Chapter 3

Research Methodology

This chapter outlines the methodology employed to assess a psychosocial intervention designed for mothers of children with Autism Spectrum Disorder (ASD), using a mixed-methods approach that integrates both qualitative and quantitative techniques. The initial phase involved conducting a needs assessment, which served as the foundation for developing the intervention. The quantitative phase followed a classical experimental design, featuring a before-and-after test with a control group to measure the effectiveness of the intervention. Participants were randomly selected from the identified centres in the Kamrup Metropolitan District of Assam, and the intervention was delivered over 11 sessions, combining individual and group formats. Data analysis included thematic analysis for qualitative data, along with descriptive and inferential statistics to examine demographic details and evaluate the changes and relationships resulting from the intervention. This chapter provides a thorough overview of the research methods used, ensuring the study's validity, reliability, and robustness in addressing the research objectives.

Aim

To examine the effects of Psychosocial Intervention for mothers of children with autism spectrum disorder (ASD) on their overall quality of life.

Objectives

1. To understand the needs of mothers of children with ASD and develop a psychosocial intervention module.
2. To assess the parental stress on mothers of children with ASD before and after psychosocial intervention.
3. To examine the perceived support on mothers of children with ASD before and after psychosocial intervention.
4. To identify the coping of mothers of children with ASD before and after psychosocial intervention.
5. To test the efficacy of the developed psychosocial intervention on the overall quality of life of mothers of children with ASD.

Hypotheses

H_0 There is no significant difference in parental stress levels of mothers of children with ASD in the experimental group after the psychosocial intervention as compared to mothers in control groups.

H_1 There is a significant difference in parental stress levels of mothers of children with ASD in the experimental group after the psychosocial intervention as compared to mothers in control groups.

H_0 There is no significant difference in the perceived support of mothers of children with ASD in the experimental group after the psychosocial intervention as compared to mothers in the control group.

H_2 There is a significant difference in the perceived support of mothers of children with ASD in the experimental group after the psychosocial intervention as compared to mothers in the control group.

H_0 There is no significant difference in the coping strategies of mothers of children with ASD in the experimental group after the psychosocial intervention as compared to mothers in the control group.

H_3 There is a significant difference in the coping strategies of mothers of children with ASD in the experimental group after the psychosocial intervention as compared to mothers in the control group.

H_0 There is no significant improvement in the overall quality of life of mothers of children with ASD in the experimental group after the psychosocial intervention as compared to mothers in the control group.

H_4 There is a significant improvement in the overall quality of life of mothers of children with ASD in the experimental group after the psychosocial intervention as compared to mothers in the control group.

Operational Definitions

Children with ASD

In this study refers to children who has been diagnosed with Autism Spectrum Disorder and receiving services from the identified centres.

Primary Caregivers

In this study refers to the person who is providing personal care, meal planning and food preparation, medication management, who participate in required trainings or meetings, general healthcare, emotional support to the child with ASD.

Mothers of Children with ASD

In this study refers to either biological or adoptive mothers who are the primary caregivers of children who are diagnosed with ASD and are attending the identified centres.

Parental Stress

Refers to the unpredictable, uncontrollable, and overloaded pressure respondents find in their lives relating to parenting a child with ASD.

Social Support

Refers to informational, emotional, and tangible support and the source from which these supports are received namely family, friends, or significant others.

Coping

Refers broadly as an effort used by mothers of children with ASD to minimize distress associated with negative life experiences.

Quality of life

In this study it is defined as the reduction of stress, enhanced access to social support, and the use of effective coping behaviours.

Psychosocial intervention- in this study, it refers to the psychosocial intervention module which was developed by the researcher after comprehensive literature review and assessment of needs from the target groups.

Research Design

This study employed a mixed-methods research design, integrating both qualitative and quantitative methodologies to provide a comprehensive analysis of the research problem.

Qualitative Method

An exploratory qualitative approach was used to investigate the challenges faced by mothers in raising a child with ASD.

An exploratory qualitative approach is usually employed to investigate and gain insights into complex phenomena that require detailed and comprehensive understanding (Moser & Korstjens, 2017). This approach is particularly valuable when researchers seek to gather detailed, rich, and in-depth information about a particular issue or experience (Kalu & Bwalya, 2017). It allows for the flexibility to explore a wide range of perspectives and themes that may emerge during the research process. Exploratory qualitative research emphasizes understanding the meanings, experiences, and interpretations of participants (Tenny et al., 2017).

This approach was deemed most suitable because it allows for an in-depth understanding of the complex, in-depth experiences of the participants. Through open-ended interviews and discussions, the exploratory method facilitates the discovery of themes and insights that might not emerge from structured quantitative methods (Cleland, 2017). It provides a rich, detailed context that is essential for capturing the lived experiences and unique challenges faced by these mothers, thereby informing the development of a tailored psychosocial intervention module.

Quantitative Method

The study utilized a classical experimental design, implementing a before-and-after test with a control group.

In an experimental design, a before-and-after test with a control group is considered one of the most robust methods for evaluating the effectiveness of an intervention (Aggarwal, R & Ranganathan, 2019). This design involves measuring participants on relevant variables before and after the intervention, allowing researchers to assess changes attributable to the intervention. The inclusion of a control group, which does not receive the intervention, provides a baseline for comparison. This helps to account for external factors that could influence the outcomes, thereby enhancing the validity and reliability of the results (Wright, 2006).

Mixed-Method

This study employs a mixed-methods design to comprehensively explore the psychosocial experiences of mothers of children with ASD and assess the effectiveness of a psychosocial intervention. The rationale for adopting this approach stems from the study's main objectives: to gain an in-depth understanding of the needs and challenges of mothers through qualitative inquiry, and to evaluate the impact of an intervention using quantitative measures. Integrating both qualitative and quantitative components allows for a more holistic exploration of the research problem, ensuring that the intervention is both theoretically and empirically grounded.

The qualitative phase consisted of a needs assessment, conducted through in-depth interviews, to capture the lived experiences of mothers. This phase was essential in identifying specific stressors, gaps in support, and coping strategies that shaped their daily lives. The findings from this phase directly informed the development of the intervention module, ensuring that it was tailored to address the real-life concerns of participants rather than relying solely on theoretical frameworks or existing interventions.

The quantitative phase employed a pre-test and post-test design to systematically measure the effectiveness of the developed intervention. Standardized assessment tools were used to evaluate key variables such as parenting stress, coping strategies, and perceived social support. By using quantitative measures, the study was able to assess statistically significant changes over time and determine the intervention's efficacy in a structured manner.

Crucially, the integration of qualitative and quantitative data was not conducted in isolation; rather, the findings from both phases were interconnected to enhance the study's validity and applicability. The qualitative data provided context and depth to the quantitative findings, helping to explain why certain changes were observed—or why some expected changes did not occur. This integration is a hallmark of mixed-methods research, where the strengths of one approach compensate for the limitations of the other, leading to a more comprehensive understanding of the phenomenon under study (Fetters, 2019; Fàbregues et al., 2023).

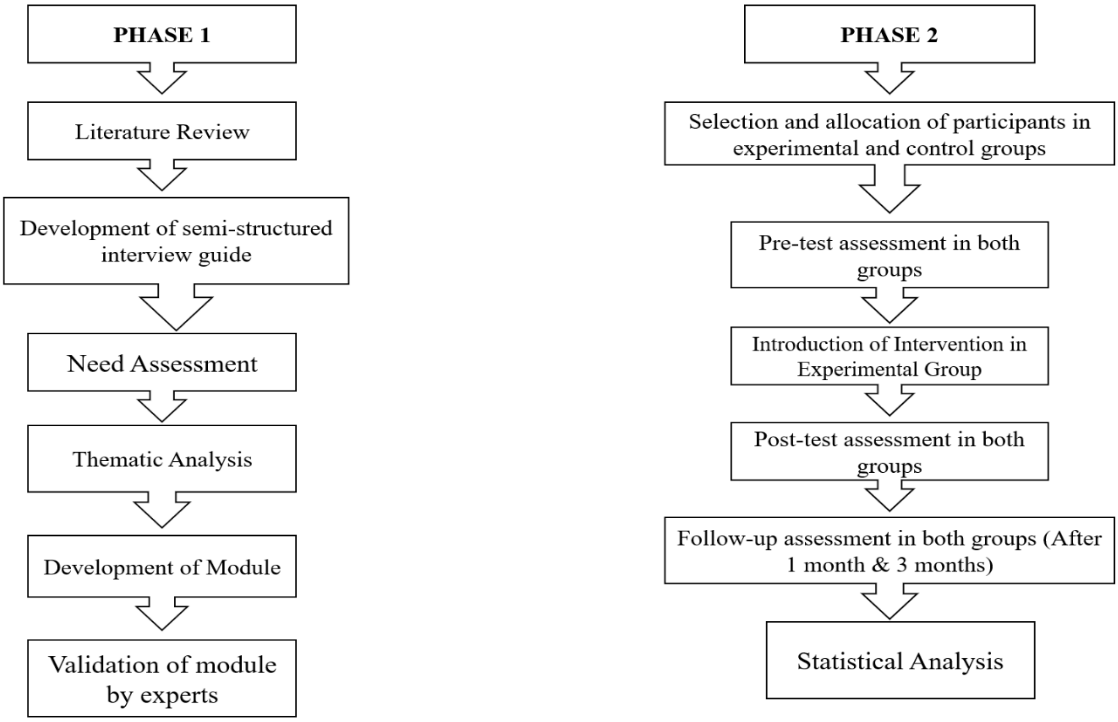
Hence, the mixed-methods approach is not only appropriate but essential in addressing the study's overarching research questions, reinforcing its contributions to the field of caregiver support in ASD.

Research Process

The study was conducted in two phases. The first phase was a qualitative needs assessment aimed at identifying the specific challenges faced by the target population. This assessment informed the development of the psychosocial intervention module. In the second phase, the study employed a quantitative approach to evaluate the intervention. This phase involved implementing the module and assessing its impact through pre- and post-intervention evaluations, along with follow-up assessments. A diagrammatic representation is provided to illustrate the flow and relationship between the qualitative and quantitative phases of the research.

Figure 3.1

Overview of the Research Process



Phase 1: Needs Assessment and Module Development (Qualitative Method)

Phase 1 of the study was conducted in six steps. First, an extensive literature review was carried out. Next, an interview schedule guide was developed based on the review. Then, in-depth interviews were conducted for the need assessment. The data from these interviews underwent thematic analysis, leading to the development of a psychosocial intervention module. Finally, the module was validated by three experts for use in the second phase of the study.

Universe. The universe of the study includes mothers of whose children have been diagnosed with ASD and who are the primary caregiver of the child receiving services from the identified centres that are working for children with autism in Kamrup Metropolitan District of Assam.

Sampling

Inclusion Criteria

The study included biological or adoptive mothers who are the primary caregivers of children diagnosed with ASD.

Exclusion Criteria

Mothers of children with ASD who are not the primary caregivers were excluded from the study.

Fathers or other family members who serve as the primary caregivers of children with ASD were also excluded.

Sampling Technique. A purposive sampling method, which is a non-probability approach, was employed to select participants for Phase 1 the study. This method was chosen to ensure that participants were specifically selected based on their relevance to the research objectives. In this case, mothers of children with ASD who met the inclusion criteria were deliberately chosen to provide the most pertinent and insightful data for the qualitative phase of the study.

Sampling Procedure and Sampling Size. The centres initially identified and contacted potential participants who met the study's inclusion criteria to seek their consent for further engagement with the researcher. Upon receiving their agreement, the researcher personally approached these mothers to explain the study in detail and address any questions or concerns. Each mother willingly provided informed consent to participate, demonstrating their voluntary commitment to the research process. A total of 10 mothers were recruited and actively participated in the study. This purposive sampling approach allowed the research to focus on individuals who could provide rich, relevant information essential for understanding the specific challenges and needs being investigated.

Tools used in the study. A semi-structured interview approach was employed, incorporating open-ended questions designed based on extensive literature reviews. This approach ensured a comprehensive exploration of relevant topics. Participants were encouraged to share freely, providing information that would contribute to a deeper understanding of their experiences.

The interviews covered a wide range of topics, including the mothers' general understanding of ASD, their overall experience of parenting a child with ASD, daily routines, stressors encountered, coping strategies (both effective and ineffective), experiences with stigma, and their support systems. Each interview was audio recorded to ensure accurate capture of participants' responses.

To ensure qualitative rigor, the researcher drew on prior experience from previous research and academic work in conducting interviews. Additionally, during MPhil training in Psychiatric Social Work, the researcher received extensive clinical training, working closely with individuals and families through diagnostic evaluations, psychosocial assessments, and therapeutic interventions. This hands-on experience provided the skills and sensitivity needed to conduct in-depth interviews. A structured interview guide was used to maintain consistency across all interviews. Bias mitigation strategies included maintaining a journal, adhering to a neutral stance during interviews, and using open-ended questions to minimize leading responses.

Data Collection Procedure. In Phase 1 of the study, data was collected through two primary methods as follows:

Literature Review. The first method involved an extensive literature review, which included academic journals, and online research databases. This review focused on various challenges faced by parents, particularly mothers and caregivers, of children with autism. It also encompassed a range of intervention studies related to this area, providing a comprehensive understanding of existing knowledge and identifying gaps that the current study could address.

In-depth Interviews. The second method of data collection was through in-depth interviews. These interviews were conducted to gain deeper insights into the personal experiences and challenges of mothers caring for children with autism. This qualitative approach allowed for a detailed exploration of individual perspectives and provided valuable data to inform the development of the psychosocial intervention module. To respect the participants' preferences and convenience, interviews were arranged as one-on-one sessions, either privately at the organization or within the comfort of the participant's home. The timing and location were scheduled according to the participants' availability, ensuring a comfortable and accommodating environment for the discussion.

Data Analysis. Using the thematic analysis method, which was deemed the most suitable for the phase 1 of this study, the research involved transcribing the data, applying codes, creating categories, and ultimately deriving themes. The analysis was conducted in several stages as follows (Lester, Cho, & Lochmiller, 2020).

Systematically arranging and structuring the data for analysis. The audio-recorded interviews, observational field notes, and other collected data were methodically organized within a designated folder.

Transcribing the data. The interviews were transcribed verbatim, capturing the exact wording and content of the spoken conversations. The transcription was done by the researcher.

Initial analysis. This process facilitated the researcher in gaining familiarity with the data. The researcher made notes on the concepts and experiences conveyed by participants during interviews and those observed in the field notes. These initial insights guided the researcher toward a more comprehensive analysis. Additionally, this familiarity with the dataset enabled the researcher to identify any limitations or gaps in the collected data.

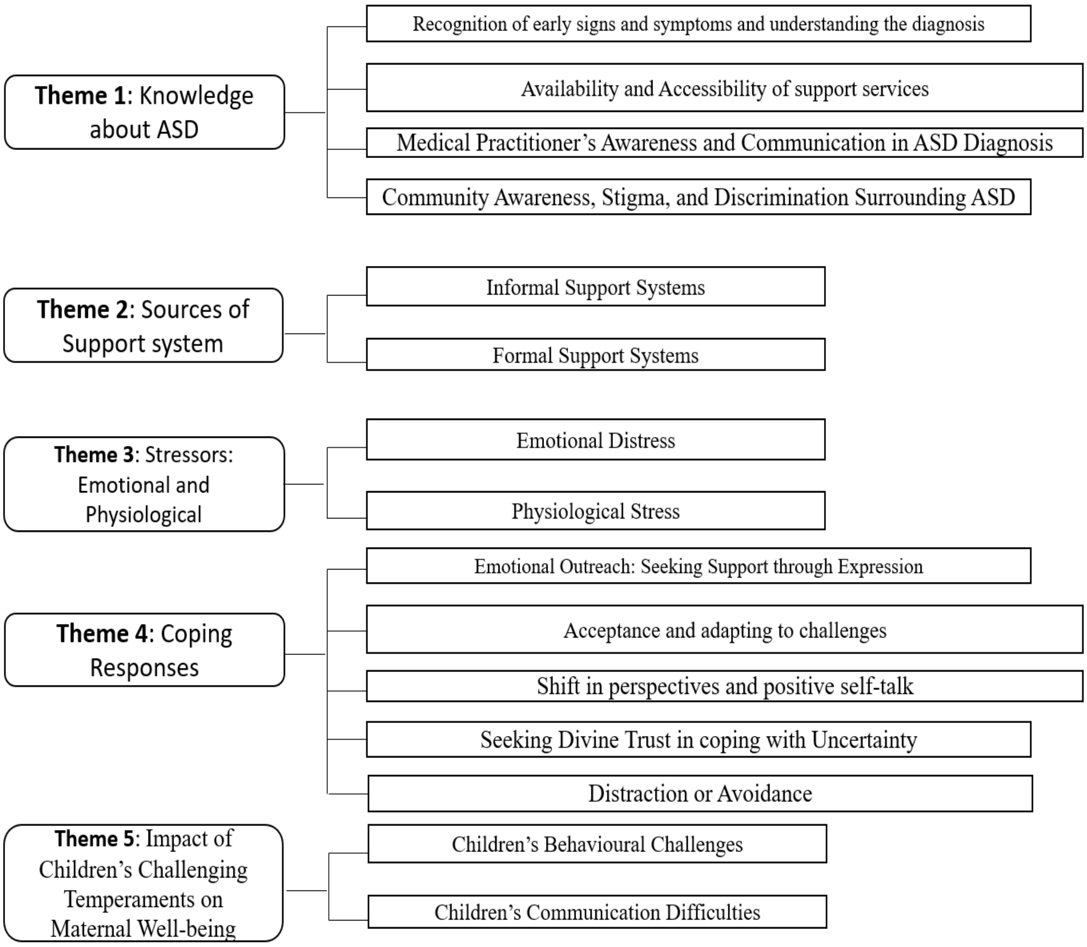
Coding, categorization, and developing themes. These were done in the following 3 steps (Derguy et al., 2015; Lester et al.,2020):

1) The Step 1 coding process entailed a detailed examination of the data, analysing it line by line, and identifying significant keywords and phrases within the text.
2) In step 2 coding, the researcher compared and identified similarities across the coded data segments from step 1, and those similar meaning units were grouped under one category with a common title, which eventually formed subthemes.
3) In Step 3 coding, these established subthemes were then assigned to the central themes. The central theme name encompasses all the underlying categories, describes their content and relationships, and is sensitive to any observed similarities or differences.

The qualitative analysis of the need assessment provided valuable insights into the experiences and challenges faced by the participants. These findings were instrumental in the development of a psychosocial intervention module tailored to address the identified needs.

Figure 3.2

Overview of Themes and Sub-themes derived from need assessment

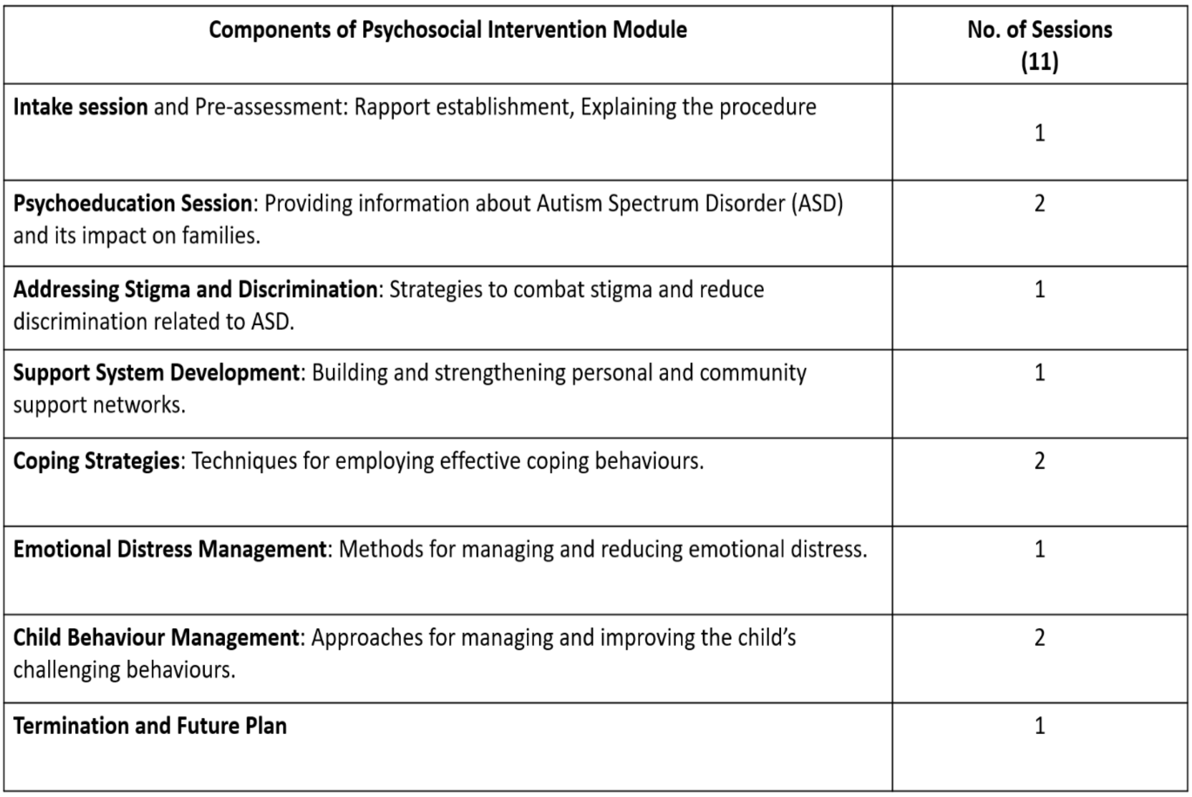


Development of Module

The module incorporated key elements derived from the need assessment as well as reviewed literature, ensuring it was both relevant and practical. Subsequently, the module was sent to three experts for validation to ensure its efficacy and appropriateness. The experts included a psychiatrist, a clinical psychologist, and a psychiatric nurse. This rigorous validation process facilitated a seamless transition to the next phase of the study, which was the quantitative component. The quantitative phase aimed to evaluate the effectiveness of the newly developed intervention module.

Figure 3.3

Components of Psychosocial Intervention Module



Components of Psychosocial Intervention Module	No. of Sessions (11)
Intake session and Pre-assessment: Rapport establishment, Explaining the procedure	1
Psychoeducation Session: Providing information about Autism Spectrum Disorder (ASD) and its impact on families.	2
Addressing Stigma and Discrimination: Strategies to combat stigma and reduce discrimination related to ASD.	1
Support System Development: Building and strengthening personal and community support networks.	1
Coping Strategies: Techniques for employing effective coping behaviours.	2
Emotional Distress Management: Methods for managing and reducing emotional distress.	1
Child Behaviour Management: Approaches for managing and improving the child's challenging behaviours.	2
Termination and Future Plan	1

Phase 2: Implementation of Intervention (Quantitative Methods)

Phase 2 of the study was carried out in seven key steps. Initially, the eligibility of respondents was assessed, and participants were randomly allocated to either the experimental or control group. Following this, a pre-test was conducted for both groups to establish baseline measures. The intervention was then introduced to the experimental group. After the intervention, the first post-assessment was conducted immediately for both groups. Subsequent post-assessments were carried out one month and three months after the intervention. Finally, the collected data underwent statistical analysis to assess the impact of the intervention

Universe. The universe of the study includes mothers of whose children have been diagnosed with autism spectrum disorder and who are the primary caregiver of the child receiving services from the identified centres that are working for children with autism in Kamrup Metropolitan District of Assam

Setting of the study. The study was conducted in identified community centres that work with children with autism in the Kamrup Metropolitan district of Assam state. These centres provided the necessary environment and support for the research, facilitating the engagement of mothers and the implementation of the intervention module.

Sampling

Inclusion Criteria

The study included biological or adoptive mothers who are the primary caregivers of children diagnosed with ASD.

Exclusion Criteria

Mothers of children with ASD who are not the primary caregivers were excluded from the study.

Fathers or other family members who serve as the primary caregivers of children with ASD were also excluded.

Sampling Technique. The study employed a simple random sampling technique to ensure an objective and unbiased selection of participants. This method allowed each eligible mother an equal chance of being assigned to either the control or experimental group.

Sampling Procedure and Sampling Size. The recruitment process was initiated by the researcher, who systematically identified organizations within the Kamrup Metropolitan District of Assam that provided services to children diagnosed with autism spectrum disorder. A total of 10 centres were identified as potential collaborators for the study. The researcher approached all 10 centres, presenting the study's objectives and seeking their participation. Out of these, five centres agreed to support the research by allowing access to their client base. Following the agreement from these five centres, the researcher worked closely with them to identify mothers who met the study's inclusion criteria. These criteria likely included being the primary caregiver of a child diagnosed with autism and receiving services from the participating centres. The centres facilitated initial contact with 58 mothers, after which the researcher personally approached each mother to explain the study in detail, including its purpose, procedures, and ethical considerations. A total of 41 mothers expressed their willingness to participate and provided informed consent. After confirming their eligibility and obtaining their informed consent, the participants were randomly assigned to the respective groups. The randomization process was conducted using an online number generator to eliminate any potential biases and ensure a fair distribution between the two groups. While allocation concealment was not implemented, every effort was made to ensure that the assignment process was conducted fairly and systematically. Due to the nature of the study, blinding was not applied in participant assignment or intervention delivery. This is acknowledged as a limitation, as knowledge of group allocation may have influenced participant responses or researcher interactions. However, standardized assessment tools and structured intervention protocols were used to minimize potential bias in data collection and interpretation.

Table 3.1

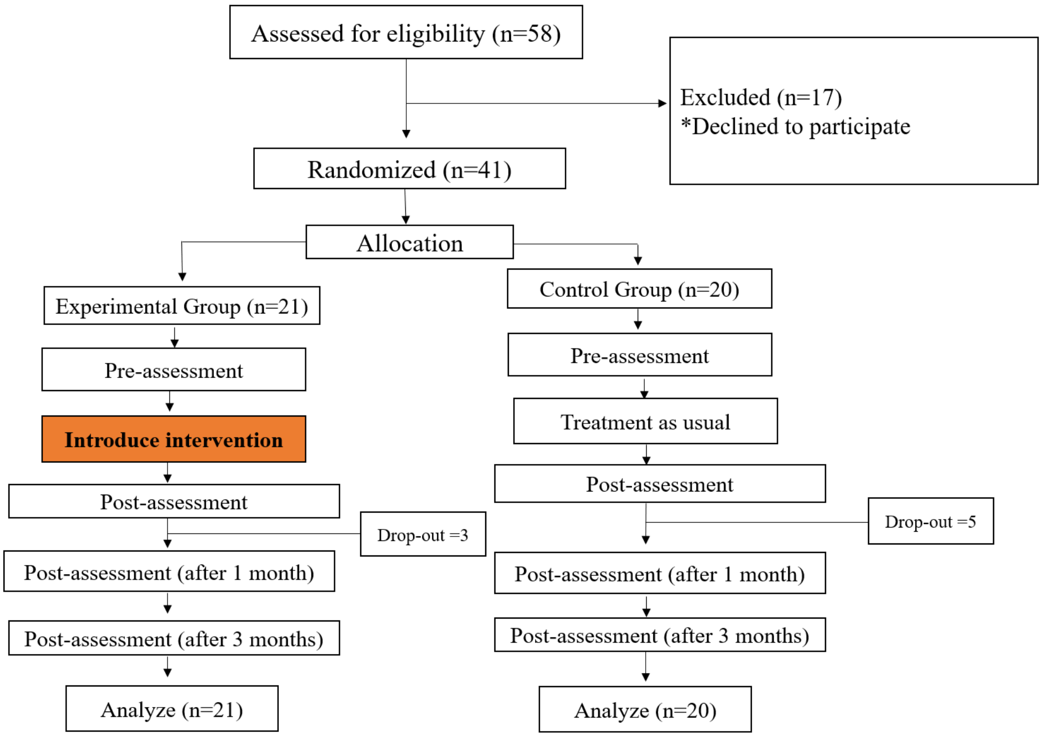
Randomization of Mothers into Experimental and Control Groups

Experimental Group	Control Group
26	6
10	21
35	36
2	15
20	31
30	38
22	19
40	12
33	14
8	3
37	34
17	27
41	4
13	11
23	39
24	16
32	1

5	29
18	25
28	7
9	

Figure 3.4

CONSORT Flow Diagram



Tools used in the study

Socio demographic profile sheet. This was developed by the researcher to systematically collect key background information from the participants. This sheet included fields to capture details such as age, gender, education level, marital status, occupation, income level, and family structure.

Kuppuswamy Socioeconomic Status scale (2022). The 2022 Modified Kuppuswamy Socioeconomic Status (SES) Scale is a comprehensive tool used to classify urban households in India based on three main parameters: education of the household head, occupation, and monthly income. The education parameter is scored from 1 (illiterate) to 7 (profession or honors degree). The occupation parameter ranges from 1 (unemployed) to 10 (legislators, senior officials, and managers). Monthly income is categorized into twelve brackets, with scores ranging from 1 (≤₹1520) to 12 (≥₹30375). These scores are summed to determine the overall socioeconomic class of the household. The total score places households into one of five socioeconomic classes: Upper Class (I) with scores of 26-29, Upper Middle Class (II) with scores of 16-25, Lower Middle Class (III) with scores of 11-15, Upper Lower Class (IV) with scores of 5-10, and Lower Class (V) with scores below 5. This scale helps in understanding and addressing the socioeconomic disparities within urban populations, providing crucial insights for health, social, and economic research (Kumar et al., 2022).

The Parental Stress Scale is an 18-item scale which attempts to measure the levels of stress experienced by parents. It contains various measures of stress, emotion, and role satisfaction, including perceived stress, work/family stress, loneliness, anxiety, guilt, marital satisfaction/ commitment, job satisfaction, and social support. Items scores range from 1 to 5 with strongly disagree being given a score of 1 and strongly agree being scored as 5. But Item numbers 1, 2, 5, 6, 7, 8, 17, and 18 are reverse scored as: (1=5) (2=4) (3=3) (4=2) (5=1). The item scores are then summed.

Higher scores on the whole indicate higher level of parental stress (Berry & Jones, 1995). In their 1995 study, Berry and Jones found the Parental Stress Scale (PSS) had adequate reliability with a Cronbach's alpha of 0.83.

The Multidimensional Scale of Perceived Social Support (MSPSS) is a 12-item scale designed to divide into factor groups relating to the source of the social support, namely family, friends or significant other. To calculate mean scores: Significant Other Subscale: Sum across items 1, 2, 5, & 10, then divide by 4. Family Subscale: Sum across items 3, 4, 8, & 11, then divide by 4. Friends Subscale: Sum across items 6, 7, 9, & 12, then divide by 4. Total Scale: Sum across all 12 items, then divide by 12. In this approach any mean scale score ranging from 1 to 2.9 could be considered low support; a score of 3 to 5 could be considered moderate support; a score from 5.1 to 7 could be considered high support (Zimet et al., 1988). The Multidimensional Scale of Perceived Social Support (MSPSS), generally shows good to excellent internal consistency, with Cronbach's alpha values typically ranging from 0.81 to 0.98, depending on the sample.

Brief COPE is a 28 item Scale used to understand various coping such as self-distraction, denial, substance use, use of emotional support, use of instrumental support, venting, positive reframing, planning, humor, acceptance, religion, self-blame (Carver, 1997). Subsequent analysis by Dias et al. (2012) divided the scale into three factors; (1) Problem-focused coping, (2) Emotion-focused coping, and (3) Avoidant coping.

> (1) Problem-Focused Coping (Items 2, 7, 10, 12, 14, 17, 23, 25): Characterized by the facets of active coping, use of informational support, planning, and positive reframing. A high score indicates coping strategies that are aimed at changing the stressful situation. High scores are indicative of psychological strength, grit, a practical approach to problem solving and is predictive of positive outcomes.
>
> (2) Emotion-Focused Coping (Items 5, 9, 13, 15, 18, 20, 21, 22, 24, 26, 27, 28): Characterized by the facets of venting, use of emotional support, humor, acceptance, self-blame, and religion. A high score indicates coping strategies that are aiming to regulate emotions associated with the stressful situation. High or low scores are not uniformly associated with psychological health or ill health, but can be used to inform a wider formulation of the respondent's coping styles.
>
> (3) Avoidant Coping (Items 1, 3, 4, 6, 8, 11, 16, 19): Characterized by the facets of self-distraction, denial, substance use, and behavioural disengagement. A high score indicates physical or cognitive efforts to disengage from the stressor. Low scores are typically indicative of adaptive coping.
>
> The Brief COPE, generally exhibits good internal consistency, with Cronbach's alpha values ranging from 0.70 to 0.89 for the overall scale and its subscales.

Parental stress tools were used to measure the levels of stress experienced by mothers, providing a baseline for evaluating the impact of the psychosocial intervention. Social support tools assessed the support received from significant others, friends, and family, which was crucial for understanding how the intervention might enhance the mothers' support networks and address gaps in support. The Brief COPE tool was utilized to evaluate various coping strategies, offering insights into how mothers managed stress and whether their coping mechanisms changed in response to the intervention. Each tool was integral to capturing a comprehensive view of the participants' experiences and the intervention's effectiveness. To ensure the tools were relevant and accessible to the participants, they were translated into Assamese, the local language. This translation was meticulously performed and validated by bilingual experts fluent in both English and Assamese, ensuring that the tools maintained their accuracy and cultural appropriateness for the study population.

While self-report measures provide valuable insights, they are subject to potential social desirability bias, where participants may respond in a manner they perceive as more acceptable rather than reflecting their true experiences. To mitigate this, participants were assured of confidentiality and anonymity, encouraging honest responses. Additionally, neutral and non-judgmental language was used during interactions to reduce response distortion.

Data Collection Procedure. In Phase 2 of the study, data collection involved a systematic procedure to evaluate the effectiveness of the psychosocial intervention module. The process was as follows:

Pre-Assessment. Before the intervention began, pre-assessment tools were used to measure baseline levels of stress, support, and coping strategies in both the control and experimental groups. These baseline assessments provided a crucial reference point for evaluating the effectiveness of the subsequent intervention.

Intervention Implementation. The psychosocial intervention module was introduced to the experimental group. This intervention comprised 11 sessions, including 7 individual sessions lasting 1 hour each and 4 group sessions lasting 1.5 hours each. The individual sessions focused on providing personalized support and tailored strategies to address specific needs, while the group sessions facilitated peer interaction and collective problem-solving, enhancing the participants' support networks. The session structure was informed by existing literature on psychosocial interventions, which typically span 2-3 months with weekly or biweekly sessions, demonstrating positive outcomes in stress reduction and coping enhancement. Additionally, practical considerations, including participant availability and engagement levels, were taken into account to ensure optimal intervention delivery.

Post-Assessment. Immediately upon completion of the intervention, post-assessment tools were administered to both groups to measure any immediate changes in stress levels, support, and coping strategies. This immediate post-assessment aimed to evaluate the initial impact of the intervention on the experimental group compared to the control group.

Follow-Up Assessments. To assess the longer-term effects of the intervention, follow-up assessments were conducted one month and three months after the intervention. The one-month post-assessment provided insights into the short-term effects and retention of the intervention's benefits, while the three-month post-assessment aimed to evaluate the sustainability and enduring impact of the intervention over time. This comprehensive assessment schedule allowed for a thorough evaluation of the intervention's effectiveness and its lasting influence on the participants in the experimental group.

Data Analysis. For Phase 2 data analysis, SPSS was utilized to analyse and interpret the data. Descriptive statistics, such as mean and standard deviation, as well as frequency and percentage, were employed. Before conducting the primary statistical analyses, normality of the data was assessed using the Shapiro-Wilk test. The results indicated that the data for both the study and control groups were normally distributed ($p = 0.202$ and $p = 0.846$, respectively). As a result, parametric tests, including t-tests, repeated measures ANOVA, and Pearson correlation, were applied to assess the data.

Mean and Standard Deviation. These statistics were used to summarize and describe the ages of the children and parents.

Frequency and Percentage. For categorical variables, such as socio-economic background, education, occupation, family type, religion, and the gender of the child, frequency counts and percentages were calculated. These measures helped illustrate the distribution and prevalence of different categories within the sample.

Repeated Measures ANOVA. This analysis was conducted to evaluate changes over time in stress levels, coping strategies, and support within the experimental and control groups. Repeated measures ANOVA assessed how these variables evolved across different assessment points (pre-intervention, post-intervention, one month, and three months) and tested for any significant differences attributable to the intervention.

Intent To Treat Analysis (Gupta, 2011). In this study, we utilized an Intention-to-Treat (ITT) analysis to maintain the integrity of randomization and to avoid biases related to participant dropouts or non-compliance. Participants were initially randomized into the experimental (n=21) and control (n=20) groups. Even though there were 3 dropouts from the experimental group and 5 from the control group after the first post-assessment, all participants were included in the analysis according to their original group assignments. To manage missing data resulting from these dropouts, we employed the Last Observation Carried Forward (LOCF) method. This approach ensures that each participant's data is accounted for in the analysis based on their initial group assignment, thus preserving the robustness and validity of the study's findings.

Ethical Approval (Refer to Appendix 1)

This study received ethical approval from the Tezpur University Ethics Committee (TUEC) [IEC No: DoRD/TUEC/PROP/2022/13-R1], following a thorough review of the research proposal, which included the study’s objectives, methodology, and procedures for ensuring participant confidentiality and informed consent.

Informed Consent

Informed consent was obtained from all participants prior to their involvement in the study. Participants were provided with detailed information about the study’s objectives and procedures both verbally and through a written consent form. They were assured that their participation was entirely voluntary, and they had the right to withdraw from the study at any stage without any repercussions.

The consent form emphasized that all information provided would be kept confidential and used solely for research purposes. Participants were also informed that their identities would remain anonymous in any publications or presentations resulting from the study. Additionally, they were given the opportunity to ask questions and seek clarification before signing the consent form, ensuring that they fully understood the nature of the research and their role in it.

Ethical Considerations

Ethical Approval

Data collection was initiated only after obtaining approval from the Tezpur University Ethical Committee (TUEC).

Informed Consent

Informed consent was obtained from all participants before they took part in the study.

Right to Withdraw

Participants were informed of their right to withdraw from the study at any point without any repercussions.

Confidentiality

The confidentiality of all participants was strictly maintained throughout the research process.

Academic Integrity

Proper references were provided wherever necessary, and no unlawful means or plagiarism were employed in the presentation of data.