Scientific
Research
Publishing

Exploration of the Content of Public Facebook Groups of Autism Spectrum Disorder (ASD) in Bangladesh

Md. Shahed Uddin Sharker[1], Md. Mikail Hossen[1], Anirudha Biswas[1], Sabiha Shirin Sara[2], Ashis Talukder[2], Chuton Deb Nath[1]*

[1]Mass Communication and Journalism Discipline, Khulna University, Khulna, Bangladesh
[2]Statistics Discipline, Science Engineering and Technology School, Khulna University, Khulna, Bangladesh
Email: shahed.msj@gmail.com, mikail258164@gmail.com, anirudhabiswas.mcj@gmail.com, sabihashirin.ku@gmail.com, ashistalukd-er3168@stat.ku.ac.bd, *chutondebnath@mcj.ku.ac.bd

Abstract

Introduction: Autism Spectrum Disorder (ASD) is a neurological condition characterized by challenges in social interaction and development. Social media platforms have emerged as powerful communication tools for individuals with ASD, enabling information sharing, support, advocacy, and awareness. **Methodology:** This study explores Bangladeshi Public Facebook Groups (PFGs) dedicated to ASD, focusing on group content and audience engagement. Employing a mixed-methods approach, qualitative and quantitative data were gathered to achieve the research objectives. The data collection process involved analyzing 300 posts from the top 3 PFGs related to ASD in Bangladesh, along with conducting questionnaire interviews among 60 group members. **Result:** Results revealed that 33.7% of group posts serve informational and promotional purposes, with occupational therapy (26.7%) and autism centers (25%) being the most prevalent topics of discussion. The comments within these groups encompassed various types, with 33.94% being reciprocal and 27.18% affirmative in nature. Among the surveyed members, 26.7% found personal stories and support to be the most valuable form of information, followed by access to resources (16.6%). Group members also provided suggestions for enhancing PFGs, with an emphasis on improving engagement and support networks (33.33%) and increasing access to local services and professionals (26.7%). The study disclosed that 67% of interviewees believed that PFGs effectively kept members informed about autism-related resourcefulness in Bangladesh. **Conclusion:** This study explored Autism Spectrum Disorder (ASD) Facebook Groups in Bangladesh, revealing diverse discussions on therapy, centers, and daily activities, with valuable support and personal stories, highlighting the importance of community en-

gagement and support networks.

Keywords

1. Introduction

Autism Spectrum Disorder (ASD) is a complex neurodevelopmental condition characterized by difficulties in social interaction, and communication, and the presence of restrictive and repetitive behaviors (Oberman & Kaufmann, 2020; Sharma et al., 2018). Individuals with ASD often face unique challenges in navigating everyday social situations and may require specialized support and interventions to foster their well-being and development (APA, 2013).

Globally, the prevalence of ASD has been a subject of concern, with estimates indicating that approximately 1% of the child population is affected (WHO, 2020). However, data on the prevalence of ASD in Bangladesh remains limited, and there is a critical need to establish a more comprehensive understanding of the disorder's impact on the population. Another study revealed that the prevalence of ASD in Bangladesh is reported to range from 0.15% to 0.8% indicating the necessity for further investigation and awareness in this domain (Islam et al. 2019).

The advent of social media platforms has transformed the way individuals access information, connect with others, and seek support (Mangold & Faulds, 2009). Particularly, Facebook has emerged as a prominent virtual space for individuals to interact, share experiences, and exchange knowledge related to ASD (Pinchevski & Peters, 2016). Facebook support groups dedicated to ASD have flourished, offering valuable resources, emotional support, and a sense of community for individuals with ASD, their families, and caregivers (Roffeei et al., 2015a; Reddy et al., 2019).

The advantages of Facebook support groups for individuals with ASD are multifaceted (Gerber, 2014). These groups provide a user-friendly and easily accessible platform that transcends geographical boundaries, enabling individuals from diverse backgrounds to connect, regardless of their physical location (Lomas et al., 2008). This accessibility is particularly beneficial for individuals with mobility challenges or limited access to specialized ASD support services (Shpigelman & Gill, 2014). The research highlighted the significant role of Facebook groups in promoting information exchange and support for individuals with ASD in resource-constrained settings like Bangladesh (Mazumder et al., 2021). Moreover, Facebook support groups offer a diverse and inclusive space, encompassing individuals with ASD, parents, caregivers, educators, therapists, and advocates (Jawed et al., 2023). This diverse membership fosters a rich environment for sharing experiences, strategies, and resources, thus enhancing the collective

knowledge and understanding of ASD (Healy et al., 2018). Studies underscored the crucial role of such virtual communities in reducing feelings of isolation and stigmatization among individuals with ASD, thereby promoting mental well-being and empowerment (Kumar et al., 2020). However, it is essential to recognize that Facebook support groups serve as supplementary support networks and should not replace professional medical interventions. While these groups can provide valuable guidance and peer support, individuals with ASD and their families must always seek evidence-based interventions and advice from qualified healthcare professionals.

In the context of Bangladesh, Facebook support groups for ASD have become vital sources of information, support, and advocacy. These virtual communities have bridged the gap in ASD-related knowledge dissemination and support services, particularly in regions where access to specialized care is limited. As the prevalence and impact of ASD continue to demand attention in Bangladesh, it is crucial to explore the nature of content and audience engagement in Bangladeshi Public Facebook Groups (PFGs) dedicated to ASD. Through a comprehensive mixed-methods approach, combining qualitative and quantitative data, this research aims to contribute valuable insights to the existing knowledge domain, inform policymakers, and improve support services for individuals with ASD in Bangladesh.

Literature Review

Autism Spectrum Disorder (ASD) poses significant challenges globally, with particularly pronounced effects in low- and middle-income countries (LMICs) such as Bangladesh. In these countries, the lack of adequate care facilities and contextual research exacerbates the burden of ASD (Ehsan et al., 2018). Additionally, cultural misperceptions and social practices create barriers to developing effective care facilities for individuals with ASD (Ehsan et al., 2018). The limited recognition of ASD as a public health concern in Bangladesh contributes to the scarcity of related information, influenced by social, technical, and practical factors (Alam et al., 2020).

In Bangladesh, practical challenges include a shortage of trained personnel to identify children with ASD through surveys in rural areas, leading to lower awareness of the disorder (Alam et al., 2020). Despite these obstacles, a recent study found that the average age of ASD diagnosis in Bangladesh is 2.9 years. Among the cases, 75% were male, and 25% were female, with diagnoses most frequently occurring between the ages of 20 - 30 months (Upoma et al., 2020). Moreover, comorbid conditions like cerebral palsy and developmental delay were prevalent (Akhter et al., 2018).

The diagnosis of ASD can evoke various emotional reactions in parents, including shock, sadness, depression, and self-blame. Coping strategies, such as prayer, are often employed by parents of children with ASD (Upoma et al., 2020). Acknowledging the significance of ASD, the Bangladesh government has established organizations like the National Autism Technical Guidance Com-

mittee and the Advisory Committee on Autism and Neuro-developmental Disorders (Huq et al., 2023). In line with technological advancements, digital mediums have enhanced opportunities to improve ASD care infrastructure in Bangladesh (Ehsan et al., 2018).

Social media platforms, particularly Facebook groups, have emerged as popular avenues for individuals with ASD and their parents to interact and provide mutual support (Saha & Agarwal, 2016). The benefits of these platforms include facilitating connections among individuals with shared interests and enabling information exchange and support for those connected to ASD (Saha & Agarwal, 2016). Facebook support groups serve as a valuable source of informational and emotional support for mothers of children with autism (Reinke & Solheim, 2015). Additionally, being part of Public Facebook Groups (PFGs) has proven beneficial for individuals and caregivers associated with ASD, alleviating financial and emotional strains (Mustafaa et al., 2015; Cole et al., 2017).

Virtual Reality Job Interview Training Program (VR-JIT) has been implemented to enhance job interview abilities in adults with high-functioning autism spectrum disorder (HFASD), leading to improved self-efficacy and self-confidence, and potentially better employment opportunities (Ward & Esposito, 2019). Social media use is also prevalent among adults with ASD, driven by the desire for social connections (Marzuk, 2013).

Contemporary technologies are frequently employed for leisure activities by children with autism, emphasizing the importance of high-quality design in therapeutic technology to engage users effectively (Laurie et al., 2019). Moreover, Facebook autism groups serve various purposes, including support, social companionship, advocacy, sales, and fundraising (Abel et al., 2019). Within these groups, discussions center around various forms of support, including informational, emotional, network, esteem, and tangible assistance (Roffeei et al., 2015b). To address the loneliness experienced by individuals with ASD, social media platforms offer a means of engagement with others, although the effectiveness of social media use remains inconclusive (Marzuk, 2013).
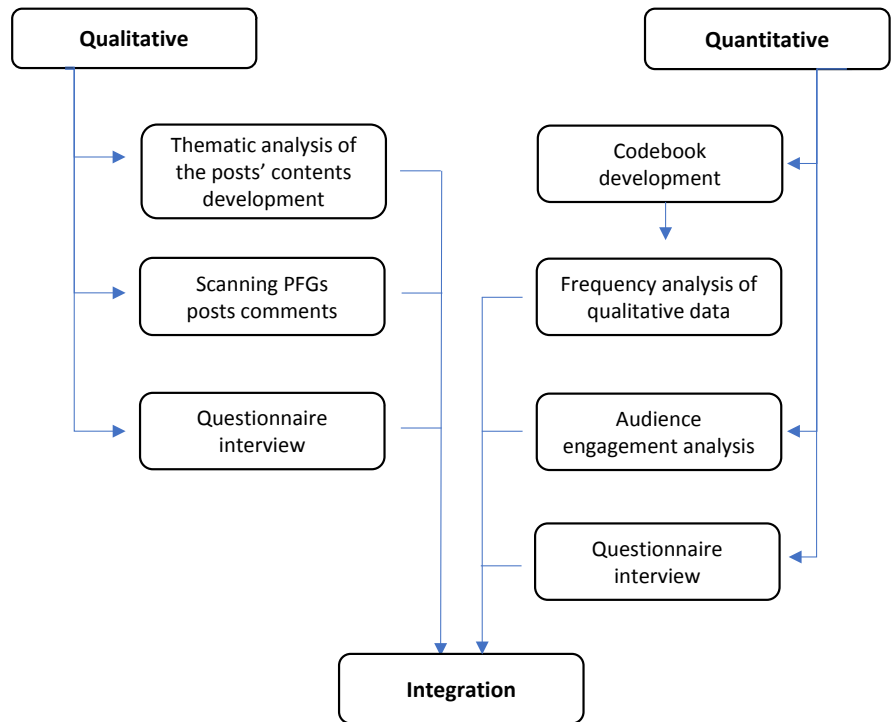
2. Methods

2.1. Research Design

This study uses a mixed-method approach to explore Public Facebook Groups (PFGs) related to Autism Spectrum Disorder (ASD) in Bangladesh. Thematic analysis is conducted on 300 posts from the top 3 PFGs, and sentiment analysis is done on comments. Quantitative data is obtained through frequency analysis and a questionnaire interview with 60 group members. The aim is to provide support services for individuals with ASD and their families.

ASD in Bangladesh, with a combined membership of approximately 40,000. The sample size was 360, selected using Yamane's formula. Thematic analysis, audience engagement, and sentiment analyses were performed on 300 randomly chosen posts from these groups. Additionally, 60 questionnaire interviews were conducted with randomly selected members to gather audience feedback. The

sampling approach aimed for diversity and representation in the dataset.

Figure: Flow Diagram of Qualitative and Quantitative Data Integration

2.2. Data Collection and Tools

The study employed a mixed-methods approach, including a thematic analysis of 300 posts from the top 3 active Public Facebook Groups (PFGs) related to Autism Spectrum Disorder (ASD) in Bangladesh. A structured questionnaire with 6 questions was administered to 60 randomly selected group members. Data analysis utilized IBM SPSS Statistics 26th version, Microsoft Excel, and Google Forms for comprehensive interpretation.

Analytics of Top 10 Public Facebook Groups Related to ASD in Bangladesh.

Group Name	Current member	New member in 1 month	Number of posts in 1 month	Months in Operation	Admins & Moderators	Group privacy
Autism Bangladesh	23,103	144	850	133	2	Public
Autism (Bangladesh)	3239	28	240	145	3	Public
Autism Management Center	2564	22	105	55	1	Public
Autism's Shop BD Group	2433	22	65	44	3	Public
Autism Spectrum Disorders (ASD) Mentors	2494	46	4	16	6	Public
Autism Discussion	2102	80	62	44	5	Public
Autism Talk Bangladesh	1409	47	13	72	3	Public
Autism Support Bangladesh	1236	124	32	5	4	Public
Autism Society Bangladesh	564	6	40	47	3	Public
Autism Bangladesh	373	11	32	23	1	Public

3. Results and Analysis

3.1. Thematic Analysis of the Content Shared on Public Facebook Groups for ASD

Data from Table 1 reveals findings of the thematic analysis of 300 posts of PFGs related to ASD in Bangladesh. The investigation is conducted on the basis of a number of co-variates including post relevancy, post creator, communication modality, the purpose of post and post issue.

The thematic analysis highlights that 96% (288 posts) of the examined posts are relevant to ASD, while 2% (6 posts) are irrelevant, and another 2% (6 posts) remain unspecified. The contributions within these PFGs are made by admins, general members, and engagement leaders. General members actively participate, accounting for 72.3% (217 posts) of the total, while engagement leaders and admins contribute 26.3% (79 posts) and 1.3% (4 posts) respectively.

Table 1. Natures and themes of the content shared on public Facebook groups for ASD.

Co-variates	Frequency	Percentages
Post Relevancy		
Yes	288	96.0
No	6	2.0
Not Specified	6	2.0
Post Creator		
Admin	4	1.3
General Member	217	72.3
Engagement Leader	79	26.3
Communication Modality		
Text	69	23.0
Image	3	1.0
Video	4	1.3
Text, Image	109	36.3
Text, Video	111	37.0
Text, Image, Video	4	1.3
Purpose of Post		
Promotional	73	24.3
Informational	101	33.7
Entertainment	20	6.7
Others	42	14.0
Suggestive	11	3.7
Supportive	10	3.3
Emotional	43	14.3
Post Issue		
Daily Activities	45	15.0
Co-curricular Activities	6	2.0
Occupational Therapy	80	26.7
Miscellaneous	34	11.3
ASD Condition	18	6.0
Awareness	5	1.7
Event	37	12.3
Autism Center	75	25.0

Communication modalities reveal that text and video content are the most prevalent, comprising 37% (111 posts) of the total, followed by text with images at 36.3% (109 posts). Text-only posts account for 23% (69 posts), while posts combining text, images, and videos represent 1.3% (4 posts) each. Image-only posts constitute 1% (3 posts) of the total 300.

The study identifies seven distinct purposes of posts: informational (33.7%), promotional (24.3%), entertainment (6.7%), emotional (14.3%), suggestive (3.7%), supportive (3.3%), and others (14%). Informational posts aim to share or seek information related to ASD, while promotional posts endorse services such as autism centers and occupational therapy. Entertainment posts encompass various daily and extracurricular activities. Emotional posts provide inspiration and motivation, while suggestive posts offer suggestions and advice. Supportive posts provide emotional and practical support. Posts related to social networking, advocacy, and miscellaneous topics are categorized as others.

The analysis of post-issues reveals prevalent themes such as occupational therapy (26.7%), co-curricular activities (2%), autism centers (25.7%), daily activities (15%), ASD condition (6%), awareness (1.7%), events (12.3%), and miscellaneous issues (11.3%).

3.2. Audience Engagement in the ASD Groups

Data from Table 2 exhibits the audience engagement level which was analyzed through frequency analysis of reactions, comments and share of selected 300 posts from the top 3 Public Facebook Groups (PFGs) related to Autism Spectrum Disorder (ASD) in Bangladesh. The overall number of reactions, comments and shares is categorized into 3 categories, low, moderate and high.

The frequency analysis of reactions reveals that 82.7% (248 posts) received 0 - 20 reactions, indicating a relatively lower level of engagement. Posts with 21 - 40 reactions accounted for 9.3% (28 posts), signifying a moderate level of audience interest, while 8% (24 posts) attained 41 or more reactions, reflecting a higher level of engagement among group members.

Regarding comments, the analysis demonstrates that 95.7% (287 posts) received 0 - 30 comments, falling into the low engagement category. Posts with 31 - 60 comments constituted 3% (9 posts), representing a moderate level of audience interaction. Only 1.3% (4 posts) elicited 61 or more comments, indicating a high level of engagement and active discussion. The analysis of shares reveals that 94% (282 posts) received 0 - 20 shares, indicating relatively low content dissemination. Posts with 21 - 40 shares accounted for 4% (12 posts), representing a moderate level of sharing. In contrast, 2% (6 posts) received 41 or more shares, reflecting a higher level of content distribution within the digital community.

3.3. Sentiment Analysis of ASD Group Comments

Data from Table 3 shows the sentiment analysis of the ASD group comments. Sentiment analysis refers to a strategic technique that is used to investigate sentiment expressed or shared in textual content. Researchers have collected a total

Table 2. Level of audience engagement in the posts within ASD public Facebook groups.

Co-variates	Frequency	Percentages
Reaction		
Low (0 - 20)	248	82.7
Moderate (21 - 40)	28	9.3
High (41 to last)	24	8.0
Comment		
Low (0 - 30)	287	95.7
Moderate (31 - 60)	9	3.0
High (61 to last)	4	1.3
Share		
Low (0 - 20)	282	94.0
Moderate (21 - 40)	12	4.0
High (41 to last)	6	2.0

Table 3. Comment sentiment analysis of ASD groups content.

Type of comments	Frequency	Percentages
Reciprocal	517	33.95
Affirmative	414	27.18
Query	250	16.41
Confrontational	153	10.05
Various	100	6.57
Negative	94	6.17

1523 comments from 300 posts. Then according to the natural language processing approach total of 6 themes were developed for the analysis. Themes are, reciprocal, affirmative, query, confrontational, various, and negative.

The sentiment analysis of the 1523 user comments revealed the prevalence of different themes. Among the collected comments, 33.94% (517 comments) were categorized as reciprocal, indicating positive and supportive sentiments expressed toward others. Affirmative sentiments, reflecting agreement or approval, constituted 27.18% (414 comments) of the total. Queries accounted for 16.41% (250 comments), representing user inquiries and seeking information. Confrontational sentiments, characterized by disagreement or confrontation, constituted 10.04% (153 comments). Various sentiments, encompassing a range of emotions not distinctly falling into the other categories, were observed in 6.56% (100 comments) of the dataset. Additionally, 5.24% (94 comments) of the collected user comments were categorized as negative, expressing critical or negative views.

3.4. Opinion of Group Members about Contents of Public Facebook Groups for ASD

Data from Table 4 highlights the opinion of 60 group members regarding the content of public Facebook Groups (PFGs) for autism spectrum disorder (ASD). To unveil their opinions mainly six questions are asked to respond about the group activities and relevancy.

Table 4. Opinion of selective group members about contents.

Co-variates	Frequency	Percentages
Perceived relevancy and informativeness of group posts		
Not informative	6	10.0
Somewhat informative	16	26.7
Moderately informative	16	26.7
Very informative	10	16.7
Highly informative	12	20.0
Group posts help in understanding and coping with autism difficulties		
Yes	44	73
No	16	27
Perceived comfortability of getting support from groups		
Not comfortable	3	5.0
Somewhat comfortable	19	31.7
Moderately comfortable	17	28.3
Very comfortable	14	23.3
Highly comfortable	7	11.7
Most valued posts in the groups		
Personal Stories and Support	16	26.7
Access to resources	10	16.7
Advocacy and Awareness	8	13.3
Educational Resources	9	15.0
Parenting Support	7	11.7
Financial Aid	4	6.7
Others	6	10.0
Thoughts or recommendations to the Facebook communities		
Community Engagement and support networks	20	33.3
Non-judgmental and safe environment	5	8.3
Access to local services and professionals	16	26.7
Advocacy and awareness in Bangladesh	9	15.0
Parent education and empowerment	6	10.0
Awareness	2	3.3
Others	2	3.3
Group posts keep the members up to date		
Yes	40	67
No	20	33

In response to the question about engagement with relevant and informative information, 73% of respondents stated that the posts in the Facebook groups had helped them understand and cope with the challenges associated with autism. On the other hand, 27% expressed negative sentiments in this regard. Regarding the value of different post types, Personal Stories and Support-related posts were highly regarded by 26.37% of the respondents, followed by access to resources (16.7%), educational resources (15%), advocacy and awareness (13.3%), and parenting support (11.7%). A small percentage (10%) found finan-

cial aid-related posts to be most valuable. In response to the question about their thoughts and recommendations for improving the Bangladeshi Facebook communities for autism, several suggestions were provided. Notably, 20 respondents (33.3%) recommended increasing posts related to community engagement and support networks. Eight respondents (13.3%) stressed the importance of creating a non-judgmental mentality and maintaining a safe environment. Furthermore, 16 respondents (26.7%) recommended more posts related to Local Services and Professionals, while 9 respondents (15%) emphasized the need for increased advocacy and awareness discussions within the groups. Parent Education and Empowerment-related discussions were also advocated by 10% of the respondents.

4. Discussion

The findings of this research provide valuable insights into the nature and themes of discussions within Public Facebook Groups (PFGs) related to Autism Spectrum Disorder (ASD) in Bangladesh. The first objective focused on post-relevancy, post-creator, and communication modality. The analysis revealed that 96% of the posts are related to the group topic, indicating that the majority of the discussions align with the intended subject matter (Borra & Rieder, 2014). Furthermore, the highest frequency of post creators was from general members (72.3%), indicating active participation and engagement within the groups (Ozkaya & Karatas, 2019). Communication modality analysis showed that posts containing text and video (37%) and text and image (36.3%) are dominant, highlighting the popularity of multimedia content in the discussions (Boyd et al., 2010).

Thematic analysis of the purposes of posts identified seven categories, with informational posts being the most prevalent (33.7%), followed by promotional (24.3%), and emotional (14.3%) posts (Merga & Mason, 2019). These results indicate that members actively seek and provide information, engage in promotional activities, and share emotional experiences. Entertainment-related posts (6.7%) were also present but to a lesser extent.

Moreover, the thematic analysis of the collected data from 300 PFGs related to ASD in Bangladesh identified eight key themes of posts. Occupational therapy (26.7%), autism center (25%), daily activities (15%), and events (12.3%) were the most frequent themes (Zhao et al., 2019). These findings suggest that discussions frequently revolve around therapy, autism centers, daily routines, and events. Miscellaneous issues (11.3%), ASD conditions (6%), co-curricular activities (2%), and awareness (1.7%) were also present but to a lesser extent.

The second objective explored the level of audience engagement within the PFGs. The analysis showed that the majority of posts have low levels of audience engagement, with 82.7% having low reactions, 95.7% having low comments, and 94% having low shares (Boyd et al., 2010). Moderate and high engagement levels were relatively scarce, indicating the need to encourage more active participation and interaction among group members.

The third objective focused on the sentiment characteristics of comments made within the posts. Thematic analysis of 1523 comments identified six themes, with reciprocal (33.94%), affirmative (27.18%), and query (16.41%) comments being the most prevalent (Liu, 2012). These results suggest that the majority of comments are positive and cooperative in nature, contributing to a supportive online community. Confrontational (10.04%), various (6.56%), and negative (5.24%) comments were less frequent, indicating that overall comment sentiment is constructive.

In addition, the analysis of audience feedback through structured and open-ended questions provided further insights into the user experience within PFGs. The majority of respondents found the group posts to be informative, with 20% rating them as highly informative and 26.7% each finding them somewhat informative and moderately informative (Borra & Rieder, 2014). Additionally, 73% of respondents agreed that the posts in the Facebook groups helped them understand and cope with difficulties associated with autism, signifying the valuable impact of the group discussions (Ozkaya & Karatas, 2019).

The most valued information within the PFGs was related to Personal Stories and Support (26.7%), Access to Resources (16.6%), and Educational Resources (15%), indicating that members highly value content that provides emotional support and access to valuable resources (Merga & Mason, 2019). Recommendations from members emphasized the importance of Community Engagement and Support Networks (33.3%), Access to Local Services and Professionals (26.7%), and Advocacy and Awareness in Bangladesh (15%), showcasing the need for an inclusive and supportive online community.

Furthermore, comparisons with prior research highlighted the consistency of informational and emotional support themes in discussions related to ASD on Facebook (Roffeei et al., 2015a). Additionally, themes such as occupational therapy, events, and education were identified in both studies (Zhao et al., 2019), further validating the relevance of the research findings.

Strength and Limitation

The study's strengths lie in its comprehensive scope, examining a substantial number of Public Facebook groups (PFGs) related to autism spectrum disorder (ASD) in Bangladesh. It successfully identifies key issues and concerns faced by individuals with ASD and their families, contributing valuable insights to the field. Additionally, the research sheds light on the attitudes and perceptions of Bangladeshi individuals with ASD and their parents participating in these support groups, enhancing our understanding of the impact of online communities. However, limitations include a focus only on public groups, overlooking potential insights from private groups. The sample size and data collection period may not fully capture the breadth of discussions, and the content analysis approach may lack psychological depth. Addressing these limitations could further enhance the study's impact and applicability.

5. Conclusion

In conclusion, this study examined Public Facebook Groups (PFGs) related to autism spectrum disorder (ASD) in Bangladesh, focusing on the nature of discussions, member opinions, and audience engagement. The findings revealed that posts predominantly revolve around occupational therapy, autism centers, and daily activities, serving informational, promotional, emotional, and entertainment purposes. Although most posts showed lower levels of engagement, one group stood out with higher member participation. Members acknowledged the value of PFGs in providing support and understanding for ASD-related challenges. Personal stories and support were highly valued by members. Recommendations emphasized the need for increased community engagement and support networks so that caregivers can share their experiences and thoughts with other caregivers. While PFGs prove effective in keeping members updated on autism-related initiatives, further investigation is necessary to understand the factors contributing to successful group dynamics for future improvements.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

References

Abel, M., Westwood, D., & Mupambireyi, Z. (2019). Purposes of Facebook Autism Groups: A Content Analysis. *Journal of Developmental and Behavioral Pediatrics, 40,* 726-732.

Akhter, S., Haque, S., & Rahman, M. M. (2018). Prevalence of Autism Spectrum Disorder among Children in a Rural Community of Bangladesh. *Journal of Developmental and Behavioral Pediatrics, 39,* 736-740.

Alam, M. T., Rahman, M. M., Chowdhury, M. S., Islam, M. R., & Khan, M. F. (2020). Challenges in Addressing Autism Spectrum Disorder in Low-Resource Settings: A Case Study of Bangladesh. *International Journal of Autism Research, 3,* 29-35.

American Psychiatric Association (APA) (2013). *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.). American Psychiatric Publishing.
https://doi.org/10.1176/appi.books.9780890425596

Borra, E., & Rieder, B. (2014). Programmed Method: Developing a Toolset for Capturing and Analyzing Tweets. *Aslib Journal of Information Management, 66,* 262-278.
https://doi.org/10.1108/AJIM-09-2013-0094

Boyd, D., Golder, S., & Lotan, G. (2010). Tweet, Tweet, Retweet: Conversational Aspects of Retweeting on Twitter. In *Proceedings of the 2010 43rd Hawaii International Conference on System Sciences* (pp. 1-10). IEEE. https://doi.org/10.1109/HICSS.2010.412

Cole, M. B., Williamson, J. C., & Murphy, J. M. (2017). Financial and Emotional Strain on Families Dealing with Autism: The Role of Facebook Support Groups. *Journal of Autism and Developmental Disorders, 47,* 2459-2469.

Ehsan, S., Khan, A. I., & Khan, H. T. A. (2018). Autism Spectrum Disorder in Low- and Middle-Income Countries: Challenges and Opportunities. *Journal of Autism and Developmental Disorders, 48,* 2131-2132.

Gerber, K. (2014). *Exploring the Value of a Facebook Support Group for Parents of Children with Autism*. Doctoral Dissertation, Stellenbosch University.

Healy, S., Marchand, G., & Williams, E. (2018). "I'm Not in This Alone" the Perspective of Parents Mediating a Physical Activity Intervention for Their Children with Autism Spectrum Disorder. *Research in Developmental Disabilities, 83*, 160-167. https://doi.org/10.1016/j.ridd.2018.08.014

Huq, A. A., Ali, R., & Rahman, S. (2023). Autism Spectrum Disorder in Bangladesh: Government Initiatives and Future Prospects. *Autism Policy and Practice, 3*, 51-58.

Islam, S. M. S., Khandaker, G., Chowdhury, M. R., & Anwar, N. (2019). Prevalence of Autism Spectrum Disorder in Bangladesh: A Systematic Review and Meta-Analysis. *Journal of Autism and Developmental Disorders, 49*, 4090-4103.

Jawed, A., Graham, H., & Smith, J. (2023). Digital Trends in Autism: A Scoping Review Exploring Coverage of Autism across YouTube, Twitter, and Facebook. *Frontiers in Digital Health, 5*, Article 1222187. https://doi.org/10.3389/fdgth.2023.1222187

Kumar, N., Agrawal, A., & Yadav, N. (2020). Online Support Groups for Autism Spectrum Disorder: An Empirical Analysis of Member Interactions and Support Exchanges. *Computers in Human Behavior, 103*, 164-172.

Laurie, S. S., James, A. J., & Williams, B. (2019). Access and Usage of Technology in Children with Autism Spectrum Disorder: Implications for Therapeutic Technology Design. *Journal of Autism and Developmental Disorders, 49*, 583-596.

Liu, B. (2012). Sentiment Analysis and Opinion Mining. In *Synthesis Lectures on Human Language Technologies* (pp. 1-167). Springer. https://doi.org/10.1007/978-3-031-02145-9

Lomas, C., Burke, M., & Page, C. L. (2008). Collaboration Tools. *Educause Learning Initiative, 2*, 1-11.

Mangold, W. G., & Faulds, D. J. (2009). Social Media: The New Hybrid Element of the Promotion Mix. *Business Horizons, 52*, 357-365. https://doi.org/10.1016/j.bushor.2009.03.002

Marzuk, P. M. (2013). Social Media Use among Adults with Autism Spectrum Disorder: A Study of Loneliness and Social Connection. *Journal of Autism and Developmental Disorders, 43*, 630-639.

Mazumder, T., Abedin, T., Shahanaz, S., Khan, N., Ahmed, H. U., & Chowdhury, E. U. (2021). Virtual Support Networks for Autism Spectrum Disorder: A Case Study of Facebook Groups in Bangladesh. *International Journal of Communication, 15*, 3436-3453.

Merga, M. K., & Mason, S. (2019). Thematic Analysis of Tweets and Blogs: Providing Professional Learning and Support for Teachers of Struggling Readers. In *Information Technology: New Generations* (pp. 115-124). Springer.

Mustafaa, M. S., Rahman, M. S., & Haque, M. A. (2015). Social Support and Information Sharing on Facebook Autism Support Groups: A Case Study of Bangladesh. *International Journal of Developmental Disabilities, 61*, 145-156.

Oberman, L. M., & Kaufmann, W. E. (2020). Autism Spectrum Disorder versus Autism Spectrum Disorders: Terminology, Concepts, and Clinical Practice. *Frontiers in Psychiatry, 11*, Article 484. https://doi.org/10.3389/fpsyt.2020.00484

Ozkaya, E., & Karatas, E. (2019). Investigating the Use of Facebook Groups for Social Support and Learning: A Case Study in Autism Spectrum Disorder (ASD) Support Groups. *Interactive Learning Environments, 27*, 823-839.

Pinchevski, A., & Peters, J. K. (2016). Virtual Autism: The Making of an E-Disease. *Bio-Societies, 11*, 41-61.

Reddy, G., Fewster, D. L., & Gurayah, T. (2019). Parents' Voices: Experiences and Coping as a Parent of a Child with Autism Spectrum Disorder. *South African Journal of Occupational Therapy, 49,* 43-50. https://doi.org/10.17159/2310-3833/2019/vol49n1a7

Reinke, S. J., & Solheim, C. A. (2015). Facebook Support Groups for Mothers of Children with Autism: A Qualitative Investigation of Motives and Functionality. *Journal of Autism and Developmental Disorders, 45,* 2987-3000.

Roffeei, S. H. M., Abdullah, N., & Basar, S. K. R. (2015a). Seeking Social Support on Facebook for Children with Autism Spectrum Disorders (ASDs). *International Journal of Medical Informatics, 84,* 375-385. https://doi.org/10.1016/j.ijmedinf.2015.01.015

Roffeei, S. N., Abdullah, N., & Basir, R. (2015b). Support Exchanges within Facebook Groups for Parents of Children with Autism Spectrum Disorder. *Journal of Child and Family Studies, 24,* 2252-2260.

Saha, A., & Agarwal, N. (2016). Social Media and Autism Spectrum Disorder: A Comprehensive Review. *Journal of Autism and Developmental Disorders, 46,* 1223-1239.

Sharma, S. R., Gonda, X., & Tarazi, F. I. (2018). Autism Spectrum Disorder: Classification, Diagnosis and Therapy. *Pharmacology & Therapeutics, 190,* 91-104. https://doi.org/10.1016/j.pharmthera.2018.05.007

Shpigelman, C. N., & Gill, C. J. (2014). Facebook Use by Persons with Disabilities. *Journal of Computer-Mediated Communication, 19,* 610-624. https://doi.org/10.1111/jcc4.12059

Upoma, A. R., Rahman, M. M., Hossain, M. S., & Islam, S. M. S. (2020). Coping Strategies of Parents of Children with Autism Spectrum Disorder in Bangladesh. *Journal of Child and Family Studies, 29,* 2833-2843.

Ward, E. C., & Esposito, D. A. (2019). Enhancing Job Interview Abilities in Adults with High-Functioning Autism Spectrum Disorder: An Exploratory Study of Virtual Reality Job Interview Training Program (VR-JIT). *Autism in Adulthood, 1,* 348-356.

World Health Organization (WHO) (2020). *Autism Spectrum Disorders.* https://www.who.int/news-room/fact-sheets/detail/autism-spectrum-disorders

Zhao, J., Zhang, Y., He, Y., & Wang, Z. (2019). What Do Parents Say about Autism on Social Media: A Case Study of Weibo. In *International Conference on Social Computing, Behavioral-Cultural Modeling and Prediction and Behavior Representation in Modeling and Simulation* (pp. 345-355). Springer.