religions

MDPI

Article

Psychosocial Stress Among Siblings of Individuals with Disabilities: The Interplay of Religiosity, Gender, and Cultural Background

Raaya Alon

Department of Special Education, Michlalah Jerusalem College, Baruch Duvdevani 36, Jerusalem 9116002, Israel; raaya.alon@gmail.com

Abstract

Siblings of individuals with developmental disabilities frequently assume central emotional and caregiving roles within their families, often facing ongoing and unique stressors. This quantitative study assessed perceived psychosocial stress among 465 emerging adult siblings (aged 18–28) of individuals diagnosed with autism, Down Syndrome (DS), or cerebral palsy (CP), focusing on the gender of the typically developing sibling, type of diagnosis, and religious-cultural sector. Within the Jewish-Israeli population, three main religious-cultural sectors—secular, religious-national, and ultra-Orthodox—differ in their engagement with broader society and adherence to traditional lifestyles. Results indicated significant main effects for all variables: Brothers reported higher stress than sisters, and siblings of individuals with autism or CP experienced greater stress than those with siblings with DS. Religious-cultural sector further interacted with stress: ultra-Orthodox siblings of individuals with autism reported the highest stress, while secular siblings of individuals with CP also exhibited elevated stress. Secular brothers reported higher stress than sisters, while gender differences were not evident in the religious-national or ultra-Orthodox groups. These findings emphasize the need for culturally and religiosity-sensitive interventions that address gender norms and the distinct challenges of various developmental disabilities, to support and improve the well-being and adaptive functioning of siblings during emerging adulthood.

Keywords: autism; down syndrome; cerebral palsy; religious-cultural context; secular; national-religious; ultra-orthodox; gender differences

check for updates

Academic Editors: Urszula Dudziak and Piotr Guzdek

Received: 31 July 2025
Revised: 4 September 2025
Accepted: 5 September 2025
Published: 8 September 2025

Citation: Alon, Raaya. 2025. Psychosocial Stress Among Siblings of Individuals with Disabilities: The Interplay of Religiosity, Gender, and Cultural Background. *Religions* 16: 1155. https://doi.org/10.3390/rel16091155

Copyright: © 2025 by the author. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (https://creativecommons.org/licenses/by/4.0/).

1. Introduction

Psychosocial stress constitutes a complex phenomenon that results when social-emotional and environmental factors interact with psychological processes, often beyond the individual's ability to cope (Kaplan 2013). While "positive stress" can foster motivation, adaptive functioning, and holistic well-being, chronic and heightened psychosocial stress can be associated with negative biological, psychological, and social outcomes (Shahsavarani et al. 2015). These consequences are noticeable among typically developing siblings of individuals with developmental disabilities. These siblings frequently assume expanded roles within the family, encompassing not only companionship but also emotional support, caregiving responsibilities, and mediation (e.g., Hanöz et al. 2024). The challenges and difficulties associated with the disability—such as complex medical needs, behavioral challenges, and social or communicative impairments—may serve as a prominent and ongoing source of stress for the typically developing sibling. These challenges often generate

emotional strain, heightened responsibility, and, at times, conflicting familial dynamics, exposing the sibling to sustained and elevated stress. This may be especially notable during emerging adulthood (approximately ages 18–28), a pivotal developmental period marked by identity exploration, increased autonomy, and evolving social roles (Arnett et al. 2014). For siblings of individuals with developmental disabilities, the process of forging an independent adult identity is often complicated by ongoing familial obligations and the emotional weight associated with their sibling's disability. These responsibilities, which often originate in childhood and intensify during adolescence, may culminate in heightened psychosocial stress during emerging adulthood, potentially impeding psychological adjustment and personal growth (Jensen and Orsmond 2019).

Rooted in a family systems framework, which posits that stressors impacting one member are experienced and felt by other family members, the present study seeks to elucidate the nature and psychological implications of psychosocial stress among emerging adult siblings of individuals with developmental disabilities. Particular emphasis is placed on contextual variables, including the gender of the typically developing sibling, the type of disability, and the religious-cultural context, all of which may uniquely shape the perception of stress. This aligns with the cognitive-transactional framework (Lazarus and Folkman 1984; Shahsavarani et al. 2015), which views stress as a dynamic interaction between individuals and their environment, arising when environmental demands are cognitively appraised as taxing personal resources (McEwen 2004). This approach emphasizes subjective appraisal, where stress results from the individual's interpretation rather than objective environmental events (Shahsavarani et al. 2015). A nuanced understanding of the sibling-environment interactions can foster more effective psychosocial interventions and support mechanisms to promote the well-being of the often overlooked emerging adult typically developing siblings.

1.1. Psychosocial Stress in Emerging Adulthood

Emerging adult siblings of individuals with disabilities encounter significant stressors, including parentification, where they take on traditional parental roles, often at an age when they are unprepared for it (Wright et al. 2024). They often undertake caregiving responsibilities such as managing medical appointments as well as emotional support tasks (Hanöz et al. 2024; Kim et al. 2025). Parentification, along with insufficient family support, imbalanced emotional caregiving within the family, and conflict management can intensify siblings' stress (Hanöz et al. 2024; Tomeny et al. 2016). This is illustrated in increased psychosocial stress and reflected in increased emotional difficulties, reduced quality of life, and increased anxiety and depression compared to peers without disabled siblings (Sabik et al. 2024; Sommantico et al. 2020). Further, social relationships often reflect decreased emotional closeness, increased sibling conflicts, and constrained social interactions (Kim et al. 2025; Sommantico et al. 2020). Concerns regarding future caregiving responsibilities further amplify stress, particularly in light of inadequate long-term care resources (Burke et al. 2018; Casale et al. 2021; Hanöz et al. 2024; Hwang et al. 2025). Additionally, siblings often lack formal recognition or targeted support; existing resources primarily address the individual with the disability and their parents, neglecting siblings' psychosocial requirements (Dogbe et al. 2019; Patterson et al. 2018).

1.2. The Influence of Gender, Disability Type, and Religious-Cultural Context

As the environment interacts with the individual and relates to perceptions of stress, it is important consider factors that may impact these perceptions. Differences between brothers and sisters have been found among siblings of individuals with disabilities. Specifically, sisters typically assume more caregiving roles and experience greater parentification.

At the same time, they often demonstrate enhanced resilience and self-efficacy compared to brothers (Hanöz et al. 2024; Siman-Tov and Sharabi 2023). There is also evidence that disability type can significantly affect siblings' stress experiences. Siblings of individuals with intellectual disabilities generally report higher distress than those with siblings having autism without accompanying intellectual disabilities, though overall stress levels are higher among siblings of individuals with autism compared to Down Syndrome ([DS] Shivers et al. 2019; Siman-Tov and Sharabi 2023). Research examining stress among siblings of individuals with cerebral palsy (CP) highlights critical impacts on family dynamics and personal development (e.g., Dew et al. 2014; Jajodia and Roy 2022). For instance, Lostelius et al. (2019) reported that siblings were aware of the individual with CP's pain and processed it in various ways, experiencing negative emotions, changes in the family's attention, among others.

The broader cultural context can also profoundly shape siblings' experience and perception of stress. In non-Western societies such as South Korea and Turkey, cultural expectations around filial piety intensify caregiving burdens, particularly affecting women who navigate dual expectations of their own aspirations and familial obligations (Hanöz et al. 2024; Hwang et al. 2025; Kim et al. 2025). Within Jewish-Israeli society, where the current study took place, there are distinct sectors—secular, national-religious, and ultra-Orthodox, which vary in their religious, cultural, and social features.

Israeli Sectors

The secular sector tends to be fully integrated into general Israeli society while adhering to a basic level of Jewish practice, is typically exposed to media and diverse cultural influences, and has a greater balance in gender roles (Smooha 2019). This sector participates in Israel's mandatory military service at age 18, for the minimum three-years required. The national-religious community, while maintaining an Orthodox lifestyle, is distinguished by active participation in Israeli public life and state institutions, less social isolation, and a combination of religious observance with modern education and professional engagement (Fischer 2022). Like their secular counterparts, males in the national-religious community serve their required military service, some serving within a structure that includes Judaic studies. Females in this sector are increasingly serving in the army as well, though they have an option to partake in national service instead, serving in places like schools, hospitals, and the like. The ultra-Orthodox sector is marked by a conservative lifestyle, strict adherence to religious norms, and limited exposure to mainstream and digital media; both the ultra-Orthodox and national-religious sectors are highly community-oriented, with strong social ties and collective frameworks (Malach and Cahaner 2022). Members of the ultra-Orthodox community do not serve in the Israeli military. In the ultra-Orthodox sector, traditional gender roles tend to be maintained, with women serving as the primary caretakers of both the home and the family (Kook and Harel-Shalev 2021). Within various ultra-Orthodox communities, rabbinic figures serve as intermediaries between God and the community, acting as the arbiters in all aspects of life (Kook and Harel-Shalev 2021). While the proportion of women and men who report themselves as caregivers in the general population in Israel is similar, there are significant differences in the scope of care, its type, and its impact on the caregiver. Women take on a heavier care burden over time and report a greater burden (Arazi et al. 2023). These differences are particularly pronounced in communities with a traditional-religious character, such as the ultra-Orthodox sector (Zamir and Awad 2025). Additionally, as the ultra-Orthodox are more insular communities, the conformity to social norms takes on added importance, and the individuals with disabilities who may not conform tend to be more stigmatized (Gershuni et al. 2023). The nature of experiences among siblings within these different religious-cultural sectors

remain significantly understudied, warranting further research to explore how varied environmental contexts can be targeted in promoting the well-being of these siblings.

2. Current Study

Psychosocial stress plays a crucial role in the adjustment and well-being of families with an individual with a disability (Sangha et al. 2023). The abovementioned research demonstrates that psychological stress can be impacted by various environmental factors, but remains understudied within religious sectors. As such, this study set out to examine whether there are differences in the dependent variable of psychosocial stress levels among typically developing emerging adult siblings of individuals with disabilities, focusing on the following key independent variables: environmental variables, including the gender of the typically developing sibling, the type of diagnosis (autism, DS, CP), and religious-cultural sector (secular, religious, Ultra-Orthodox). The following hypotheses guided the study:

1. There will be differences in psychosocial stress levels between typically developing brothers and sisters of individuals with disabilities.
2. There will be differences in stress levels among typically developing siblings according to the type of diagnosis (autism, DS, CP).
3. There will be differences in stress levels among typically developing siblings according to religious-cultural sector (secular, national-religious, ultra-Orthodox).
4. There may be interactions between the gender of the typically developing sibling, the type of diagnosis, and the sector in relation with stress levels.

3. Methods

Participants

The study included 465 siblings of individuals with developmental disabilities, divided into three groups based on the sibling's diagnosis: autism (n = 189), DS (n = 177), and CP (n = 99). Of the participants, 333 were sisters (72%) and 129 were brothers (28%). Participants ranged in age from 18 to 28 years (M = 22.39, SD = 3.60). The majority were single (66%), while 33% were married and 1% were divorced. Approximately 23% of the participants reported that they were parents. Among the individuals with disabilities, 66% were male and 34% were female. Their ages ranged from 5 to 40 years (M = 17.55, SD = 7.23). Participants were asked to rate their sibling's level of independent functioning in day-to-day activities (e.g., dressing, bathing, taking public transportation), taking their age into consideration, using a 3-point scale: 1 = independent, 2 = somewhat independent, and 3 = not independent. According to the participants' reports, 28.4% of siblings with disabilities were described as independent, 56.3% as somewhat independent, and 15.3% as not independent.

4. Measures

4.1. Family Stress Perception Questionnaire

This 13-item questionnaire is adapted from the Diabetes Quality of Life Young Adolescent Questionnaire (Bott et al. 1998), with further modifications for adolescents (Ingersoll and Marrero 1991) and translated into Hebrew by Vardi (2006). The measure assesses perceived family-related stress among non-disabled siblings of individuals with a disability (e.g., "How often do you feel embarrassed because you have to be with your sibling in public?" "How often do you feel that your sibling limits your social connections?"). Each item is rated on a 5-point Likert scale (1 = never, 5 = always), and the mean score reflects the overall level of perceived stress, with higher scores indicating greater stress. Reliability in the current sample was high with Cronbach's alpha = 0.87.

4.2. Demographic Questionnaire

The demographic questionnaire consisted of 17 items divided into two main sections. The first section collected information about the participating sibling, including age, gender, religious-cultural affiliation (secular, national-religious, ultra-Orthodox, or other), occupation, and marital status (married, single, divorced, or widowed).

The second section focused on the sibling with a disability, including age, gender, diagnosis, place of residence, the presence and severity of intellectual disability (none, mild, moderate, severe, or profound), and the degree of independent functioning (independent, partially independent, or not independent at all). Participants were asked to provide a subjective evaluation of their sibling's ability to perform daily activities (such as dressing, feeding, bathing, and using the bathroom) as well as tasks outside the home (e.g., using public transportation, purchasing groceries, seeking assistance, and recognizing potential dangers).

5. Procedure

Ethical approval for the study was obtained from the ethics committee of the Academic Institution (Approval No. 027; blinded for review). Recruitment targeted siblings of individuals with disabilities through Israeli platforms, including dedicated Facebook groups, WhatsApp communities, and online forums. Participants were also encouraged to share the survey with eligible peers using a snowball sampling approach. The study's purpose, procedures, and confidentiality safeguards were explicitly outlined to interested individuals. Informed consent was obtained electronically in compliance with ethical standards, emphasizing anonymity and data protection. Upon consenting, participants gained immediate access to the questionnaire. The digital questionnaire, containing all study measures, was distributed via these channels. No financial incentives were provided for participation.

6. Data Analysis

The data was 99.3% complete, and in the rare cases where data was missing, imputation methods were used based on majority responses. In order to examine whether there were differences in sibling stress according to the main demographic variables such as age, gender, sector, and type of disability, a three-way analysis of variance (ANOVA) was conducted. Then interactions between the study variables that were found to be statistically significant in the previous stage, were added to the analysis.

7. Results

Results of the three-way ANOVA exploring differences in stress by demographic variables revealed significant differences for each variable. Specifically, a significant difference in stress levels emerged between brothers and sisters, F (1.419) = 13.14, $p < 0.001$, $\eta^2 = 0.03$, such that stress among brothers was significantly higher than among sisters. In addition, a statistically significant difference was found in stress levels between the siblings based on disability type, F (2.419) = 7.72, $p = 0.001$, $\eta^2 = 0.04$. Scheffe post hoc analyses revealed that stress among siblings of individuals with autism and among siblings of individuals with CP were significantly higher than among siblings of individuals with DS. No significant difference was found between stress levels of siblings of those with autism and with CP.

In addition, a significant difference was found based on sector (traditional-secular/religious, Ultra-Orthodox), F (2.419) = 12.42, $p < 0.001$, $\eta^2 = 0.06$. Scheffe post hoc analyses demonstrated that stress among those who identify as secular and as Ultra-Orthodox were significantly higher than that of siblings who define themselves as religious. No significant difference was found in stress levels between secular and Ultra-Orthodox siblings.

The Diagnosis x Sector interaction was found to be significant, F (4.419) = 2.41, p = 0.049, η^2 = 0.020. In follow-up analyses exploring the source of the interaction, it was found that among siblings of individuals with autism, stress among the ultra-Orthodox siblings was significantly higher than that of the religious siblings. Among siblings of individuals with DS, no significant differences were found based on sector, while among siblings of individuals with CP, stress among secular individuals was significantly higher than ultra-Orthodox.

The Gender x Diagnosis interaction was not found to be significant, F (2.419) = 0.52, p = 0.592, η^2 = 0.002. That is, no significant differences emerged between brothers and sisters according to disability type, rather across the three diagnostic groups (autism, DS, CP), the stress levels of brothers were significantly higher than the stress levels of sisters. The Gender x Sector interaction was significant, F (2.419) = 4.32, p = 0.014, η^2 = 0.02, and follow-up analyses demonstrated that among secular siblings, brothers' stress levels were significantly higher than that of sisters. No significant difference emerged between religious or ultra-Orthodox brothers' and sisters' stress.

Finally, the three-way Gender x Sector x Diagnosis interaction was significant, F(4.419) = 2.55, p = 0.039, η^2 = 0.02. Follow-up analyses revealed that among siblings of individuals with autism and those with Down syndrome, the stress level of secular brothers was significantly higher than the stress level of sisters, while among religious and ultra-Orthodox siblings, no significant difference was found between siblings' stress levels. In contrast, among siblings of individuals with CP, no significant difference was found between brothers and sisters in any of the three sectors (see Table 1).

Table 1. Means and standard deviations of stress levels by diagnosis type, gender, and sector.

Diagnosis	Sector	Gender	N	*M*	*SD*
Autism	Secular	Brothers	18	2.76	0.66
		Sisters	29	1.99	0.57
	Religious	Brothers	20	2.03	0.52
		Sisters	71	2.21	0.69
	Ultra-Orthodox	Brothers	11	2.83	0.53
		Sisters	29	2.42	0.71
Down Syndrome	Secular	Brothers	11	2.67	0.84
		Sisters	18	1.96	0.47
	Religious	Brothers	17	1.83	0.61
		Sisters	72	1.86	0.61
	Ultra-Orthodox	Brothers	11	2.18	0.81
		Sisters	36	1.86	0.61
Cerebral Palsy	Secular	Brothers	14	2.76	0.85
		Sisters	14	2.55	0.6
	Religious	Brothers	13	2.35	0.85
		Sisters	28	1.95	0.47
	Ultra-Orthodox	Brothers	5	2.15	0.66
		Sisters	20	2.29	0.61

8. Discussion

This study set out to investigate perceived psychosocial stress among emerging- adult siblings of individuals with developmental disabilities, with a particular emphasis on the role of gender, disability type (autism, DS, CP), and religious-cultural sector (secular, national-religious, ultra-Orthodox). Briefly, brothers tended to report higher stress levels than sisters, siblings of individuals with autism and with CP reported higher stress than those with DS, and stress among secular and ultra-Orthodox siblings was higher than among national-religious siblings. Interactions demonstrated that stress among ultra-

Orthodox siblings of individuals with autism was higher than national-religious siblings, and secular siblings of individuals with CP was higher than ultra-Orthodox. Finally, gender, disability type, and religious-cultural sector interacted, demonstrating that among siblings of individuals with autism and those with DS the stress level of secular brothers was significantly higher than the stress level of sisters, while among religious and ultra-Orthodox siblings, no significant difference was found between siblings' stress levels. Among siblings of individuals with CP, no significant difference was found between brothers and sisters in any of the three sectors.

One of the noticeable findings in the current study was the importance of religious-cultural sector on the siblings' psychosocial stress. Siblings who identified with the national-religious sector reported lower levels of stress than both secular and ultra-Orthodox siblings. The national-religious sector, often characterized by strong family structures, religious observance, and engagement with both modern and traditional cultural spheres (Stern and Ben-Shalom 2020), may provide siblings with a balanced ecosystem of emotional support, communal involvement, and religious coping. These elements potentially serve as protective factors against the challenges of growing up alongside a sibling with a disability. Indeed, studies have shown that religious faith and the communal support of religious systems can help individuals cope with having a disabled family member (e.g., Alon and Achituv 2024; Byra and Ćwirynkało 2023; Milevsky and Singer 2022). Secular siblings may lack consistent frameworks for social and spiritual meaning, which could leave them more vulnerable to feelings of isolation or role ambiguity, especially when support systems are limited. This is in accord with findings showing that in Western secular societies, where personal autonomy and privacy are emphasized, siblings of individuals with developmental disabilities often report stress resulting from a lack of community integration and inadequate public support systems (Kilmer et al. 2010). Surprisingly, despite the close community nature of the ultra-Orthodox sector, siblings from this sector also reported elevated stress levels, particularly when caring for a sibling with autism or CP. Behavioral conformity is highly valued in ultra-Orthodox communities (Zamir and Awad 2025). Neurodevelopmental disabilities that manifest in visible or disruptive ways may thus generate significant social stigma, not only toward the individual with the disability but also toward their family members (e.g., Orr et al. 2021). In such environments, siblings may internalize these attitudes, feel communal pressure to care for the individual, and experience increased stress (e.g., Gershuni et al. 2023). Studies from Muslim-majority countries such as Turkey or Iran have also highlighted the dual role of religion: on the one hand, it offers spiritual meaning and coping strategies and support, but on the other hand, community stigma surrounding disability can impose a heavy emotional toll on family members, including siblings (Jegatheesan and Witz 2013).

Across all sectors, brothers reported higher stress levels than sisters. This is in line with other studies worldwide (e.g., Shivers et al. 2019). For instance, sisters of individuals with autism in Australia were found to take on more of a caregiving and emotional burden than brothers, which may elevate their stress levels (Trew 2025). Interestingly, among siblings of individuals with DS, no sector-based differences were found. DS tends to be characterized by positive social representation and broader acceptance of siblings (Alon 2025a, 2025b). That is, DS is often perceived relatively positively among all sectors, with an image of "likable, pleasant children" who evoke affection and compassion. This positive representation may cross Jewish religious and social boundaries and as such, there may be fewer differences in levels of psychosocial stress between the various sectors. At the same time, in a study of Muslim participants in Pakistan, religious belief served as a way for parents to explain and cope with having a child with Down Syndrome, while also being associated with stigmatization of the disability (Bryant et al. 2011). Cross-religion

studies may shed more light on how religious beliefs and stringency are associated with view of various disabilities.

Overall, the study's findings suggest that psychosocial stress is not solely a function of objective caregiving demands, but is also mediated by how disability is perceived, interpreted, and responded to within a given religious-cultural framework. In sectors where there is less religious adherence and sense of belonging to the religious community, the burden may stem more from the perceived isolation and emotional distance that can result from fragmented social structures and a reduced sense of collective responsibility. These environments may foster independence but may lack the community buffer mechanisms found in more collectivist or religious cultures. In contrast, in collectivist societies such as Japan, India, or many Latin American and African cultures, strong family obligations and interdependence may lead to increased caregiving responsibilities for siblings, especially older siblings, often without formal support or emotional outlet. Kim et al. (2023) demonstrated that Koreans, who have a collectivist society that values adherence to social norms, exhibited greater explicit stigma as well as implicit biases towards individuals with autism compared to participants from the United States, a more individualistic culture. Additionally, parents of children with CP in India expressed greater societal stigma towards their children compared to parents from Canada (Jindal et al. 2018). Similarly to the ultra-Orthodox context of in the present study, these cultures may maintain strong normative expectations regarding family honor, conformity, and silence around disability—which may exacerbate sibling stress through internalized pressure and limited space for emotional expression (Gupta and Singhal 2005; Yamaoka et al. 2015). Finally, while religiosity may provide a path for coping with the emotions and experience of being a sibling to an individual with a disability, if disability is more stigmatized, it may require greater external support to help mitigate the experience of stress.

8.1. Limitations and Future Research

Several limitations of the current study should be noted. First, the reliance on self-report measures introduces potential bias, particularly in relation to cultural norms surrounding emotional disclosure. In some sectors, respondents may underreport emotional difficulties due to social desirability or cultural norms regarding emotional restraint. Additionally, qualitative methods, such as in-depth interviews, could offer richer insight into siblings' lived experiences, particularly in relation to faith, stigma, and family roles. Second, the cross-sectional design provides information about the particular time point within emerging adulthood. Longitudinal research is necessary to explore how stress evolves across key developmental milestones (e.g., military service, higher education, marriage) and how sibling roles change over time. Additionally, other potentially significant family-related factors, such as socio-economic status, number of siblings, and family completeness (e.g., presence of both parents) were not examined in the present study. These variables may serve as important moderators of stress and well-being, and their inclusion in future research could provide a more nuanced understanding of the complex interplay between personal, familial, and social resources. Last, the study focused primarily on Jewish religious sectors. The concept of "religiosity" itself warrants deeper operationalization to distinguish between intrinsic belief systems and externally imposed communal expectations. Further, research should expand to include non-Jewish religious communities, such as Muslim, Christian, or Druze families in Israel to enable more comprehensive cross-religious comparisons of sibling experiences. Additionally, exploring the role of culture and religion in different types of communities can expand the understanding of how these critical variables may vary in the way they may impact stress.

8.2. Implications

The current study's findings offer a variety of practical implications. Given that brothers indicated higher levels of perceived stress than sisters indicates that brothers may need greater attention. It is possible that it is assumed that sisters will take on a greater caregiving role, leaving brothers to fend for themselves. As such, interventions that target siblings may need to differentiate between brothers and sisters and exert greater effort at reducing their stress levels. Similarly, the disparity in perceived stress based on the particular disability seems to indicate a need to target sibling groups of individuals with various disabilities in different ways to provide the necessary support to promote improved coping with stress. The results regarding cultural-religious sector highlight that sibling well-being cannot be understood in isolation from cultural systems. Given the increase in disability diagnoses around the world, across cultures and religions (World Health Organization 2023), it is important for practitioners who work with siblings of individuals with disabilities and their families to consider how cultural and religious contexts can impact stress and family dynamics and design interventions in line with cultural and religious values. The importance of the findings regarding religious sector reflects the potential of faith-based interventions as a means of strengthening siblings' resilience. At the same time, the nature of more insular religious communities, both within and outside Israel, may foster a negative emphasis on adhering to behavioral norms that can heighten perceived stress, indicating a need for careful consideration of the role of religious belief and practice. Thus, for example, in the Ultra-Orthodox community where stress was elevated, efforts can be made to reduce stigma by emphasizing the role of caring for individuals with disabilities in Judaism. Similarly, focusing on greater acceptance of individuals who do not conform can be advocated by rabbinic figures within these communities.

8.3. Conclusions

The current study provides insights into some of the complex ways that gender, type of disability, and religious-cultural background intersect to shape the experience of psychosocial stress of siblings of individuals with developmental disabilities. While brothers of individuals with more behaviorally complex disabilities (autism and CP) were associated with higher stress levels, religious-cultural affiliation emerged as a particularly meaningful contributor to siblings' perceptions of stress. This emphasizes the necessity of moving beyond individualistic models of psychological stress to more contextual and culturally embedded frameworks. Moreover, religion should be carefully considered as it has the potential to serve as a source of resilience, but when characterized by rigid norms or social stigma of disabilities, it may amplify the stress experienced by siblings of individuals with disabilities. Ultimately, the study highlights the role of stress in the functioning of emerging adult siblings of individuals with disabilities, and the need to support these siblings as they progress through important life stages and take on future caregiving responsibilities.

Funding: This research received no external funding.

Institutional Review Board Statement: The study was conducted in accordance with the Declaration of Helsinki, and approved by the Ethics Committee) of Michlalah Jerusalem College (protocol code 027, date of approval: 15 November 2024).

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: The data that support the findings of this study are available from the corresponding author upon reasonable request.

Acknowledgments: The author thanks her students for their assistance in distributing the questionnaires.

Conflicts of Interest: The author declares no conflict of interest.

References

Alon, Raaya. 2025a. A moderated mediation model for predicting acceptance of a sibling with autism or Down Syndrome. *Research in Developmental Disabilities* 164: 105059. [CrossRef]

Alon, Raaya. 2025b. Examining the Acceptance of Siblings with Down Syndrome Through a Positive Psychological Lens. *Research and Practice for Persons with Severe Disabilities*, 15407969251350121. [CrossRef]

Alon, Raaya, and Sigal Achituv. 2024. Perceptions of Motherhood Among Israeli Religious and Haredi Mothers of Children on the Autism Spectrum: From "I feel Like with Him I'm Lost" to "It's a Gift in My Life". *Pastoral Psychology*, 1–19. [CrossRef]

Arazi, Rachel, Benjamin Bental, and Davidovitch Nadav. 2023. Family Caregivers in Israel: Analysis, Characterization, and Impact on the Labor Market. Available online: https://www.taubcenter.org.il/wp-content/uploads/2023/05/Caregivers-2023-ENG.pdf (accessed on 4 September 2025).

Arnett, Jeffrey J., Rita Žukauskienė, and Kazumi Sugimura. 2014. The new life stage of emerging adulthood at ages 18–29 years: Implications for mental health. *The Lancet Psychiatry* 1: 569–76. [CrossRef] [PubMed]

Bott, Uwe, Ingrid Mühlhauser, Hubert Overmann, and Michael Berger. 1998. Validation of a diabetes-specific quality-of-life scale for patients with type 1 diabetes. *Diabetes Care* 21: 757–69. Available online: https://www.researchgate.net/profile/Ingrid-Muehlhauser/publication/13695354_Validation_of_a_Diabetes-Specific_Quality-of-Life_Scale_for_Patients_With_Type_1_Diabetes/links/00b7d52f8d2b6a8e2e000000/Validation-of-a-Diabetes-Specific-Quality-of-Life-Scale-for-Patients-With-Type-1-Diabetes.pdf (accessed on 4 September 2025). [CrossRef]

Bryant, Louise D., Shenaz Ahmed, Mushtaq Ahmed, Hussain Jafri, and Yasmin Raashid. 2011. All is done by Allah. Understandings of Down syndrome and prenatal testing in Pakistan. *Social Science & Medicine* 72: 1393–99. [CrossRef]

Burke, Meghan, Catherine Arnold, and Aleksa Owen. 2018. Identifying the correlates and barriers of future planning among parents of individuals with intellectual and developmental disabilities. *Intellectual and Developmental Disabilities* 56: 90–100. [CrossRef]

Byra, Stanisława, and Katarzyna Ćwirynkało. 2023. Beliefs about the world and coping strategies in siblings of adults with intellectual disabilities: The moderating effect of posttraumatic growth. *Przegląd Badań Edukacyjnych, Educational Studies Review* 2: 23–45. [CrossRef]

Casale, E. G., E. G. Burke, R. C. Urbano, C. K. Arnold, and R. M. Hodapp. 2021. Getting from here to there: Future planning as reported by adult siblings of individuals with disabilities. *Journal of Intellectual Disability Research* 65: 246–61. [CrossRef]

Dew, Angela, Gwynnyth Llewellyn, and Susan Balandin. 2014. Exploring the later life relationship between adults with cerebral palsy and their non-disabled siblings. *Disability and Rehabilitation* 36: 756–64. [CrossRef] [PubMed]

Dogbe, Joslin Alexei, Joana D. A. Kyerematen, Maxwell Peprah Opoku, William Nketsia, and Charles Hammond. 2019. There is family tension, but they understand. . .': Familial and sibling relationships following the diagnosis of cerebral palsy in children in Ghana. *International Journal of Developmental Disabilities* 1: 35–46. [CrossRef]

Fischer, Shlomo. 2022. Religious Zionism–Romantic Religious Nationalism in Israel. In *Routledge Handbook on Contemporary Israel*. London: Routledge, pp. 258–73.

Gershuni, Chaya, Netta Gilboa-Feldman, and Ahuva Spitz. 2023. Health and medicine in Israeli Haredi society 1. In *Contemporary Israeli Haredi Society*. London: Routledge, pp. 204–26.

Gupta, Ashum, and Nidhi Singhal. 2005. Psychosocial support for families of children with autism. *Asia Pacific Disability Rehabilitation Journal* 16: 62–83.

Hanöz, Lale, Serkan Özgün, Senem Zeytinoğlu Saydam, Celia Naivar Şen, and Emine Ayyıldız. 2024. Siblings under the shadow: A qualitative study of young adults' parentification experiences with siblings with special needs. *International Journal of Systemic Therapy* 35: 127–44. [CrossRef]

Hwang, Se Kwang, Kyung Mee Kim, and Chung Eun Lee. 2025. Middle-aged adults' perspectives on caregiving for their siblings with intellectual and developmental disabilities. *Journal of Policy and Practice in Intellectual Disabilities* 20: e70005. [CrossRef]

Ingersoll, Gary M., and David G. Marrero. 1991. A modified quality-of-life measure for youths: Psychometric properties. *The Diabetes Educator* 17: 114–18. [CrossRef] [PubMed]

Jajodia, Preeti, and Paramita Roy. 2022. Sibling issues in disability: A thematic analysis of sibling, parent & expert perspectives. *International Journal of Disability, Development and Education* 70: 1392–409. [CrossRef]

Jegatheesan, Brinda, and Klaus Witz. 2013. An ethnographic study on religion, spirituality, and maternal influence on sibling relationships in a Muslim family with a child with autism. *Review of Disability Studies: An International Journal 9*. Available online: https://mail.rdsjournal.org/index.php/journal/article/view/68 (accessed on 4 September 2025).

Jensen, Alexander C., and Gael I. Orsmond. 2019. The sisters' advantage? Broader autism phenotype characteristics and young adults' sibling support. *Journal of Autism and Developmental Disorders* 49: 4256–67. [CrossRef]

Jindal, Pranay, Joy C. MacDermid, Peter Rosenbaum, Briano DiRezze, and Amitesh Narayan. 2018. Perspectives on rehabilitation of children with cerebral palsy: Exploring a cross-cultural view of parents from India and Canada using the international classification of functioning, disability and health. *Disability and Rehabilitation* 40: 2745–55. [CrossRef]

Kaplan, Howard B., ed. 2013. *Psychosocial Stress: Trends in Theory and Research*. Cambridge, MA: Academic Press.

Kilmer, Ryan P., James R. Cook, Eylin Palamaro Munsell, and Samantha Kane Salvador. 2010. Factors associated with positive adjustment in siblings of children with severe emotional disturbance: The role of family resources and community life. *American Journal of Orthopsychiatry* 80: 473–81. [CrossRef] [PubMed]

Kim, Min Ah, Jaehee Yi, Shinyeong Hwang, Jimin Sung, Seong Young Lee, and Heejin Kim. 2025. Narratives from female siblings of adults with intellectual and developmental disabilities: A photovoice study on identity and growth experiences in South Korea. *Journal of Applied Research in Intellectual Disabilities* 38: e70029. [CrossRef] [PubMed]

Kim, So Yoon, Jeong Eun Cheon, Kristen Gillespie-Lynch, Jennifer Grandits, and Young-Hoon Kim. 2023. Explicit stigma and implicit biases toward autism in South Korea versus the United States. *Autism* 27: 1492–507. [CrossRef]

Kook, Rebecca B., and Ayelet Harel-Shalev. 2021. Patriarchal norms, practices and changing gendered power relations-narratives of Ultra-Orthodox women in Israel. *Gender, Place & Culture* 28: 975–98.

Lazarus, Richard, and Susan Folkman. 1984. *Stress, Appraisal, and Coping*. New York: Springer.

Lostelius, Petra Vikman, Lena Ståhle-Öberg, and Anncristine Fjellman-Wiklund. 2019. Pain in children with cerebral palsy—Adolescent siblings' awareness of pain and perceived influence on their family. *European Journal of Physiotherapy* 21: 164–70. [CrossRef]

Malach, Gilad, and L. Cahaner. 2022. *Annual Statistical Report on Ultra-Orthodox (Haredi) Society in Israel*. Jerusalem: The Israel Democracy Institute.

McEwen, Bruce S. 2004. Protection and damage from acute and chronic stress: Allostasis and alloastatic overload and relevance to the pathophysiology of psychiatric disorders. *Annual Journal of New York Academy of Sciences* 1032: 1–7. [CrossRef]

Milevsky, Avidan, and Orly Singer. 2022. Growing up alongside a sibling with a disability: A phenomenological examination of growth and deficiency in adulthood. *Research in Developmental Disabilities* 130: 104336. [CrossRef]

Orr, Zvika, Shifra Unger, and Adi Finkelstein. 2021. Localization of human rights of people with disabilities: The case of Jewish ultra-Orthodox people in Israel. *Human Rights Quarterly* 43: 93–116. [CrossRef]

Patterson, Pandora, Fiona E. J. McDonald, K. White, and Phyllis Butow. 2018. An invisible patient: Healthcare professionals' perspectives on engaging and supporting adolescent and young adult siblings of young cancer patients. *European Journal of Cancer Care* 27: e12970. [CrossRef]

Sabik, Asala, Shifaa Hamd, Khetam Asakli Faris, and Ayelet Gur. 2024. The power of faith in Israeli Druze parents of children with disabilities across the lifespan. *Journal of Religion & Spirituality in Social Work: Social Thought* 43: 330–47. [CrossRef]

Sangha, Simrit, Joanna K. Anderson, and Anne-Marie Burn. 2023. A qualitative study investigating the experiences of young adults caring for a sibling with disability within immigrant families in the UK: "Challenges are just the constant". *Journal of Intellectual & Developmental Disability* 48: 421–31. [CrossRef]

Shahsavarani, Amir Mohammad, Esfandiar Azad Marz Abadi, and Maryam Hakimi Kalkhoran. 2015. Stress: Facts and theories through literature review. *International Journal of Medical Reviews* 2: 231–41.

Shivers, Carolyn M., Casey McGregor, and Ashlea Hough. 2019. Self-reported stress among adolescent siblings of individuals with autism spectrum disorder and Down syndrome. *Autism: The International Journal of Research and Practice* 23: 112–22. [CrossRef] [PubMed]

Siman-Tov, Ayelet, and Adi Sharabi. 2023. Differences between typically-developing brothers & sisters of individuals with developmental disabilities. *Journal of Child and Family Studies* 32: 1559–70. [CrossRef]

Smooha, Sammy. 2019. *Arabs and Jews in Israel: Volume 1, Conflicting and Shared Attitudes in a Divided Society*. London: Routledge.

Sommantico, Massimiliano, Santa Parrello, and Barbara De Rosa. 2020. Sibling relationships, disability, chronic, and mental illness: Development of the siblings' experience quality scale (SEQS). *Journal of Developmental and Physical Disabilities* 32: 943–61. [CrossRef]

Stern, Nehemia, and Uzi Ben-Shalom. 2020. Soldiers and scholars: Ritual dilemmas among national religious combat soldiers in the Israel Defense Forces. *Journal of Contemporary Ethnography* 49: 345–70. [CrossRef]

Tomeny, Theodore S., Lorien K. Baker, Tammy D. Barry, Sophia W. Eldred, and James A. Rankin. 2016. Emotional and behavioral functioning of typically-developing sisters of children with autism spectrum disorder: The roles of ASD severity, parental stress, and marital status. *Research in Autism Spectrum Disorders* 32: 130–42. [CrossRef]

Trew, Sebastian. 2025. Close relationships despite the challenges: Sibling relationships and autism. *Journal of Autism and Developmental Disorders* 55: 2989–3001. [CrossRef] [PubMed]

Vardi, Aya. 2006. The Contribution of Self-Esteem, Level of Self-Differentiation, Family Stress Perception, and Parental Differential Treatment to Personal Growth Among Siblings of Children with and Without Intellectual Disability. Unpublished Master's Thesis, in Hebrew, Louis and Gabi Weisfeld School of Social Work, Bar-Ilan University, Ramat Gan, Israel.

World Health Organization. 2023. Disability. Available online: https://www.who.int/news-room/fact-sheets/detail/disability-and-health (accessed on 7 September 2025).

Wright, Bridget M., Joann P. Benigno, John W. Mccarthy, and Jennifer Chabot. 2024. 'They change our lives more than we change them': Young adults' perspectives on relationships with Autistic siblings. *International Journal of Disability, Development and Education* 71: 389–402. [CrossRef]

Yamaoka, Yui, Nanako Tamiya, Yoko Moriyama, Felipe Alfonso Sandoval Garrido, Ryo Sumazaki, Haruko Noguchi, and Haotian Lin. 2015. Mental health of parents as caregivers of children with disabilities: Based on Japanese nationwide survey. *PLoS ONE* 10: e0145200. [CrossRef]

Zamir, Alon, and Rabab Awad. 2025. 'Caring for him makes me more sensitive, like a kind of prayer': Intimate physical care for aging family members with intellectual and developmental disabilities in Religious Muslim and Ultra-Orthodox Jewish societies. *Scandinavian Journal of Disability Research* 27: 106–19. [CrossRef]

Disclaimer/Publisher's Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.