BMC Psychiatry

RESEARCH

Open Access

Psychological and spiritual well-being of adolescents with autism spectrum disorder in Ghana

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Abstract

Background Adolescents with Autism Spectrum Disorder (ASD) face significant psychological and spiritual challenges that impact their overall quality of life. This study explores the psychological well-being (e.g., mood instability, financial burdens) of adolescents with ASD, including mental health challenges and coping mechanisms. We also studied the role of spirituality (e.g., participation in religious activities) as a coping mechanism for adolescents with ASD within the Ghanaian cultural context.

Methods This qualitative study utilized semi-structured interviews with 13 parents of adolescents with ASD in Accra, Ghana. Participants were selected through purposive sampling. Data were analyzed thematically to identify patterns related to psychological well-being and spiritual practices as experienced by adolescents with ASD and their families.

Results Two main themes emerged: (1) Psychological well-being of adolescents with autism, with parents reporting issues such as mood disturbances, depression, and social stigma affecting both adolescents and their families; and (2) Spiritual well-being, where religious engagement served as a coping resource, though sensory sensitivities posed participation challenges for some adolescents.

Conclusion The study highlights the importance of accessible mental health resources and supportive spiritual communities for adolescents with ASD in Ghana. Community-based mental health services and inclusive spiritual support can help families address the psychological and spiritual needs of adolescents with autism more effectively.

Keywords Autism spectrum disorder, Psychological Well-being, Spiritual Well-being, Adolescents with autism, Parental perspectives, Coping mechanisms, Social inclusion, Ghana

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Introduction

Autism Spectrum Disorder affects various aspects of individuals' lives, extending beyond physical and social domains to impact psychological and spiritual well-being (American Psychiatric Association 2013). Adolescents with ASD often face considerable psychological challenges, including difficulties in emotional regulation, heightened anxiety, and increased risk of depression, which can severely affect their quality of life (Bent et al. 2020; Sonido et al. 2020). In Ghana, these challenges are often intensified by societal stigma surrounding autism and other developmental disorders, which can lead to isolation for both the adolescents and their families (Acheampong 2024; Agyekum 2018; Havens 2021; Manu 2012).

In addition to psychological challenges, spirituality plays a significant role in the lives of many families in Ghana. Religious beliefs and practices are deeply embedded in Ghanaian culture and often serve as important sources of comfort and resilience for families dealing with adversity (Kunz 2011). For parents of adolescents with ASD, spirituality may provide a framework for coping with the daily stresses of caregiving and the societal stigma associated with autism. Participation in religious communities can offer a sense of belonging and emotional support, which is crucial for families who may feel isolated due to their child's condition (Kunz 2011).

However, the experience of spirituality and religious engagement can be complex for adolescents with ASD. While spiritual practices can provide comfort and a sense of peace, adolescents with ASD may encounter sensory sensitivities that make participation in religious services challenging (Collins and Ault 2010). Bright lights, loud sounds, and crowded environments common in places of worship can overwhelm individuals with ASD, resulting in anxiety or discomfort. Despite these challenges, religious communities can serve as inclusive spaces that accommodate the unique needs of adolescents with ASD, offering support and acceptance in a culturally meaningful context (Scahill and Bearss 2009).

Studies indicate that psychological well-being and spirituality are often interconnected, with spiritual engagement contributing positively to mental health by providing meaning, coping resources, and social support (Walsh et al. 2011). For adolescents with ASD, psychological well-being may involve managing emotional challenges, building self-esteem, and finding ways to reduce stress in a context that often lacks specialized mental health services. In Ghana, mental health resources for individuals with developmental disabilities remain limited, with few trained professionals available to provide specialized care (Agyekum 2024; Formentos et al. 2021; Manu 2012). Consequently, families may turn to spiritual resources as an alternative form of support, seeking guidance and community support within their religious traditions.

Despite the potential benefits of spiritual engagement, there is limited research examining how spirituality impacts the quality of life of adolescents with ASD in Ghana. This gap reflects broader challenges in understanding the holistic needs of individuals with ASD in low-resource settings, where cultural beliefs and limited healthcare infrastructure influence approaches to care and support (Abubakar et al. 2016; Oti-Boadi et al. 2020). By examining the psychological and spiritual dimensions of quality of life (QoL) for adolescents with ASD through the perspectives of their parents, this study seeks to provide a more nuanced understanding of how these factors impact families in Ghana.

This research aims to uncover the unique psychological and spiritual challenges that adolescents with ASD face in Ghana, as well as the ways in which parents use spiritual resources to cope with the stresses of caregiving. The findings from this study will inform approaches to integrating mental health and spiritual support within health and community settings, providing a culturally appropriate framework for addressing the needs of adolescents with ASD in Ghana. Understanding the interplay between psychological and spiritual well-being is essential for developing holistic interventions that can enhance the quality of life for adolescents with autism and their families in this context.

Methods

Study design

This study used an exploratory descriptive qualitative design to examine the psychological and spiritual well-being of autistic adolescents from their parents' perspectives. This design allowed for a rich, in-depth exploration of the experiences and insights of parents, which is essential given the limited existing knowledge on this topic in the Ghanaian context. This approach was particularly useful because the adolescents were minimally-speaking.

Philosophical underpinning

The study was grounded in an interpretivist paradigm, which holds that reality is constructed through individuals' interpretations and understanding of their experiences. This framework allowed for a nuanced exploration of how parents perceive the psychological and spiritual well-being of their autistic adolescents.

Ontology Taking an interpretivist ontological stance, this study recognized reality as socially constructed, multiple, and subjective. This perspective was crucial in exploring how parents in Ghana understand and interpret their adolescent children's psychological and spiritual well-being.

Epistemology The interpretivist epistemology considers participants as active agents in co-constructing knowledge. In this study, parents' narratives were central to generating insights into the psychological and spiritual well-being of autistic adolescents. Face-to-face, in-depth interviews were used to gather parents' firsthand accounts, and verbatim quotes from these interviews served to emphasize participants' voices in shaping the findings.

Axiology Ethical considerations were integral to the study. Approval was obtained from an ethics review board, and informed consent was secured from each participant. Anonymity and confidentiality were strictly maintained to ensure that participants felt safe and respected throughout the research process.

Study setting and population

This study took place in the Accra Metropolis of the Greater Accra Region, Ghana, with a population of approximately 5.5 million as of 2021 (Ghana Statistical Service 2021). The Accra Metropolitan District, one of the ten districts within the Accra Metropolitan Area, served as the primary study setting. The target population consisted of parents of autistic adolescents aged 10–19 years residing in the Greater Accra Region.

Sampling

The study employed a non-probability purposive sampling technique, supplemented by snowball sampling. Parents meeting the inclusion criteria were initially selected purposefully, and additional participants were identified through referrals from those interviewed, continuing until data saturation was achieved.

Inclusion criteria

To participate in the study, parents had to:

1. Have autistic adolescents aged 10–19 years.
2. Be able to speak English, Twi, Hausa, or Gonja.
3. Have lived with their autistic adolescent for the adolescent's entire life.

Exclusion criteria

Exclusion criteria were:

1. Parents of autistic children who did not consent to participate.

Data collection instrument

Data were collected through in-depth, face-to-face interviews using a semi-structured interview guide developed around the study objectives and conceptual model. This guide contained open-ended questions to facilitate an exploration of parents' perspectives on the psychological and spiritual well-being of their autistic adolescents. The interview guide was developed based on Ferrell et al. 1996 Quality of Life Model, literature review on psychological and spiritual well-being in ASD, as well as input from clinical psychologists and ASD caregivers. Items were informed by validated tools, such as the WHOQoL-BREF (WHO 2025) for assessing quality of life on spirituality and autism. The questions were designed to explore key themes, and the guide was pretested with two parents of adolescents with ASD to ensure clarity and relevance. Feedback from the pretest was used to refine the questions before full-scale data collection.

See Supplementary file 1 for detailed semi-structured interview guide.

Data collection procedure

Prior to data collection, an introductory letter from the University of Ghana's School of Nursing and Midwifery and ethical clearance documentation were obtained. The study aims, inclusion criteria, and procedures were explained to each participant. Interviews were conducted at times and locations convenient for participants, with audio recordings made with participants' consent. Anonymity and confidentiality were assured, and COVID-19 protocols, including wearing face masks and maintaining physical distance, were strictly adhered to during interviews.

Data analytic procedure

Thematic content analysis was employed to analyze the data. Interviews were transcribed verbatim, and initial codes were created to segment the data into meaningful units. Themes were subsequently identified, refined, and named to accurately reflect the data. Both data collection and analysis occurred concurrently, allowing emerging themes to inform further data collection and analysis as the study progressed. To enhance the reliability of thematic coding, two independent researchers analyzed and categorized the interview transcripts. Any discrepancies were resolved through discussion until consensus was reached. Cohen's kappa coefficient was calculated to assess inter-rater reliability, yielding a kappa value of 0.78, indicating substantial agreement.

Pilot study

A pilot study was conducted with two participants to ensure the clarity and relevance of the interview guide. Audio recordings from these interviews were transcribed, coded, and analyzed to identify any inconsistencies or unclear questions. Modifications were made to the interview guide based on feedback from the pilot study to enhance data collection for the main study.

Table 1 Socio-demographic/economic characteristics of respondents

Variables	Values (%)
Age (Parents)	
30–39	5 (38.5)
40–49	7 (53.9)
50 + years	1 (7.7)
Sex	
Female	9 (69.2)
Male	4 (30.8)
Child's Age	
10–12 years	5 (38.5)
13–15 years	6 (46.6)
16–17 years	2 (15.4)
Religion	
Christianity	13 (100)
Marital Status	
Single	3 (23.1)
Married	8 (61.5)
Divorced	2 (15.4)
Parity	
1	3 (23.1)
2	4 (30.8)
3	6 (46.2)
Education	
No Formal Education	4 (30.8)
Secondary	2 (15.4)
Tertiary	7 (53.8)
Employment Status	
Yes	12 (92.3)
No	1 (7.7)
Type of Employment	
Trader	3 (23.1)
Teacher	3 (23.1)
Civil Servant	1 (7.7)
Engineer	1 (7.7)
Entrepreneur	1 (7.7)
Banker	1 (7.7)
Business	1 (7.7)
Housewife	1 (7.7)
Baker	1 (7.7)
Ethnicity	
GA	3 (23.1)
Ewe	4 (30.8)
Asante	2 (15.3)
Kasena	1 (7.7)
Fante	1 (7.7)
Ada	1 (7.7)
Krobo	1 (7.7)

Values are presented as frequency (%).

Ensuring rigor

To ensure the rigor of the study, Lincoln's (1985) criteria was followed:

- **Credibility**: Member-checking was employed to verify data accuracy and completeness with participants.
- **Dependability**: Detailed descriptions of the study's methodology were documented to enable replication.
- **Transferability**: A comprehensive account of the study context and participants' perspectives was maintained to allow for contextual understanding and applicability in similar settings.
- **Confirmability**: An audit trail documenting each stage of the research process was created to enhance transparency and confirmability.

Results

Sociodemographic and economic characteristics of respondents

The majority 9 (69.2%) of respondents were female. Most parents 7 (53.9%) were aged between 40 and 49 years, followed by those aged 30 to 39 years 5 (38.5%), and a smaller proportion 1 (7.7%) aged 50 years or older. The children's ages ranged from 10 to 17 years, with the largest group of 6 (46.6%) children aged between 13 and 15 years, followed by those aged 10 to 12 years 5 (38.5%) and 2 (15.4%) aged 16 to 17 years. All respondents identified as Christians (100%).

In terms of marital status, the majority 8 (61.5%) were married, while 3 (23.1%) were single and 2 (15.4%) were divorced. Parity data revealed that most respondents had three children 6 (46.2%), followed by those with two children 4 (30.8%) and one child 3 (23.1%). Regarding educational attainment, more than half of the respondents had tertiary education 7 (53.8%), while 4 (30.8%) had no formal education, and 2 (15.4%) had secondary education. Employment was high among respondents, with 12 (92.3%) being employed. Among occupations, the most common were traders and teachers 3 (each representing 23.1%), followed by civil servants, engineers, entrepreneurs, bankers, businesspeople, housewives, and bakers, each accounting for 1 (7.7%).

Ethnically, the largest group was Ewe 4 (30.8%), followed by Ga 3 (23.1%) and Asante 2 (15.3%). Smaller proportions of respondents identified as Kasena, Fante, Ada, and Krobo 1 (7.7% each). None of the autistic children was verbal.

These characteristics provide a comprehensive overview of the sample population, reflecting diverse backgrounds in terms of age, marital status, education, employment, and ethnicity. The results are shown in Table 1.

Table 2 Summary of themes and Sub-themes

THEME	SUB-THEMES
Psychological well-being of the Adolescent with Autism	1. Depression 2. Financial burden 3. Level of understanding and comprehension 4. Sleep patterns
Spiritual well-being of the Adolescent with Autism	1. Engagement at religious gatherings 2. Undertaking spiritual activities

Interviews were conducted with 13 parents of adolescents with ASD to examine perceived psychological and spiritual factors based on parental perspectives. All the autistic children included in this study were minimally speaking. Of the 13 adolescents, only 2 (15.4%) didn't attend, and/or participated in religious services. Through thematic analysis, two primary themes and six sub-themes emerged, encapsulating critical aspects of adolescents' QoL as described by their parents. These themes and sub-themes are outlined in Table 2 and are further elaborated below, supported by selected, illustrative quotes from the parent interviews.

Psychological Well-being of the adolescent with autism

Psychological well-being, a construct of the QoL model was explored among adolescents with autism spectrum disorder. Respondents described the condition's impact on their children's psychological and cognitive functioning. The following sub-themes emerged from the study: depression, financial burden, level of comprehension and sleep patterns.

Depression

Parents reported inconsistent emotional displays in their children with autism. Respondents admitted their children had mood swings. While not always outwardly expressing depression or anxiety, these adolescents exhibited mood fluctuations. Periods of irritation, moodiness, and social withdrawal alternated with times of openness and being interactive. Comments made include:

> *"Oh, if you observe him, he interacts well and plays with everyone. However, when there are many people around, I make him sit near me because he used to be aggressive. I was afraid he might grab something and hit someone with it." [R07].*
> *"Sometimes, you will notice him being quiet. During those moments, when everything seems fine, he remains calm, often smiling and not appearing moody." [R01].*
> *"There are times that he is err, irritated if I should say. Like at odd times, you will see he is irritated and just by himself." [R013].*

Other respondents had these to say:

> *"If he is in a car and we are going somewhere, and he wants something but doesn't get it immediately, he suddenly becomes angry. When the car stops, he sometimes falls to the ground and starts rolling." [R03].*
> *"When he is sleepy or feeling unwell, he will sit calmly. Otherwise, he rarely stays in one place." [R08].*
> *"Sometimes, he appears moody, and at other times, it is difficult to understand what he is feeling. He may seem angry at one moment, but then at another, he does not appear angry at all." [R06].*

It appears the mood and reactions of adolescents with autism change quite often and parents sometimes are unable to figure out the reason why.

Financial burden

The financial burden of caring for an adolescent with autism was also explored during the interview. Respondents majorly indicated it was costly having an adolescent with autism. Cost of medication, treatment procedure, feeding, schooling and general upkeep of adolescents with autism was described as a financially demanding situation. Remarks made were:

> *"The drugs I have bought during his childhood is not a joke. His father was jobless at that time, and I was responsible for everything. I cannot remember how much but it is a lot." [R03].*
> *"It has and I don't think he is the only person. Every mother or every parent raising a special child will tell you that it costs the family financially." [R01].*
> *"Yes. Her medications are expensive. Where she is now her therapies are expensive you know. Everything about it is expensive so off course it will affect me." [R13].*

Furthermore, participants opined that it was financially demanding to cater for their educational needs. They opined as follows:

> *"The school now is expensive. And his medical checkup and all things…every mainstream school I took him to, he was charged more…than a, you know, typical I mean, student or people…It's always expensive" [R10].*
> *"You know this kind of school. It's cost involving. I mean sometimes you have to get a teacher that will be taking him through some lessons at home and the material they use to learn, and the school fees too are not easy. [R02]*

Though the majority of the respondents emphasized the financial burden associated with caring for an autistic adolescent, a few of them did not attribute finances as a primary determinant of their child's psychological well-being. They remarked:

> *"Oh financially, Aunty, I would be telling lies if I say that his sickness has affected us financially. I mean, errr, he has brought us luck… I wouldn't say that his sickness has affected our finances but God through him has brought us luck." [R09].*
> *"No, no. I firmly believe that if there were a cure for it, I would have cured my son a long time ago. I always tell people this." [R05].*

This finding gives credence to the argument that it is financially burdensome to cater for an autistic child in Lower-Middle-Income Countries (LMICs) where there are no support schemes for people with autism.

Sleep patterns

Respondents reported that sleep patterns were generally unaffected in adolescents with autism. No significant sleep disturbances or difficulties were commonly observed. Comments given by respondents were:

> *"As for him, he can sleep very well…He does not joke with his sleep. Whenever is he sleepy, he will go and sleep…When he sees a nice picture behind a book which he likes, he will hold it and sleep with it." [R07].*
> *"He has been getting a good sleep" [R01].*
> *"He hasn't got any sleeping problems." [R09].*
> *"Generally, no. it just sometimes that he finds difficulty in sleeping…either he will be singing or humming throughout the night because he is not feeling sleepy, but it doesn't happen often. Many a time, he's tired, he wants to go to bed." [R05].*

Though some used to have sleeping difficulties, the respondents claim it was intermittent and was not serious. They expressed as follows:

> *"He has no problem with sleeping, he used to have challenges with sleep. He would wake up and scream all nigh" [R02].*
> *"He is able to sleep at night. Most at times he is up during the day but during the evening he sleeps and it's just once in a blue moon that he doesn't sleep early." [R04].*

Spiritual Well-being of the adolescent with autism

The last construct explored in assessing the quality of life among adolescents with ASD was spiritual well-being. This construct looks at the spiritual engagement and impact of the disease on adolescents with autism. The results show that all of them regularly attended religious services and participated in at least one religious activity such as singing or drumming. The thematic content analysis yielded two primary sub-themes: religious engagement and undertaking spiritual activities.

Religious engagement

Participants reported no negative impact of autism on religious involvement. Adolescents with ASD were able to fully engage with their religious community. Adolescents with ASD were fully embraced in their respective church communities, actively participating in church activities and maintaining regular attendance. Remarks made were:

> *"He wants to go so, I have decided to talk to him about sitting quietly when I take him to church next year. However, he tends to make noise and talk while the priest is speaking." [R10].*
> *He goes to church. He dances. He's always in the queues for offering and so forth. [R02]*
> *"When it is Sunday, he is always in a hurry to go to church. Yes, he likes God, so we go to church. On Sunday if he doesn't go to church, I mean you see him not being happy. He always wants to go to church. [R07]*

Others had these to add:

> *"She is first class, she's the leader at Presby, with that one, she's first class, she irons her clothes on Saturday, she goes to church every Sunday" [R09].*
> *"We attend church with him, sometimes if the church is singing praises and he is sitting down he normally stands up and starts clapping." [R08].*

While most parents reported full participation in religious activities, few were not able to. Disruptive behaviors, such as talking and making noise, prevented some adolescents with autism from attending church.

Undertaking spiritual activities

Adolescents with autism actively undertook various religious activities. Despite their condition, they engaged in prayer, singing, dancing and clapping at church. These behaviors demonstrated their ability to express faith within a religious context. Some comments made by respondents were:

"When she wakes up and does this [bows her head], I do not know what she says. Every morning when she wakes up, she puts her head down, but I do not know what she says." [R13].
"He speaks minimally and does not actively pray, but during prayer time, when others are praying—raising their hands and making gestures—you will see him imitating them. He observes others and follows their actions." [R01].
"Normally the only thing you'll see is that he's dancing…" [R05].
"He will take part as in not really singing or dancing but he's there. He doesn't speak so I mean when he's tired, you will find him laughing or acting out and then he will be given a break." [R09].
"When we want to pray we need to engage him and say the lord's prayer. And he knows the whole thing" [R07].
"The only thing he did was that he likes drumming, so he will always be with the instrumentalists. He will always sit beside them. When they see that they are playing, we will also be making his own beats. When he puts the stick down, he will also go and sit behind the drums and also be playing. [R11]
"He will just sit; he will just sit beside us and we will pray" [R10].

From the narration, while many adolescents with autism actively participate in religious activities, others rely on observation engagement.

Discussion

The discussion will analyze how psychological challenges and spiritual engagement interact in shaping the overall well-being of adolescents with ASD. Comparisons with international studies will help contextualize how spirituality may play a unique role in regions where social support is limited. This will also highlight the need for holistic care approaches that incorporate mental health and spiritual resources.

Psychological Well-being of the adolescent with autism

The psychological well-being of adolescents with ASD constitutes a complex and multifaceted challenge, characterized by a unique interplay of neurodevelopmental, environmental, and social factors. One key observation from this study is the mood instability exhibited by these adolescents. Respondents frequently noted that adolescents with autism displayed a wide range of emotional states, often shifting from irritation and isolation to openness and interaction depending on the situation. This emotional volatility indicates a lack of emotional regulation, which is a significant psychological burden. These findings align with previous research by Bent et al. (2020); Sonido et al. (2020); Stephens et al. (2015), who similarly reported that mood swings are common among adolescents with ASD, highlighting their unpredictable emotional responses and difficulties in maintaining emotional balance.

Interestingly, contrary to many studies that associate ASD with sleep disorders, such as those by Broder-Fingert et al. (2016), Demer (2018), Mazurek and Petroski (2015), our respondents reported that their adolescents did not experience significant sleep problems. This discrepancy suggests that the relationship between ASD and sleep disorders may be more nuanced than previously understood. While cognitive malfunctions are prevalent among individuals with ASD, our findings indicate that these do not necessarily translate into disrupted sleep patterns for all affected adolescents. This could imply that psychological impacts of ASD on sleep may vary widely among individuals, potentially influenced by factors such as environmental conditions, co-existing medical conditions, and individualized care routines.

Another critical dimension of psychological well-being for adults with autism is the financial burden associated with their care. Respondents universally acknowledged the substantial financial strain of managing ASD, primarily due to the high cost of medications and therapies, coupled with insufficient societal and governmental support. This financial strain extends beyond the immediate monetary cost, contributing significantly to the psychological burden experienced by both the adolescents and their caregivers. Leader et al. (2021) have also highlighted that financial burdens can severely affect the psychological well-being of individuals with ASD and their families.

The financial burden also directly affects the psychological health of both adolescents and their caregivers. As Leader et al. (2021) assert, financial strain can diminish overall psychological well-being, creating a cycle of stress and emotional instability. This financial impact is particularly pronounced in contexts where external support systems are lacking, further exacerbating the psychological challenges faced by families. The financial stress associated with ASD care can exacerbate existing psychological challenges, adding a layer of anxiety and emotional strain.

Gomez et al. (2012) define psychological well-being as encompassing emotional stability, cognitive balance, and attention control. The adolescents in our study demonstrated reduced psychological well-being, characterized by their mood changes and emotional volatility. This diminished emotional control reflects a core challenge in managing ASD, aligning with the broader literature on the psychological impacts of the disorder.

The psychological well-being of adolescents with ASD is compromised by several factors, including emotional instability, financial burdens, and, to a lesser extent, the variability in sleep disorders. These findings underscore

the need for comprehensive support systems that address both the emotional and financial challenges of ASD, enhancing the overall quality of life for affected adolescents and their families. Future research should continue to explore these dimensions, particularly the nuanced relationship between ASD and sleep disorders, to develop targeted interventions that can mitigate these psychological burdens.

Spiritual Well-being of the adolescent with autism

The spiritual well-being of adolescents with autism represents a significant yet overlooked aspect of their overall health. Our study reveals that adolescents with ASD demonstrate high levels of spiritual well-being, contrary to the assertions made by some researchers. Aspects of spiritual well-being studied included participation in religious activities, such as attending services, engaging in prayer, and singing or drumming. These findings indicate active engagement and a sense of inclusion, which contribute to their spiritual well-being. This findings aligns with Liu et al. (2016), who emphasizes that spiritual well-being encompasses faith-based and religious aspects, which can enhance the functionality of autistic adolescents. Additionally, Gomez et al. (2012) highlight spiritual well-being as a valuable management resource for adolescents with autism, suggesting that it can play a crucial role in their overall well-being.

Although the interview guide did not include direct questions on spirituality, many participants spontaneously mentioned their spiritual beliefs and practices. This underscores the central role of spirituality in Ghanaian culture and its perceived function in coping with the challenges of raising an adolescent with ASD. The findings align with previous research indicating that spirituality often emerges naturally in discussions about stress and coping in highly religious societies (Jordan et al. 2020; Ouanes et al. 2021; Tutzer et al. 2024). Respondents in this study noted that adolescents with ASD actively participate in religious activities, such as congregational services, singing, drumming, and dancing. This level of engagement not only facilitates their integration into the community but also provides a means for them to socialize effectively. This observation challenges the views of Collins and Ault (2010), Kunz (2011), and Walsh et al. (2008), who argue that the unique characteristics of autistic adolescents often create barriers to full participation in religious activities. The active participation of adolescents with ASD in religious activities observed in our study suggests that these barriers may not be as pervasive as previously thought.

Engagement in religious events and activities can serve as a coping strategy for managing stress related to ASD. Crawford Sullivan and Aramini (2019), Davis III and Kiang (2020), and Gomez et al. (2012) assert that participation in religious activities can help adolescents with autism manage stress and improve their overall well-being. Our findings support this assertion, indicating that adults with ASD who engage in religious activities can better manage their condition. This engagement not only provides a structured environment for social interaction but also offers a sense of community and belonging, which are critical components of spiritual well-being. Moreover, the ability of adolescents with ASD to fully participate in religious activities suggests that their spiritual well-being is not hindered by their condition. On the contrary, these activities appear to enhance their sense of self and community integration, contributing positively to their overall quality of life. This observation is significant because it highlights an area where adolescents with autism can achieve a sense of normalcy and fulfillment.

This study contributes to the growing body of literature that recognizes the importance of spiritual well-being in the management of ASD. Gomez et al. (2012) and Liu et al. (2016) provide a theoretical framework that supports our observations, emphasizing that spiritual well-being can be a powerful tool in improving the functionality and quality of autistic adolescents' lives. Our study adds empirical evidence to this framework, demonstrating that active participation in religious activities can significantly benefit adolescents with ASD.

The high spiritual well-being observed in this study underscores the importance of considering spiritual and religious aspects in the holistic management of autism. This dimension of well-being not only facilitates community integration and socialization but also provides a valuable resource for stress management and overall health. Further studies should explore the role of spiritual well-being in the lives of individuals with ASD, with an emphasis on identifying best practices for integrating spiritual and religious activities into therapeutic interventions.

Limitations

This study's limitations include its focus on a specific geographical area (Accra). This factor may limit the generalizability of the findings to other regions of Ghana, where cultural and spiritual practices may differ. Additionally, the small number of participants ($n = 13$) and the reliance on caregiver perspectives, rather than direct interviews with adolescents, may limit the generalizability of findings. While parents can provide valuable insight, the adolescents' own voices are essential to fully understanding their psychological and spiritual well-being. Future studies should incorporate larger samples and perspectives from adolescents themselves.

Another limitation is the qualitative nature of this research. Although qualitative methods allow for an in-depth exploration of themes, they are inherently

subjective, and responses may be influenced by parents' personal beliefs and social contexts. Future studies should aim to incorporate adolescents' perspectives directly, explore diverse regions, and use larger samples to improve the breadth and depth of understanding regarding the psychological and spiritual well-being of adolescents with ASD in Ghana.

Conclusion

This study provides insights into the psychological and spiritual well-being of adolescents with ASD in Ghana, highlighting the challenges these adolescents and their families face in a context where stigma, limited mental health resources, and societal expectations significantly impact their lives. The findings underscore the importance of mental health support systems and the role of spirituality as a coping resource for both adolescents and their families.

To address the psychological needs of adolescents with ASD, there is a need for increased access to culturally appropriate mental health resources, which could involve training mental health professionals in ASD-specific care and integrating mental health support within existing healthcare services. Spirituality, as shown in this study, plays a significant role in the lives of many Ghanaian families, and religious communities could serve as supportive networks. Promoting inclusivity within these communities and educating religious leaders on ASD can enhance spiritual well-being and foster a sense of belonging for adolescents with ASD.

Ultimately, an integrated approach that combines mental health support and spiritual engagement has the potential to improve the overall well-being of adolescents with ASD in Ghana. By fostering inclusive, supportive environments that address both psychological and spiritual needs, stakeholders can help these adolescents, and their families navigate the challenges of ASD, promoting resilience and improving quality of life.

Abbreviations

ASD	Autism Spectrum Disorder
LMICs	Lower–Middle–Income Countries
QoL	Quality of Life

Supplementary Information

The online version contains supplementary material available at https://doi.org/10.1186/s12888-025-06844-x.

Supplementary Material 1

Acknowledgements

We thank all the respondents for making themselves available to respond to the questionnaire.

Author contributions

Conceptualized the study: A.K., A.A.F.; Methodology: A.K., K.A.K., A.A.F.; Software: A.K.; Validation: A.K., K.A.K.; Formal analysis: A.K., A.A.F.; Investigation: A.K., A.A.F.; Resources: A.K.; Data Curation: A.K.; Writing—original draft preparation: A.A.F.; Writing—review and editing: A.A.F., A.K., K.A.K.; Supervision: K.A.K., A.A.F.; Project Administration: A.K., A.A.F. All authors have read and agreed to the published version of the manuscript.

Funding

This study was self-funded.

Data availability

No datasets were generated or analysed during the current study.

Declarations

Ethics approval and consent to participate

The study was conducted in accordance with guidelines of the Declaration of Helsinki and approved by the Ghana Health Service's Ethics Review Board (Reference Number GHS-ERC 049/05/21). Participants were informed of their rights to withdraw from the study at any time and provided with informed consent forms, which they signed or thumb-printed. The target population consisted of parents of autistic adolescents aged 10–19 years. The study ensured anonymity and confidentiality by using codes instead of names in data reporting and by storing data securely.

Competing interests

The authors declare no competing interests.

Consent for publication

Consent was obtained from all participants for the publication of anonymized interview excerpts. Names and identifying details were removed to ensure confidentiality.

Clinical trial number

Not applicable.

Received: 13 November 2024 / Accepted: 9 April 2025
Published online: 17 April 2025

References

Abubakar A, Ssewanyana D, Newton CR. A systematic review of research on autism spectrum disorders in sub-Saharan Africa. Behav Neurol. 2016;2016(1):3501910.

Acheampong J. Caring for autism in Ghana: exploring the psychological impact and coping strategies of caregivers. Cogent Educ. 2024;11. https://doi.org/10.1080/2331186X.2024.2374686.

Agyekum HA. Challenges of parents with autistic children in Ghana. Brain Disorders Therapy. 2018;7(249):2. https://doi.org/10.4172/2168-975X.1000248.

Agyekum HA. In: Thiel A, Ntewusu SA, editors. Mental health in Ghana: standardisation, advocacy and changing perceptions of care and disease BT - The social life of health data: health records and knowledge production in Ghana. Singapore: Palgrave Macmillan; 2024. pp. 67–89. https://doi.org/10.1007/978-981-97-3500-6_4.

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders: DSM-5* (Vol. 5, Issue 5). American psychiatric association Washington, DC.

Bent S, Wahlberg J, Chen Y, Widjaja F, McDonald MG, Hendren RL. Quality of life among school-age children with autism: the oak hill school outcomes study. Semin Pediatr Neurol. 2020;34:100808. https://doi.org/10.1016/j.spen.2020.100808.

Broder-Fingert S, Shui A, Ferrone C, Iannuzzi D, Cheng ER, Giauque A, Connors S, McDougle CJ, Donelan K, Neumeyer A. A pilot study of autism-specific care plans during hospital admission. Pediatrics. 2016;137(Supplement2):S196–204.

Collins BC, Ault MJ. Including persons with disabilities in the religious community: program models implemented by two churches. J Relig Disabil Health. 2010;14(2):113–31. https://doi.org/10.1080/15228961003622195.

Crawford Sullivan S, Aramini V. Religion and positive youth development: challenges for children and youth with autism spectrum disorder. Religions. 2019;10(10):540.

Davis III, R. F., Kiang L. Parental stress and religious coping by mothers of children with autism. Psychol Relig Spiritual. 2020;12(2):137.
Demer LL. The autism spectrum: human rights perspectives. Pediatrics. 2018;141(Supplement4):S369–72.
Ferrell BR, Grant M, Funk B, Garcia N, Otis-Green S, Schaffner ML. Quality of life in breast cancer. Cancer Pract. 1996;4(6):331–40. http://europepmc.org/abstract/MED/9128486.
Formentos A, Ae-Ngibise KA, Nyame S, Asante KP. Situational analysis of service provision for adolescents with mental and neurological disorders in in two districts of Ghana. Int J Mental Health Syst. 2021;15:1–21. https://doi.org/10.1186/s13033-021-00457-z.
Ghana Statistical Service. (2021). *Population of Greater Accra; Ghana Statistical Service – 2021*.
Gomez LE, Arias B, Verdugo MÁ, Navas P. An outcomes-based assessment of quality of life in social services. Soc Indic Res. 2012;106:81–93.
Havens J. (2021). *Lived Experiences of Parents With Children With Autism Spectrum Disorder Transitioning to Adulthood* (Vol. 47, Issue 11) [Walden University]. https://scholarworks.waldenu.edu/cgi/viewcontent.cgi?article=12070&context=dissertations
Jordan G, Malla A, Iyer SN. Perceived facilitators and predictors of positive change and posttraumatic growth following a first episode of psychosis: a mixed methods study using a convergent design. BMC Psychiatry. 2020;20(1):289. https://doi.org/10.1186/s12888-020-02693-y.
Kunz R. You have not forgotten Us: towards a disability-accessible church and society. J Relig Disabil Health. 2011;15(1):20–33.
Leader G, O'Reilly M, Gilroy SP, Chen JL, Ferrari C, Mannion A. Comorbid feeding and Gastrointestinal symptoms, challenging behavior, sensory issues, adaptive functioning and quality of life in children and adolescents with autism spectrum disorder. Dev Neurorehabilitation. 2021;24(1):35–44.
Lincoln YS. Naturalistic inquiry. Sage; 1985.
Liu Y, Li J, Zheng Q, Zaroff CM, Hall BJ, Li X, Hao Y. Knowledge, attitudes, and perceptions of autism spectrum disorder in a stratified sampling of preschool teachers in China. BMC Psychiatry. 2016;16:1–12.
Manu N. (2012). *Belief and Attitudes surrounding Childhood Autism in Ghana* [Norges teknisk-naturvitenskapelige universitet, Fakultet for … https://ntnuopen.ntnu.no/ntnu-xmlui/handle/11250/270890
Mazurek MO, Petroski GF. Sleep problems in children with autism spectrum disorder: examining the contributions of sensory over-responsivity and anxiety. Sleep Med. 2015;16(2):270–9.
Oti-Boadi M, Asante O, K., Malm EK. The experiences of ageing parents of young adults with autism spectrum disorders (ASD). J Adult Dev. 2020;27(1):58–69.
Ouanes S, Kumar R, Doleh ESI, Smida M, Al-Kaabi A, Al-Shahrani AM, Mohamedsalih GA, Ahmed NE, Assar A, Khoodoruth MAS, AbuKhattab M, Maslamani M, Al, AlAbdulla MA. Mental health, resilience, and religiosity in the elderly under COVID-19 quarantine in Qatar. Arch Gerontol Geriatr. 2021;96:104457. https://doi.org/10.1016/j.archger.2021.104457.
Scahill L, Bearss K. The rise in autism and the mercury myth. J Child Adolesc Psychiatric Nurs. 2009;22(1):51. https://doi.org/10.1111/j.1744-6171.2008.00152.x.
Sonido MT, Hwang YI, Trollor JN, Arnold SRC. The mental well-being of informal carers of adults on the autism spectrum: A systematic review. Rev J Autism Dev Disorders. 2020;7(1):63–77.
Stephens T, Owusu NAV, Parchment T, McKay M. Meeting the needs of children and families with communication and other developmental difficulties in Accra, Ghana—an assessment of the AwaaWaa2 community-based program. Global Social Welf. 2015;2:111–8.
Tutzer F, Schurr T, Frajo-Apor B, Pardeller S, Plattner B, Schmit A, Conca A, Fronthaler M, Haring C, Holzner B, Huber M, Marksteiner J, Miller C, Perwanger V, Pycha R, Schmidt M, Sperner-Unterweger B, Hofer A. Relevance of spirituality and perceived social support to mental health of people with pre-existing mental health disorders during the COVID-19 pandemic: a longitudinal investigation. Soc Psychiatry Psychiatr Epidemiol. 2024;59(8):1437–48. https://doi.org/10.1007/s00127-023-02590-1.
Walsh MB, Walsh A, Gaventa WC. (2011). Autism and faith: a journey into community. In M. D. Mary Beth Walsh, Ph.D., Alice F. Walsh, M.Div., William C. Gaventa, editor, *The Elizabeth M. Boggs Center on Developmental Disabilities* (Second). https://boggscenter.rwjms.rutgers.edu/documents/BOGGS/Publications/CommunitySupportsandServices/AutismandFaith-ENG.pdf
WHO. (2025). *WHOQOL*. https://www.who.int/tools/whoqol/whoqol-bref

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