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Family quality of life of caregivers of individuals with autism, with other disabilities, and without disabilities: the case of Saudi Arabia

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ABSTRACT

This comprehensive study delves into the family quality of life (FQOL) of caregivers in Saudi Arabia, focusing on those caring for individuals with autism, intellectual disabilities, and other disabilities and those without any disabilities. Employing the Arabic version of the Beach Center FQOL Scale, the research encompasses a diverse group of 1065 family members. It reveals that caregivers of individuals without disabilities experience notably higher FQOL, especially in domains such as family interaction, parenting, emotional, and physical/material well-being. The study also identifies unique FQOL challenges encountered by caregivers of individuals with autism. These insights underscore the necessity for specific support mechanisms catering to the distinct needs of caregivers, particularly those handling autism-related challenges, highlighting a critical area for targeted interventions and policy formulation.

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Background

The World Health Organization defines quality of life (QOL) as the self-perception of one's position in life according to goals, expectations, standards, and concerns (World Health Organization 2022, p. 1). In recent years, the study of QOL among individuals with disabilities has evolved from measuring their personal well-being to viewing it as a family structure related to disability issues and aspects of their needs (Brown, Schalock, and Brown 2009). There has thus been a shift in the perspective of those interested in providing services to individuals with disabilities from paying attention only to the needs of individuals with disabilities to a broader and more comprehensive approach that includes the families of these individuals. The family QOL (FQOL) approach relates to individuals and their environments with particular focus on the well-being and QOL of their families (Boelsma et al. 2017; Vanderkerken et al. 2019). In this context, studies attempting to understand the general condition of families of individuals with disabilities have received increased attention.

The disability of a family member affects the QOL of the entire family (Forde et al. 2004), owing to the parents' preoccupation with caring for this individual for long periods, inability to conduct their daily lives, and resorting to isolation from society (Ahmadizadeh et al. 2015; Çolak and Kahriman 2021; Leung and Li-Tsang 2003). Families of individuals with disabilities, such as autism and intellectual disability (ID), have consistently reported lower QOL than families of individuals without disabilities (Dizdarevic et al. 2022; Emerson et al. 2006; Misura and Memisevic 2017; Oelofsen and Richardson 2006). These findings have been consistent across many countries, such as Croatia (Misura and Memisevic 2017), Bosnia Herzegovina (Dizdarevic et al. 2022), the United Kingdom (Emerson et al. 2006; Oelofsen and Richardson 2006), and Turkey (Meral et al. 2013). Moreover, studies have shown that psychological variables, such as stress and depression, have a negative effect on FQOL (Baker-Ericzén, Brookman-Frazee, and Stahmer 2005; Emerson 2003; Langley, Totsika, and Hastings 2020; Masefield et al. 2020; Olsson and Hwang 2001; Plant and Sanders 2007; Singer 2006). In their scoping review, Davy et al. (2022) summarize that caregivers (especially mothers) of children with autism are significantly less likely to participate in social activities, leisure, and work life, and this

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affected their QOL. Notably, most studies included in this review were conducted in English-speaking countries. Therefore, little is known about other countries, such as Arabic-speaking countries. Studies in the Kingdom Saudi Arabia (KSA) have found that the type of disability was influential in caregivers' QOL. Parents of children with autism have the lowest level of QOL compared to children without disabilities and with other disabilities such as ID, physical disabilities, and learning difficulties (Al Awaji et al. 2021; Alenazi, Hammad, and Mohamed 2020; Al-Jabri et al. 2022; Haimour and Abu-Hawwash 2012).

Families of individuals with disabilities require more support than families without such individuals because they may have a lower QOL (Broek et al. 2017; Dizdarevic et al. 2022; Emerson et al. 2006; Misura and Memisevic 2017; Vonneilich, Lüdecke, and Kofahl 2016). Attention to the family's perspective in providing services can also be seen as indirect support for individuals with disabilities (Davis and Gavidia-Payne 2009), as individuals with disabilities receive more support from their families (Neely-Barnes and Dia 2008). Providing support can help meet the needs of individuals with developmental disabilities and their families (Davis and Gavidia-Payne 2009; Schmidt, Schmidt, and Brown 2017), and family support positively influences FQOL (Nwafor et al. 2022). To provide appropriate care and support to families of individuals with developmental disabilities according to their needs, it is important to study the QOL of these families from their perspective as a preliminary step to identifying aspects of need and understanding which domains of QOL are most affected by the disability of a family member in order.

Zuna, Turnbull, and Summers (2009) emphasize that services have a significant impact on FQOL. In the KSA, services are provided to families of individuals with disabilities and their children through many ministries, non-profit organizations, and associations (Hatemesh, Khairiya, and Engy 2020). Families of individuals with disabilities benefit from a comprehensive range of services offered by various government ministries, non-profit organizations, and associations. These encompass educational, medical, rehabilitative, and financial support. Specifically, the Ministry of Education provides tailored programs within mainstream schools for students with mild to moderate disabilities and establishes separate special education schools for those requiring more intensive support, all at no cost. The Ministries of Health and Human Resources and Social Development facilitate access to medical care, physical therapy, occupational therapy, speech therapy, and other rehabilitative services. These are substantially subsidized to alleviate financial pressure on families. Additionally, the Saudi government grants financial aid to these families, including monthly allowances dependent on the disability's nature and severity, and subsidies for necessary medications, equipment, and accessibility modifications.

Despite Saudi Arabia's status as a high-income nation, the quality of life and experiences of families are influenced by more than economic resources. Stigma associated with disabilities, a global issue, affects family dynamics and social participation. Continuous efforts are underway to enhance awareness and foster inclusivity, yet stigma persists as a hurdle to achieving an optimal quality of life for some families. Predominantly, children with disabilities attend specialized education schools designed to meet their unique requirements. However, a shifting paradigm towards inclusivity is observed, with increasing initiatives promoting the integration of students with disabilities into mainstream educational settings. The provision of services, ranging from governmental to private centers, is aimed at caring for and developing the competencies of children with disabilities (Ministry of Labor and Social Development in KSA 2023). In addition, a variety of health, psychological, and social services are available to individuals with disabilities and their families (Hatemesh, Khairiya, and Engy 2020), often free or supported financially by government assistance. This assistance is intended to enhance the family's financial situation and cover the expenses needed for their child's care (Alwhaibi et al. 2020). The significant impact of such services on family quality of life (FQOL) underscores the importance of understanding the needs of these families as a foundational step towards service development (Al-Masoud and Alqahtani 2023; Hewitt et al. 2013; Zuna, Turnbull, and Summers 2009).

The present study

There is a growing interest in enhancing the role of the family as the primary caregivers to support children with disabilities (Brown, Schalock, and Brown 2009). Families who have a member with a disability are considered an integral part of societies, and, to allow them to remain as a basic unit of society, it is necessary to determine their satisfaction with their QOL (Zuna et al. 2011). Assessing FQOL helps practitioners know the domains in which families were least satisfied to find solutions to overcome these

challenges (Zuna, Turnbull, and Summers 2009) in addition to meeting needs in appropriate ways that are more positive in improving family life conditions (Brown, Schalock, and Brown 2009). Therefore, it is important to understand the level of satisfaction with QOL of families of individuals with disabilities to improve practices and develop policies related to families (Zuna, Turnbull, and Summers 2009).

Most research on FQOL in Arabic-speaking countries has been conducted with mothers, fathers, or parents (e.g. Alenazi, Hammad, and Mohamed 2020; Haimour and Abu-Hawwash 2012; Al Awaji et al. 2021). No study has included a large sample of mothers, fathers, and other caregivers (e.g. siblings). Therefore, this study examined the variation in the level of satisfaction with FQOL among families of individuals with autism, ID, and other disabilities and families without individuals with disabilities in Saudi Arabia.

Drawing on previous research, we hypothesized that caregivers of individuals without disabilities will perceive higher levels of FQOL than caregivers of individuals with disabilities (Dizdarevic et al. 2022; Emerson et al. 2006; Misura and Memisevic 2017; Oelofsen and Richardson 2006). Additionally, we expect caregivers of individuals with autism to express lower levels of FQOL than caregivers of individuals with ID and other disabilities (Al-Jabri et al. 2022; Brown et al. 2006; Haimour and Abu-Hawwash 2012; Meral et al. 2013; Schmidt, Schmidt, and Brown 2017).

Material and method

Participants

This study included caregivers of individuals with disabilities, referring to those family members responsible for providing care and support to the member with a disability. A total of 1,065 caregivers (521 men, 518 women) and (26 not disclosed) participated in this study. Most were mothers ($n = 448$); 187 fathers, 70 sisters, and 62 brothers (with and without disabilities) participated in the survey. Seventy-eight caregivers were in another relationship with the individual (e.g. aunt, uncle, grandparents), and 220 did not disclose their relationship with the individual with disabilities. In total, 21% ($n = 221$) of participants were caregivers for individuals without disabilities; 22% ($n = 232$) for individuals with autism; 33% ($n = 353$) for individuals with ID; and 24% ($n = 259$) for individuals with other disabilities, including hearing or visual impairment, physical disabilities, learning difficulties, or multiple disabilities.

Data collection

Approval to conduct the study was obtained from the Institutional Review Board at Prince Sattam bin Abdulaziz University. Data were collected from all regions of Saudi Arabia by distributing the study tool to a wide range of schools and centers that provide services for individuals with disabilities. They were reached through the educational map of special education institutes and programs provided by The Electronic Portal of the General Administration of Special Education (2022), which shows the names and locations of those schools and centers in all regions of Saudi Arabia. An employee in each of the schools and centers was contacted by phone, and the survey was sent electronically to be distributed to the beneficiary families of individuals with disabilities. The purpose of the survey and its target group were explained, emphasizing that participation in the survey was voluntary and start completing the survey after agreeing to participate in the study.

Instrument

The Beach Center FQOL (BCFQOL) scale developed by the Beach Center on Disability (2005) was used to assess caregivers' perceptions of FQOL in the life domains. The BCFQOL is a common scale used to measure family satisfaction with their QOL and has been used with many samples from different countries, such as the US (Hoffman et al. 2006), China (Hu, Wang, and Fei 2012), Turkey (Meral 2013), Greece (Parpa et al. 2016), Spain (Balcells-Balcells et al. 2011; Park et al. 2003; Verdugo, Córdoba, and Gómez 2005), South Africa (Schlebusch, Dada, and Samuels 2017), and Singapore (Waschl et al. 2019). According to Alnahdi et al. (2022), it is one of the most frequently used scales to assess FQOL worldwide.

The BCFQOL comprises 25 items and 5 FQOL subscales: (1) family interaction (6 items; e.g. 'My family members talk openly with each other'), (2) parenting (6 items; e.g. 'Family members help the children learn to be independent'), (3) emotional well-being (4 items; e.g. 'My family members have some time to pursue their own interests'), (4) physical or material well-being (5 items; e.g. 'My family gets medical care when needed'), and (5) disability-related support (4 items; e.g. 'My family has a good

relationship with service providers who work with our family member with a disability') (Hoffman et al. 2006). The BCFQOL uses a five-point Likert scale to express satisfaction with an item (1 = not very satisfied and 5 = very satisfied). In this study, the Arabic version (Alnahdi, Schwab, and Elhadi 2021) was used, and the Cronbach's alpha coefficients ranged from 0.854 to 0.946 for all subscales. Caregivers of individuals without disabilities rated only the first four scales, as the fifth subscale (disability-related support) was not applicable.

Results

Table 1 shows the descriptive statistics (means and standard deviations) of the caregivers of individuals with autism, ID, and other disabilities and those without disabilities for all subscales. In general, all means were above the theoretical mean of the scale (min = 1, max = 5, $M = 3$), indicating a rather positive perception of the FQOL of all caregivers. Overall, family interaction was rated most positively by all subgroups, while emotional well-being was rated the lowest (except for caregivers of an individual with ID, wherein disability-related support was rated marginally lower).

To investigate whether the descriptive differences reached significance (at the 5% level), a univariate analysis of variance (ANOVA) was conducted for each subscale. FQOL was used as the dependent variable, and group (caregivers of an individual with ID, autism, other disabilities, or no disability) was used as the independent variable. Furthermore, post-hoc tests according to least significant difference were used if a significant main effect appeared. The ANOVA revealed four significant main effects (family interaction, parenting, emotional well-being, and physical or material well-being) of the five subscales (see Table 1).

According to the results of the post-hoc tests (see Table 1), caregivers of individuals with no disability scored significantly higher on all four subscales (family interaction, parenting, emotional well-being, and physical or material well-being) than caregivers of individuals with disabilities (ID, autism, or other disabilities; $p < 0.01$).

In addition, caregivers of individuals with ID were less satisfied than caregivers of individuals with autism ($p < 0.05$) or other disabilities ($p < 0.01$). Caregivers of individuals with autism perceived their physical or material well-being to be lower than families with individuals with other disabilities ($p < 0.05$).

In addition, we compared the mean scores on the different subscales for mothers, fathers, and other caregivers of individuals with disabilities, using a t-test and post-hoc analyses with the least significant difference method to determine if there were significant mean differences based on participant relationship to the individual with a disability (see Appendix 1). The main findings in these results revealed that fathers reported less satisfaction with their FQOL than mothers in three out of five subscales (family interaction, parenting, and disability-related support). This pattern might suggest a differential perception of FQOL among caregivers, highlighting the importance of tailoring support and interventions to address the unique challenges and perspectives within these caregiver roles.

Discussion

Families are supportive elements for individual members and play an active role in positively influencing them. Having a person with a disability in the family may place more responsibility and burden on all the family members (Ghazawy et al. 2020). Studying the QOL of families of persons with disabilities is important to meet their needs and help them secure a

Table 1. FQOL means (M), standard deviations (SD), and ANOVA results and post-hoc tests.

Independent variable		ID	Autism	Other Disability	No Disability	Tests of Between-Subjects Effects	Post-Hoc Tests◆
Family interaction	M (SD)	3.82 (1.15)	3.94 (.98)	4.15 (.88)	4.66 (.48)	F3.91 = 37.52**	(1 vs. 3)**, (1 vs. 4)**, (2 vs. 3)*, (2 vs. 4)**, (3 vs. 4)**
Parenting	M (SD)	3.68 (1.14)	3.86 (.95)	4.05 (.85)	4.59 (.48)	F3.90 = 43.96**	(1 vs. 2)*, (1 vs. 3)**, (1vs.4)**, (2 vs. 4)**, (3 vs. 4)**
Emotional well-being	M (SD)	3.48 (1.08)	3.42 (.96)	3.60 (.98)	3.98 (.81)	F3.90 = 14.57**	(1 vs. 4)**, (2 vs. 4)**, (3 vs. 4)**
Physical or material well-being	M (SD)	3.80 (.98)	3.66 (.89)	3.84 (.93)	4.52 (.57)	F3.90 = 41.97**	(1 vs. 4)**, (2 vs. 3)*, (2 vs. 4)**, (3 vs. 4)**
Disability-related support	M (SD)	3.47 (1.16)	3.63 (1.02)	3.63 (1.04)		F3.68 = 1.391	

◆= Only significant comparisons are included.
** = $p < 0.01$.
*= $p < 0.05$, Group 1= ID, Group 2= Autism, Group 3= Other Disability, Group 4= No Disability.

healthy and stable life (Vilaseca et al. 2017). Therefore, this study sought to examine the FQOL of caregivers of individuals with autism, ID, or another disability in contrast with caregivers of individuals without disabilities.

Overall, caregivers of all individuals demonstrated high satisfaction on all FQOL subscales. Caregivers of individuals without disabilities perceived their family interaction, parenting, and emotional well-being as well as their physical or material well-being more positively than caregivers of individuals with autism, ID, or other disabilities. This aligns with the previous literature. Lee et al. (2009) showed that families of individuals without disabilities had higher levels of healthy QOL than those with individuals with autism. The presence of a disability in a family member emerges as a significant factor influencing caregivers' perceptions of FQOL. Families with individuals with disabilities face greater stress than those without an individual with a disability, and these stresses could increase depending on the severity of the disability (Falk, Norris, and Quinn 2014; Park and Lee 2022). This is consistent with the well-established understanding that increased caregiving demands associated with disability can negatively impact FQOL. Overall, this finding supports the idea that caregivers of individuals with disabilities might have a lower QOL than those of individuals without disabilities. However, our study revealed an exception in the 'parenting' domain, particularly among families with intellectual disabilities (ID) and autism, suggesting variations that might arise from the methodological focus on specific domains rather than the overall FQOL score, as recommended by Alnahdi (2022) and contrasting with the broader assessment approach of Meral et al. (2013). Additionally, the lack of a 'parenting' domain in other studies, such as those by Al-Jabri et al. (2022) and Schmidt, Schmidt, and Brown (2017), may lead to underreporting or varied interpretations of satisfaction levels. Future research should employ consistent methodologies across studies to accurately understand the impact of different disabilities on family dynamics and FQOL.Family interaction was rated more positively than the other subscales by all caregivers. Caregivers of individuals with autism and ID reported no significant differences in the family interaction subdomain in several countries, such as Turkey (Meral et al. 2013), Spain (Balcells-Balcells et al. 2011), Australia, Taiwan, Canada, and South Korea (Brown et al. 2010). Family interactions are important for living in a cohesive environment and forming bonds of cooperation among individuals in the same family to overcome difficulties and solve problems together (Jenaro et al. 2020). Families in Saudi Arabia live with strong ties, and it is common for families to assume responsibility for care for sick and elderly individuals and those with disabilities (Asiri et al. 2023; Alhammadi 2000). This is achieved as a result of the recognition of family obligations and living in harmony among all family members (Asiri et al. 2023).

In contrast, emotional well-being was rated the lowest among caregivers, mirroring findings by Borilli et al. (2022), who reported lower emotional well-being scores compared to family interaction ratings. This aligns with the established need for social support, as highlighted by George et al. (2020), who found that caregivers value empathy and encouragement from their social circles. Conversely, Alyafei et al. (2021) demonstrated that a lack of support from others negatively impacts a caregiver's emotional well-being. These findings suggest a potential link between social support and emotional well-being in caregiving populations.

The results of the current study revealed different patterns of FQOL for caregivers of individuals with autism compared to those with ID or other disabilities for family interaction, parenting, and physical or material well-being. Specifically, caregivers of individuals with autism and ID rated their family interactions as less satisfying than caregivers of individuals with other disabilities. The difference between caregivers of individuals with ID and those with autism was too small and, therefore, did not reach significance. Regarding parenting, the satisfaction level was lower for caregivers of individuals with ID than for those with autism or other disabilities. Caregivers of individuals with ID experience high levels of mental pressure and stress, which limits their ability to provide care to family members (Bahador et al. 2023; Griffith and Hastings 2014; Ó Donnchadha 2018).

Interestingly, caregivers of individuals with autism rated their perceived satisfaction according to physical or material well-being as lower than caregivers of those with other disabilities. Therefore, it can be asked why having a family member with autism decreases physical or material well-being, while support measures and emotional well-being are experienced similarly. This contrasts somewhat with the results of Losada-Puente, Baña, and Asorey (2022), who found lower FQOL scores for families of individuals with autism spectrum disorders for all domains, including general resources and support for the person. Caring for individuals with autism may be a

source of additional challenges for caregivers in terms of reducing their working hours, increasing economic costs (Buescher et al. 2014; Cidav, Marcus, and Mandell 2012), job loss, financial stress, medical care requirements, and other health problems (Lee et al. 2008; Johnson et al. 2011; Jones, Bremer, and Lloyd 2017).

One explanation for these results might be by acknowledging that, although Saudi Arabia has made progress in providing services to individuals with disabilities, including autism, these services are still in the nascent stages of development relative to the identified needs. This gap notably impacts the availability and accessibility of specialized resources and support tailored specifically to the unique needs of individuals with autism and their families. Nevertheless, there is optimism for the future, as ongoing efforts and initiatives are poised to enhance the support framework for these families further. Recognizing these specific challenges is a critical step towards developing targeted interventions and policies aimed at improving the well-being of caregivers and their families overall. As Saudi Arabia continues to improve its services and support for individuals with disabilities, it is expected that these efforts will result in substantial improvements in the quality of life for families of individuals with autism, in line with the broader vision of fostering a more inclusive and supportive society.

This study underscores the multifaceted needs of caregivers, particularly in maintaining their physical health and managing their educational and professional commitments, as highlighted by Brown et al. (2010). These findings point to the critical necessity of implementing support systems that not only address the immediate caregiving challenges but also help caregivers balance their personal and professional lives. A notable disparity in the FQOL was observed between caregivers of individuals with disabilities and those without, underscoring a significant area for intervention. This disparity calls for targeted actions aimed at bridging this gap, suggesting the need for policies and programs that are specifically designed to enhance the overall well-being of caregivers of individuals with disabilities. Such initiatives are imperative in improving their quality of life and enabling them to fulfill both their caregiving and personal responsibilities effectively.

Overall, the findings of this study suggest potential implications worth further consideration. They prompt curiosity about the nuanced differences in physical/material well-being among caregivers of individuals with autism despite sharing similar support structures and emotional well-being experiences. Encouraging family involvement in discussions and decisions related to disability might help in recognizing and addressing their unique needs more effectively. These findings also hint at the potential benefits of assessing each family's distinct needs to tailor support and services more accurately. Expanding support services for these families to encompass a wider variety of assistance, such as childcare, counseling, and psychological support, may lighten the caregiving load and foster emotional resilience. Moreover, fostering collaborations among government bodies, non-profits, and the private sector could be key to optimizing resource allocation and enhancing care and support. These steps could potentially improve the quality of life for families with members with disabilities in Saudi Arabia, suggesting a direction for future efforts to better support these families.

The current study found that fathers expressed lower satisfaction with FQOL compared to mothers and other caregivers. This could be explained that fathers of children with disabilities might experience unique and potentially greater stress than other family members (Bourke-Taylor et al. 2022; Darling, Senatore, and Strachan 2012). Research has highlighted that fathers often face pressure to maintain their careers while balancing the responsibilities of providing appropriate care for their child (Sellmaier 2019; Warfield 2005). Sometimes, this pressure is related to increasing financial burdens (Goldstein-Gidoni 2020; Wright, Crettenden, and Skinner 2016), as well as other psychological challenges (Oelofsen and Richardson 2006; Langley, Totsika, and Hastings 2020). The observed differences in FQOL satisfaction among fathers, mothers, and other caregivers underscore the need for more targeted research. It is important to explore why certain family members would report lower satisfaction in some areas. Future research could identify the unique challenges and needs of different caregiver roles and develop interventions to enhance family dynamics and support mechanisms. Such focused efforts are essential to improve support across all caregiver groups, ultimately elevating the FQOL in families with disabilities.

The study's results offer valuable insights into the lived experiences of Saudi families caring for individuals with disabilities, shedding light on the specific areas where policy and practice need to evolve to better support these families. It underscores the importance of a culturally sensitive, needs-based approach to service provision that recognizes the diverse challenges faced by caregivers across different disability

categories. Strengthening the support ecosystem for these families in Saudi Arabia not only aligns with the principles of inclusivity and equity but also contributes to the overall well-being and stability of the broader community. Further research is needed to explore the culturally specific needs and experiences of Saudi families caring for individuals with disabilities. Understanding the unique cultural, social, and economic factors that influence caregiving in the Saudi context can inform the development of more effective policies and programs.

Limitations

Some limitations must be considered as they might affect the findings and interpretations of the study. For instance, similar to other studies (e.g. Fong et al. 2022; see also Davy et al. 2022), the sample of caregivers included more mothers than other caregivers. Therefore, the views of other caregivers, such as siblings and uncles, regarding their participation were underrepresented in this study. However, mothers are most often involved in caregiving within families, so this limitation may be representative of the population. Future studies should investigate whether there are different patterns of FQOL depending on the caregiver's role.

Another significant limitation of this study is that the Beach FQOL scale does not address aspects such as acceptance and support at the macro level (e.g. Alnahdi et al. 2022; Fong et al. 2022). Furthermore, some aspects that might be specifically important culturally for the FQOL of individuals from Arabic countries might not be included in the Beach FQOL; therefore, the FQOL might be over- or underestimated. An additional limitation of this study is that 220 participants did not disclose their relationship with individuals with disabilities. This lack of information makes it impossible to determine whether any of these participants were caregivers or not.

Conclusions

The results of the current study revealed that disability plays a significant role in caregivers' perceptions of FQOL. The FQOL of caregivers of individuals with autism and ID was lower than that of other caregivers (e.g. of individuals without disability). Furthermore, different patterns of FQOL were observed, especially for caregivers of individuals with autism compared to those of individuals with ID. The study highlights that, despite the efforts of and services provided by the Saudi government to families of individuals with disabilities, there is still challenges affecting the FQOL of caregivers of individuals with disabilities. More support, especially regarding emotional well-being, can help families of individuals with autism or ID deal with certain challenges. It is important to initiate a range of supportive programs to improve families' QOL, including awareness-raising programs on disabilities and how to deal with stress, parenting, and access to services. It is recommended that further research be conducted into whether differences in QOL exist between caregivers depending on their relationship with the individual with disability. Additional research is recommended focusing on the variables that can predict not only the QOL of families with individuals with disabilities but also their coping strategies (e.g. Fong et al. 2022) in the Arab region.

Disclosure statement

No potential conflict of interest was reported by the authors.

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Data availability statement

Data from this research study are not available for sharing due to ethical approval requirements.

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Appendix 1.

Post Hoc Tests

Multiple Comparisons

LSD

Dependent Variable	(I) مختصر القرابه	(J) مختصر القرابه	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Family interaction	Father	Mother	-.26249*	.09995	.009	-.4587	-.0662
		others	-.17839	.11184	.111	-.3980	.0412
	Mother	Father	.26249*	.09995	.009	.0662	.4587
		others	.08410	.09308	.367	-.0987	.2669
	others	Father	.17839	.11184	.111	-.0412	.3980
		Mother	-.08410	.09308	.367	-.2669	.0987
Parenting	Father	Mother	-.29933*	.09829	.002	-.4923	-.1064
		others	-.20781	.10943	.058	-.4227	.0070
	Mother	Father	.29933*	.09829	.002	.1064	.4923
		others	.09152	.09160	.318	-.0883	.2714
	others	Father	.20781	.10943	.058	-.0070	.4227
		Mother	-.09152	.09160	.318	-.2714	.0883
Emotional well-being	Father	Mother	-.17605	.09897	.076	-.3704	.0183
		others	-.25165*	.10994	.022	-.4675	-.0358
	Mother	Father	.17605	.09897	.076	-.0183	.3704
		others	-.07560	.09206	.412	-.2564	.1052
	others	Father	.25165*	.10994	.022	.0358	.4675
		Mother	.07560	.09206	.412	-.1052	.2564
Physical/ Material well-being	Father	Mother	-.10545	.09128	.248	-.2847	.0738
		others	-.34105*	.10140	.001	-.5401	-.1420
	Mother	Father	.10545	.09128	.248	-.0738	.2847
		others	-.23560*	.08491	.006	-.4023	-.0689
	others	Father	.34105*	.10140	.001	.1420	.5401
		Mother	.23560*	.08491	.006	.0689	.4023
Disability-Related Support	Father	Mother	-.42546*	.10483	.000	-.6313	-.2196
		others	-.22824	.11647	.050	-.4569	.0005
	Mother	Father	.42546*	.10483	.000	.2196	.6313
		others	.19722*	.09769	.044	.0054	.3890
	others	Father	.22824	.11647	.050	-.0005	.4569
		Mother	-.19722*	.09769	.044	-.3890	-.0054

*. The mean difference is significant at the 0.05 level.