identify personal, environmental and community-based sources for support may strengthen the parents' sense of self-efficacy and their perception of having internal and external coping resources that can help them cope with stress, prejudice and somatic symptoms.

Conflict of interest

The authors declare that they have no conflict of interest.

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