IJBS
International Journal of Behavioral Sciences
10.30491/IJBS.2025.485792.2168
Original Paper

Comparison of Group Attachment-Based Intervention (GABI) and Parenting Skills Sessions on Adjustment and Resilience of Parents with Disabled Children

Sajad Jokar[1] (MSc), Haniyeh Almasian[2] (MSc), Kobra-Sadat Banihashem[3] (MSc), Mahin Khodadadpour[4] (MSc), Fatemeh Sedighi[5] (MSc)

1. Department of Psychology, Khomein Branch, Islamic Azad University, Khomein, Iran.
2. Department of the Psychology and Education of Exceptional Children, Islamic Azad University, Central Tehran Branch Faculty of Psychology and Educational Sciences, Islamic Azad University, Tehran, Iran.
3. Department of Psychology, Bojnourd Branch, Islamic Azad University, Bojnourd, Iran
4. Department of Humanities Sciences and Psychology, Science and Research Branch, Islamic Azad University, Tehran, Iran.
5. Department of Psychology, Faculty of Nursing / Midwifery, Islamic Azad University of Zanjan, Iran.

Corresponding Author:
Fatemeh Sedighi,
Department of Psychology,
Faculty of Nursing / Midwifery,
Islamic Azad University of Zanjan,
Iran.
E-mail: sedighifatame@gmail.com

Submitted: 3 December 2024
Accepted: 11 January 2025

Int J Behav Sci. 2025; 18(4): 214-225

Abstract

Background: Taking care of a disabled child could have an impact on the mental well-being of a parent. This study aims to evaluate the Group Attachment-Based Intervention (GABI) and parenting skills sessions on the adjustment and resilience of parents with a disabled child.

Method: This study was a semi-experimental design utilizing a pre-test-post-test and follow-up plan (two months later) with both control and experimental groups. The statistical population consisted of all parents (both fathers and mothers) with a disabled child in Tehran in 2023 who had a record in the welfare rehabilitation unit of Tehran. "Out of the group, 45 individuals were chosen as a representative sample through purposeful sampling techniques." The participants were then randomly divided into three groups, with 15 individuals in each group. Data was collected using the Social Adjustment Questionnaire (SAQ) and the Connor-Davidson Resilience scale (CD-RISC). The data collected were analyzed using Kruskal-Wallis H tests, repeated measures ANCOVA, and Bonferroni's post hoc test in SPSS software version 27 and JASP software version 18.1.0, with a p-value set at 0.05.

Results: According to the research findings, the home adjustment variable in the GABI showed a significant difference from the control group at all stages ($p<0.001$), indicating the impact of the GABI approach on increasing home adjustment. Similarly, the variable of home adjustment in the group that received Parenting skills sessions showed a significant difference compared to the control group in all stages ($p<0.001$). The GABI component also displayed a significant difference in job adjustment compared to the control group during the follow-up phase ($p<0.001$), and the group that received parenting skills sessions also exhibited a significant difference in job adjustment from the control group during the follow-up phase ($p<0.001$). A considerable discrepancy in resilience levels was noted between the groups that participated in the GABI and parenting skills sessions and the control group, with the former showing improvement ($P<0.001$). However, there was no significant difference between the experimental groups themselves.

Conclusion: The current study revealed that while there are challenges in raising disabled children, parents can enhance their resilience and adjustment through GABI and improving parenting skills. The results of the study suggest the need to enhance counseling and support services for families with disabled children based on these findings.

Keywords: Group Attachment-Based Intervention, Parent-Child, Parenting Skills, Adjustment, Resilience, Disabled Child, Parents

Introduction

The birth of a child with a physical or mental disability can be a difficult and stressful experience for a family, affecting the parents' overall health and affecting different parts of family life. This can result in sadness, disappointment, and a sense of inadequacy [1]. These parents commonly experience stages of shock, fear, and adjustment following the initial news, affecting many aspects of their family dynamics [2]. Furthermore, families raising a disabled child often face social isolation, lifestyle limitations, and financial strain [3]. Research conducted by Staunton et al. in 2023 found that parents of children with mental disabilities experience heightened psychological distress and a decreased quality of life [4]. Another study revealed that families with disabled children tend to have lower levels of satisfaction with family life [2].

Parents often feel despair, anger, isolation, and tension when taking care of their disabled child. Families develop adaptive strategies to cope with these emotions and adjust to the internal and external challenges they face. Parents need to maintain their overall health while dealing with the illness of their child [5]. Each parent adapts to their child's disability uniquely. Psychological adjustment is crucial for parents as they navigate the challenges and psychological consequences, such as anxiety, depression, and hopelessness, that come with their child's disability [6]. Factors such as knowledge, awareness, social pressure, and lifestyle choices can impact how parents adapt to their child's disability [7]. Family functioning plays a role in mediating the relationship between parental adjustment and parental self-efficacy when dealing with stress and adjustment related to their child's disability [8]. The existence of a disabled child poses a threat to the physical and mental well-being of the family and their ability to adapt to their surroundings, leading to negative consequences. Despite this, they possess resilience, enabling them to recover and return to a normal state following stressful situations [9]. Resilience in parents of children with disabilities is described as a process of adjustment in response to the challenging circumstances associated with their children's behavioral issues, which involves various internal and external factors like positive attitudes, skills, coping mechanisms, self-efficacy, and social backing [10]. Research has indicated that parents of disabled children tend to have lower levels of hope and resilience compared to parents of typically developing children [3]. Another study found that increasing parental support and reducing stress may enhance the resilience of these parents [11].

Raising a disabled child can result in high stress and psychological and social challenges for both the child and their family, leading to the need for adjustment in various aspects of life. Health psychologists focus on studying the impact of psychological factors, particularly attachment [12]. Attachment theory, a fundamental psychological framework, explains differences in social, behavioral, and emotional adjustment by categorizing individuals into secure, insecure-avoidant, and insecure-resistant attachment patterns. It emphasizes the importance of early parent-child interactions in shaping internal working models of attachment [13]. A study found that GABI can improve parent/child interactions, reduce parental stress, and enhance the overall psychosocial well-being of children in families [14]. The research also mentioned that utilizing psychotherapeutic interventions, particularly those based on attachment, in combination with medical treatments can result in improved recovery and well-being [12].

Children with disabilities and their families often face severe physical, cognitive, and social-emotional challenges, and in addition, these children have unique psychological and physical requirements. Therefore, parents of children with disabilities must manage stress, utilize appropriate support systems, and engage in effective parenting techniques [15]. The quality of the interactions between parents and their children, along with their methods of communication, are essential in shaping a child's healthy and well-adjusted personality [16]. Studies have shown that providing positive parenting support to mothers can enhance their self-efficacy and resilience [17]. Research also suggests that taking part in a positive parenting program or receiving instruction on dealing with parenting challenges can improve different parenting abilities and result in improved adjustment [18]. Due to the numerous challenges faced by parents of children with disabilities, it is essential to identify interventions that can help them adjust and enhance their resilience. Understanding the factors that impact parents' ability to cope and support their children can be beneficial in planning interventions and providing family education. Family attachment styles, particularly those of parents, play a significant role in a family's overall functioning. However, there is a lack of comprehensive research in Iran that explores the impact of group attachment-based intervention and parenting skills on the adjustment and resilience of parents with disabled children. The present study aims to fill this gap by comparing the effectiveness of two interventions - one focused on Group Attachment-Based intervention (GABI) and the other on parenting skills sessions - on the adjustment and resilience of parents with disabled children. The research aims to investigate if parenting skills sessions are more effective in improving the resilience and adjustment of parents as opposed to group attachment-based intervention.

Method

The present research was conducted as an applied and semi-experimental study involving pre-test, post-test, and follow-up stages after two months. It included a control group and two experimental groups, one being GABI and the other focusing on parenting skills sessions. The statistical population of this research consisted of all parents (fathers and mothers) with a disabled child in Tehran in 2023, registered with the welfare rehabilitation unit. The disabilities of the children varied, including physical, mental, visual, hearing, and speech impairments. The primary statistical sample consisted of 45 individuals, with two groups of 15 for experimental and a control group of 15, all selected from parents (both fathers and mothers) using a purposive sampling method. They were then randomly assigned into three groups through a coin toss, alternating between an experimental and a control

group. Sample size adequacy was determined using G-Power software with parameters set at α = 0.05, effect size=0.25, power test=0.95, and three groups [19]. According to the calculations, the sample size should have been 42 individuals, but to account for any potential dropouts, the researcher decided on 45 participants.

All of the families involved in the research were couples, and no single parents were leading any of them. To be eligible to participate, individuals had to be at least 20 years old, provide informed consent, have the necessary literacy level (at least a diploma), be referred to the welfare rehabilitation unit of Tehran and file a case, and have at least one disabled child. The criteria for exclusion from the study included having a physical condition that made it difficult to answer questions, failing to answer more than ten items on the questionnaires, being involved in similar educational programs three months prior or concurrently with the research, missing more than one in-person training session, or having a history of taking psychiatric medication.

The research methodology involved several steps. Initially, the researcher secured the necessary permissions from the university of affiliation before visiting a well-being rehabilitation center in Tehran. After discussing with the center, a message was shared on social media asking parents with proper paperwork to get involved. After consulting with the center, a post was made on social media inviting parents who meet the necessary criteria to participate. The researchers designated a specific area in the center for conducting their study. Once parents who met the specified requirements provided their information, they were selected for interviews. A total of 54 participants were identified and chosen following thorough evaluations. The interviews took place in person at the center's facilities, during which the research objectives and ethical considerations were communicated to the participants, addressing any inquiries they may have had. Screening measures were put in place to eliminate individuals who did not meet the eligibility criteria, such as those who were incapable of committing to attend the training sessions. Some individuals also voluntarily withdrew from the study, leading to a final selection of 45 participants. Subsequently, a pre-test was administered using research instruments to gather information from the selected parents. After collecting data from all 45 individuals in the initial phase, the participants were randomly placed into groups and readied for the upcoming training sessions.

The researcher implemented parent-child Group Attachment-Based Interventions (GABI) according to a schedule they developed. The interventions were derived from attachment-based educational techniques used in academic research and the researcher's educational background (Table 1). Similarly, the researcher organized training sessions inspired by the study conducted by Ghanbari et al., which focused on the effectiveness of parent training based on attachment theory for improving the quality of care provided by mothers of anxious preschool children [20] . The researcher designed sessions for parenting skills workshops (Table 2). The workshops were tailored to a specific set of techniques for training parents, as outlined in a study called "The Effectiveness of Life Skills Training for Parents in Decreasing Aggression and Improving the Academic Motivation in Adolescent Children" by Moodi [21].

The GABI training group focused on parent-child attachment and underwent eight training sessions held twice a week, each lasting for 45 minutes. The parenting skills sessions group also received training, with seven sessions held twice a week each lasting for 90 minutes. The experimental group attended all sessions in one of the center's offices, while the control group did not participate in any program. After the meetings, a post-test was conducted for all groups, followed by a measurement of research variables two months later. The pre-test, post-test, and follow-up results were analyzed and compared among the three groups. To adhere to ethical guidelines, parents in the control group received training for three sessions after the research was concluded.

During the study, four individuals from the GABI experimental group, three from the parenting skills sessions experimental group, and one from the control group withdrew from the research, resulting in their exclusion from the data analysis. Ethical considerations for this study involved obtaining informed consent from participants and ensuring the confidentiality of information. All participants underwent evaluation for factors related to adjustment and resilience. Table 1 provide an overview of GABI training sessions, while Table 2 outlines the parenting skills sessions. Additionally, Figure 2 displays the CONSORT flow diagram.

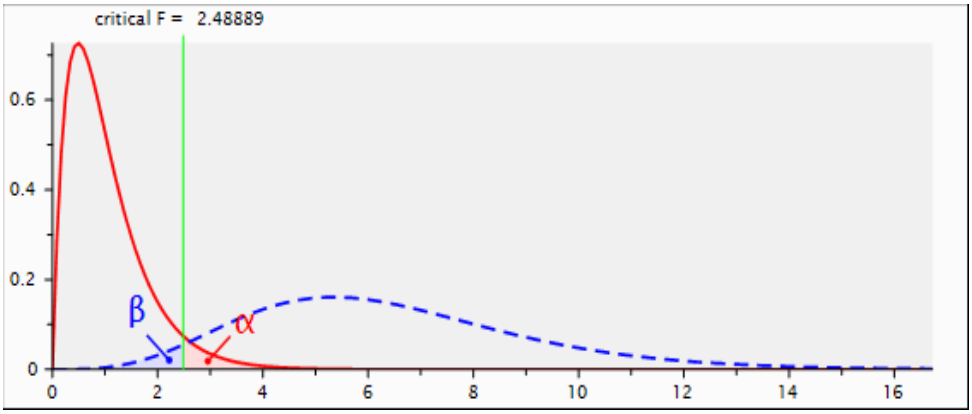

Figure 1. Sample size calculation with G*Power software.

The tools used in this study were as follows:

The Social Adjustment Questionnaire (SAQ): Bell developed a self-report questionnaire in 1979 to assess adjustment [22]. The questionnaire consists of 160 yes or no questions, divided into five components: home, health, social, job, and emotional adjustment. Each component has 32 questions, with a total score ranging from 0 to 160. A higher score indicates better adjustment with the recorded version. Reliability coefficients for the components vary, with values of 0.88, 0.91, 0.85, and 0.91 reported for social, emotional, job, and home adjustment components in the original study. In Iran, reliability coefficients for social, health, home, emotional, and job adjustment components were reported as 0.86, 0.77, 0.88, 0.85, and 0.70, respectively [23]. In this study, Cronbach's alpha coefficients for the social, health, home, emotional, and job adjustment components were determined to be 0.71, 0.75, 0.73, 0.80, and 0.81, respectively.

Connor-Davidson Resilience Scale (CD-RISC): Researchers have validated the validity and reliability of a resilience questionnaire developed by Connor and Davidson in 2003 [24]. The questionnaire consists of 25 items, each rated on a five-point Likert scale ranging from 0 (completely false) to 4 (always true). The overall score is determined by adding together the scores of each individual. Scores on the scale range from 0 to 100, with higher scores indicating greater resilience. Studies in Iran have reported Cronbach's alpha and Spearman-Brun binomialization values of 0.669 and 0.665, respectively, for the scale's reliability [25]. In the current study, the Cronbach's alpha for the questionnaire was 0.811.

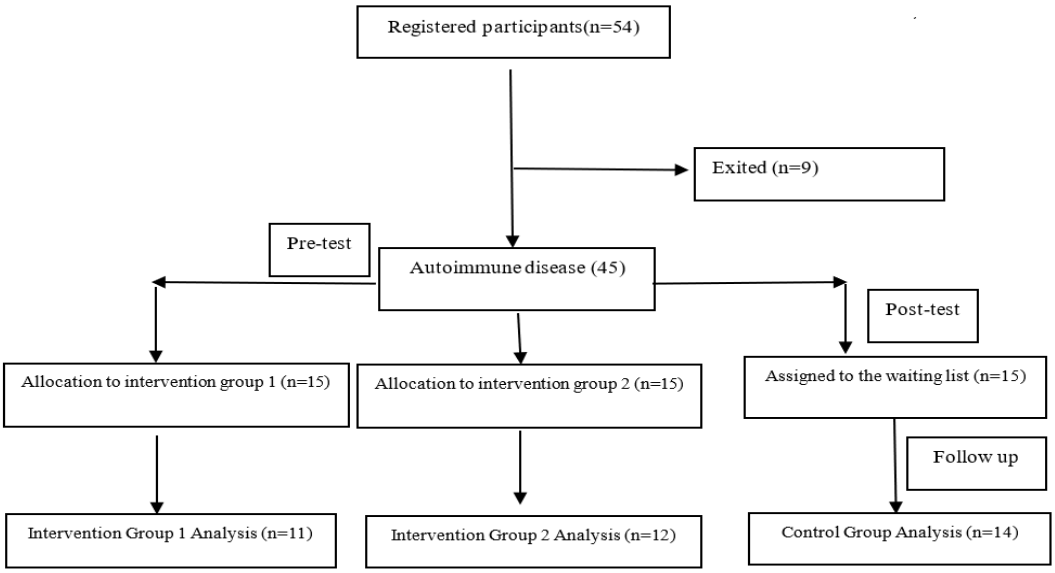

Figure 2. The flow diagram of the study.

Table 1. Summary of Interventions Sessions Based on GABI

First: The training session began with introductions and building familiarity among the members, the researcher, and attachment theories. During the meeting, participants engaged in discussions about attachment and its effect on the parent-child relationship of disabled children. The importance of confidentiality and obtaining informed consent from parents for the educational process were also topics of discussion. Furthermore, parents collaborated to identify both the strengths and weaknesses of their disabled children during the group session.
Second: In this session, members explored attachment-based behaviors compared to exploratory behaviors. They discussed insecure attachment and its impact on the parent-child relationship with disabled children. The group practiced effective techniques for responding to these behaviors.
Third: Assessment of the prior meeting and analysis of how parents' mental perceptions of attachment impact their disabled children: During the session, the group delved into the connection between childhood experiences and parental actions.
Fourth: This session will consist of revisiting the previous session, instructing on appropriate behaviors based on parental beliefs, and establishing a balance in attachment behaviors.
Fifth: Assessment of the previous session and group exercises focusing on building positive relationships with the child: analyzing the indications of both positive and negative relationships with the disabled child by parents, enhancing their emotional awareness and communication skills, and group practice on techniques for minimizing conflicts related to children's conditions and effectively addressing them.
Sixth: "Training the essential skills to comprehend and address the primary needs of disabled children, involving group participation of the parents of these children. Enhancing the communication abilities of both men and women to engage in group discussions about their children's conditions, while also working towards reducing exclusionary behaviors exhibited by parents."
Seventh: "Training parents to communicate effectively with their children, gaining a comprehensive understanding of the child from different perspectives, and promoting a positive shift in parental attitudes towards their disabled child."
Eighth: Review the previous meetings, summarize the content, and apply the information from the post-test.

Descriptive statistics for this study included measures such as mean and Standard Deviation (SD), while inferential statistics utilized covariance analysis with repeated measures. The data was analyzed using the Kruskal-Wallis H method, repeated measure ANCOVA, and Bonferroni's post hoc test at a p-value of 0.05, with the assistance of SPSS version 27 and JASP software version 18.1.0. The Shapiro-Wilk test was employed to assess normal distribution, and Levene's test was used to evaluate the homogeneity of variances.

Table 2. Summary of Parenting Skills Sessions

First: Introducing parents of disabled children to each other and educating them on self-awareness, including understanding their own needs and those of their child, as well as discussing the unique situation of each couple at home and their connection with their disabled child.
Second: Examining the previous session and instructing parents on efficient communication, outlining proper ways to communicate with a disabled child, and engaging in group exercises to practice active listening and fundamental conversation techniques.
Third: Examining the pre-session and stress management training for the couple's circumstances with their disabled child. Defining stress and analyzing stressful aspects within the household, particularly those related to children. Additionally, implementing techniques for mental and physical relaxation.
Fourth: Instruction in decision-making and problem-solving, explaining the importance of making accurate and timely decisions, honing decision-making abilities, teaching how to identify issues related to a disabled child and their circumstances, and practicing problem-solving strategies in simulated scenarios involving a child.
Fifth: Exploring ways to boost self-assurance and identifying the elements that contribute to self-confidence. Examining the factors that diminish parents' self-confidence when their child has a disability. Collecting parents' anecdotes of interactions with others and organizations regarding their disabled child. Analyzing different types of self-confidence and the factors that influence its development.
Sixth: Reviewing the previous session and instructing on building courage, utilizing self-affirmation techniques and embracing challenges (such as understanding the unique needs of disabled children), demonstrating assertive behaviors.
Seventh: Examining the previous session and providing instruction on managing anger, defining irrational anger, especially within the household and directed towards children, analyzing the different aspects of anger, and training on effective communication of anger.

Results

The research collected information from participants through three stages: pre-test, post-test, and follow-up from GABI, parenting skills enhancing sessions, and control groups. Initially, the researcher examined and described the demographic variables of the study. Participants were divided into three age brackets: 20-30 years, 31-40 years, and 41 years and older, and were also separated into three categories based on their educational background: Diploma, Bachelor's degree, and higher education (PhD, MSc). Similarly, based on the disability type, participants were divided into four groups: Physical and movement disabilities, mental retardation disability, disability and mental disorders, and disability of vision, hearing, and speech. The results of the Kruskal-Wallis H test showed that there were no notable variations among the participants when it came to demographic characteristics (P>0.05). Consequently, the groups were alike in terms of demographic variables.

The researcher also examined the mean and SD of the research variables in the research groups which has been presented in Table 4.

Table 3. Demographic Characteristics in the Experimental and Control Groups

Variables	Demographic information	GABI	%	Parenting skills sessions enhancing	%	Control	%	Kruskal-Wallis H	P
Age	20 - 30	2	18.2%	3	25.0%	4	28.6%	1.33	0.513
	31 - 40	7	63.6%	5	41.7%	9	64.3%		
	41 and up	2	18.2%	4	33.3%	1	7.1%		
	Total	11	100.0%	12	100.0%	14	100.0%		
Education	Diploma	5	45.5%	3	25.0%	6	42.9%	0.75	0.685
	Bachler	3	27.3%	5	41.7%	4	28.6%		
	Higher education (PhD, MSc)	3	27.3%	4	33.3%	4	28.6%		
	Total	11	100.0%	12	100.0%	14	100.0%		
Type of disability	Physical and movement disabilities	7	63.6%	7	58.3%	8	57.1%	0.06	0.967
	Mental retardation disability	2	18.2%	2	16.7%	2	14.3%		
	Disability and mental disorders	0	0.0%	2	16.7%	3	21.4%		
	Disability of vision, hearing, speech	2	18.2%	1	8.3%	1	7.1%		
	Total	11	100.0%	12	100.0%	14	100.0%		

Table 4. Description of Research Variables

Variable	TIME	Groups	Mean	SD	Shapiro-Wilk	P	Min	Max
Resilience	Pre-test	GABI	53.18	1.53	0.89	0.162	51	55
		Parenting skills sessions enhancing	54.08	2.15	0.94	0.583	51	58
		Control	52.85	1.51	0.87	0.050	51	55
	Post-test	GABI	58.54	1.36	0.87	0.099	56	60
		Parenting skills sessions enhancing	57.41	1.16	0.9	0.282	55	59
		Control	53.78	2.04	0.93	0.398	51	58
	Follow-up	GABI	59.90	1.92	0.88	0.126	56	62
		Parenting skills sessions enhancing	58.50	1.31	0.90	0.174	56	60
		Control	54.00	2.32	0.90	0.139	51	58
Home adjustment	Pre-test	GABI	13.36	1.36	0.88	0.108	12	16
		Parenting skills sessions enhancing	13.25	1.35	0.85	0.041	12	16
		Control	13.71	1.43	0.89	0.096	12	16
	Post-test	GABI	16.36	1.56	0.95	0.645	14	19
		Parenting skills sessions enhancing	17.16	1.26	0.93	0.449	15	19
		Control	13.21	1.05	0.82	0.010	12	15
	Follow-up	GABI	19.54	1.29	0.90	0.238	17	21
		Parenting skills sessions enhancing	18.66	2.10	0.89	0.146	15	21
		Control	13.00	1.30	0.79	0.004	12	16
Health adjustment	Pre-test	GABI	15.18	2.40	0.85	0.056	12	18
		Parenting skills sessions enhancing	15.25	2.30	0.89	0.124	12	18
		Control	15.14	1.91	0.94	0.538	12	18
	Post-test	GABI	14.54	2.20	0.90	0.224	12	18
		Parenting skills sessions enhancing	14.41	1.881	0.94	0.552	12	18
		Control	14.57	2.13	0.91	0.161	12	18
	Follow-up	GABI	14.90	2.16	0.93	0.424	12	18
		Parenting skills sessions enhancing	14.41	2.50	0.82	0.017	12	18
		Control	15.85	2.21	0.83	0.014	12	18
Social adjustment	Pre-test	GABI	15.36	0.92	0.66	<0.001	14	16
		Parenting skills sessions enhancing	14.83	1.26	0.82	0.020	12	16
		Control	15.28	0.91	0.70	<0.001	14	16
	Post-test	GABI	19.36	1.50	0.88	0.108	17	21
		Parenting skills sessions enhancing	19.417	1.311	0.920	0.290	17	21
		Control	14.143	1.512	0.867	0.038	12	16
	Follow-up	GABI	20.455	1.128	0.876	0.093	19	22
		Parenting skills sessions enhancing	20.250	1.288	0.920	0.284	18	22
		Control	15.14	1.02	0.80	0.005	13	16
Job adjustment	Pre-test	GABI	14.09	1.86	0.87	0.092	11	16
		Parenting skills sessions enhancing	13.58	1.97	0.87	0.072	11	16
		Control	13.85	1.74	0.90	0.112	11	16
	Post-test	GABI	15.54	0.93	0.84	0.035	14	17
		Parenting skills sessions enhancing	15.33	2.10	0.92	0.323	12	19
		Control	14.00	1.71	0.90	0.142	11	16
	Follow-up	GABI	19.18	0.87	0.86	0.065	18	21
		Parenting skills sessions enhancing	18.50	2.43	0.52	<0.001	11	20
		Control	14.50	1.50	0.85	0.027	12	16
Emotional adjustment	Pre-test	GABI	14.72	1.73	0.76	0.003	11	16
		Parenting skills sessions enhancing	14.25	2.09	0.76	0.004	11	16
		Control	14.07	1.94	0.85	0.024	11	16
	Post-test	GABI	17.36	1.02	0.87	0.100	16	19
		Parenting skills sessions enhancing	17.08	0.90	0.86	0.056	16	19
		Control	14.14	1.79	0.86	0.040	11	16
	Follow up	GABI	19.63	0.50	0.625	<0.001	19	20
		Parenting skills sessions enhancing	17.33	1.37	0.960	0.790	15	20
		Control	13.78	2.00	0.84	0.020	11	16

Table 4 presents the mean and SD of the participant's scores on the research variables. The mean scores for resilience, home, social, job, and emotional adjustment did not differ significantly among the three groups (GABI, parenting skills sessions enhancement, and control) in the pre-test phase. However, in the post-test and follow-up stages, the scores increased in the experimental groups compared to the control group. There was no significant difference in the health adjustment variable between the groups and stages. In Table 5, the researcher analyzed the results of the repeated measures analysis of the covariance test.

The results of the covariance analysis in Table 5 showed that the P-value for the between-subjects effects of the resilience variable was statistically significant ($p<0.001$). When adjusting for the impact of the pre-test stage effects, there is a clear distinction between the research groups. The P-value was also observed in the between-subjects effects for the components of home, social, job, and emotional adjustment ($p<0.001$), highlighting distinctions between the research groups. Moreover, the research noted significant interactive outcomes in terms of home, job, and emotional adjustment within subjects concerning time and groups ($p<0.05$). In contrast, there was no significant variation in the health adjustment component between different groups and stages. The researcher examined the interactions between stages and groups in Table 6, focusing on home, job, and emotional adjustment components.

According to Table 6 and Figure 3, the home adjustment variable in the GABI displayed notable variances compared to the control group throughout all stages ($p<0.001$), indicating that the intervention method of GABI in the study had a significant impact on the home adjustment variable, increasing scores. Additionally, there was a notable difference between the GABI in the post-test and follow-up phase ($p<0.001$), indicating stable effects. However, there was no difference between the two experimental groups in the same phases. The home adjustment variable in the group receiving parenting skills sessions was also significantly different from the control group at all stages ($p<0.001$), confirming the effectiveness of the intervention on this variable. The results indicated no noteworthy variations between the parenting skills sessions group during the post-test and follow-up phase ($p=0.139$), implying that the impacts were not enduring.

Table 6 and Figure 4 show that in the follow-up phase, the job adjustment variable in the GABI was significantly different from the control group ($p<0.001$), indicating that the GABI component had a positive effect on job adjustment over time. The difference between the GABI in the post-test and the follow-up phase was also significant ($p<0.001$), demonstrating the stability of the effects. However, there was no difference between the two experimental groups at the same stages. Similarly, in the follow-up phase, the job adjustment variable in the parenting skills sessions enhancing group differed significantly from the control group ($p<0.001$), suggesting that the intervention approach of parenting skills sessions enhancing was effective and led to an increase in job adjustment over time. The parenting skills sessions enhancing group showed a notable difference in the post-test compared to the follow-up phase ($p<0.001$), suggesting that the effects of the sessions remained stable.

Table 5. Covariance Analysis Test

Variable	Source	SS	MS	F	P	η2
Resilience	TIME	0.59	0.59	0.15	0.698	0.005
	TIME ✻ Pre-test	0.42	0.42	0.10	0.743	0.003
	TIME ✻ Group	4.96	2.48	0.64	0.533	0.03
	Group	397.56	198.78	78.64	< 0.001	0.82
Home adjustment	TIME	8.39	8.39	3.40	0.074	0.09
	TIME ✻ Pre-test	5.18	5.18	2.10	0.156	0.06
	TIME ✻ Group	32.31	16.15	6.55	0.004	0.28
	Group	407.02	203.51	123.21	< 0.001	0.88
Health adjustment	TIME	2.06	2.06	0.44	0.507	0.01
	TIME ✻ Pre-test	1.25	1.259	0.27	0.604	0.00
	TIME ✻ Group	5.64	2.82	0.61	0.546	0.03
	Group	8.03	4.01	0.81	0.451	0.04
Social adjustment	TIME	0.11	0.11	0.07	0.785	0.002
	TIME ✻ Pre-test	0.37	0.37	0.25	0.620	0.008
	TIME ✻ Group	0.09	0.04	0.03	0.970	0.002
	Group	469.30	234.65	118.70	< 0.001	0.87
Job adjustment	TIME	0.001	0.00	5.75×10^{-4}	0.981	1.74×10^{-5}
	TIME ✻ Pre-test	1.91	1.91	0.94	0.339	0.02
	TIME ✻ Group	36.92	18.46	9.10	< 0.001	0.35
	Group	146.39	73.19	20.42	< 0.001	0.55
Emotional adjustment	TIME	0.99	0.99	0.50	0.483	0.01
	TIME ✻ Pre-test	1.97	1.97	1.00	0.323	0.03
	TIME ✻ Group	20.17	10.09	5.13	0.011	0.23
	Group	274.22	137.11	64.70	< 0.001	0.79

Table 6. Post Hoc Comparisons - Group ✻ TIME

Variable			MD	SE	t	PBonf
Home adjustment	GABI, Post-test	Parenting skills sessions enhancing, Post-test	-0.84	0.59	-1.40	0.43
		Control, Post-test	3.27	0.58	5.62	< .001
		GABI , Follow-up	-3.14	0.67	-4.69	< .001
		Parenting skills sessions enhancing, Follow-up	-2.25	0.60	-3.76	0.002
		Control, Follow-up	3.38	0.58	5.83	< .001
	Parenting skills sessions enhancing, Post-test	Control, Post-test	4.11	0.57	7.21	< .001
		GABI , Follow-up	-2.30	0.60	-3.83	0.002
		Parenting skills sessions enhancing, Follow-up	-1.41	0.64	-2.20	0.13
		Control, Follow-up	4.22	0.56	7.45	< .001
	Control, Post-test	GABI, Follow up	-6.41	0.58	-11.06	< .001
		Parenting skills sessions enhancing, Follow-up	-5.53	0.56	-9.75	< .001
		Control, Level 2	0.11	0.59	0.18	0.85
	GABI, Follow-up	Parenting skills sessions enhancing, Follow-up	0.88	0.59	1.47	0.43
		Control, Follow-up	6.52	0.58	11.23	< .001
	Parenting skills sessions enhancing, Follow-up	Control, Follow-up	5.64	0.57	9.89	< .001
Job adjustment	GABI, Post-test	Parenting skills sessions enhancing, Post-test	0.15	0.70	0.21	1.000
		Control, Post-test	1.51	0.67	2.24	0.42
		GABI , Follow-up	-3.59	0.60	-5.89	< .001
		Parenting skills sessions enhancing, Follow-up	-3.06	0.70	-4.36	< .001
		Control, Follow-up	1.02	0.67	1.51	1.00
	Parenting skills sessions enhancing, Post-test	Control, Post-test	1.36	0.66	2.06	0.64
		GABI , Follow-up	-3.74	0.70	-5.33	< .001
		Parenting skills sessions enhancing, Follow-up	-3.21	0.58	-5.50	< .001
		Control, Follow-up	0.87	0.66	1.31	1.00
	Control, Post-test	GABI, Follow-up	-5.10	0.67	-7.55	< .001
		Parenting skills sessions enhancing, Follow-up	-4.57	0.66	-6.93	< .001
		Control, Level 2	-0.49	0.53	-0.92	1.00
	GABI, Follow up	Parenting skills sessions enhancing, Follow-up	0.52	0.70	0.75	1.00
		Control, Follow-up	4.61	0.67	6.82	< .001
	Parenting skills sessions enhancing, Follow up	Control, Follow-up	4.08	0.66	6.18	< .001
Emotional adjustment	GABI, Post-test	Parenting skills sessions enhancing, Post-test	0.32	0.60	0.53	1.00
		Control, Post-test	3.27	0.58	5.63	< .001
		GABI , Follow-up	-2.20	0.60	-3.65	0.01
		Parenting skills sessions enhancing, Follow-up	0.06	0.59	0.09	1.00
		Control, Follow-up	3.59	0.57	6.20	< .001
	Parenting skills sessions enhancing, Post-test	Control, Post-test	2.95	0.56	5.25	< .001
		GABI , Follow-up	-2.52	0.59	-4.21	0.001
		Parenting skills sessions enhancing, Follow up	-0.26	0.57	-0.46	1.00
		Control, Follow-up	3.26	0.56	5.80	< .001
	Control, Post-test	GABI, Follow-up	-5.48	0.57	-9.46	< .001
		Parenting skills sessions enhancing, Follow-up	-3.21	0.56	-5.71	< .001
		Control, Level 2	0.31	0.53	0.58	1.00
	GABI, Follow-up	Parenting skills sessions enhancing, Follow-up	2.26	0.60	3.77	0.005
		Control, Follow-up	5.79	0.58	9.95	< .001
	Parenting skills sessions enhancing, Follow-up	Control, Follow-up	3.53	0.56	6.27	< .001

Based on Table 6 and Figure 5, the emotional adjustment variable in the GABI showed significant differences compared to the control group at all stages ($p<0.001$). This suggests that the GABI intervention approach effectively increased emotional adjustment. In addition, a significant difference was observed between the GABI in the post-test and follow-up phase ($p=0.013$), indicating stable effects. Similar differences were found between the two test groups in the follow-up stages, confirming the effectiveness of the GABI method in enhancing emotional adjustment. Similarly, the emotional adjustment variable in the parenting skills sessions enhancing group differed significantly from the control group at all stages ($p<0.001$), indicating the effectiveness of the intervention approach in increasing emotional adjustment. No noticeable distinction was observed between the group that received parenting skills sessions in the post-test and follow-up stages, suggesting that the impact did not remain constant over time.

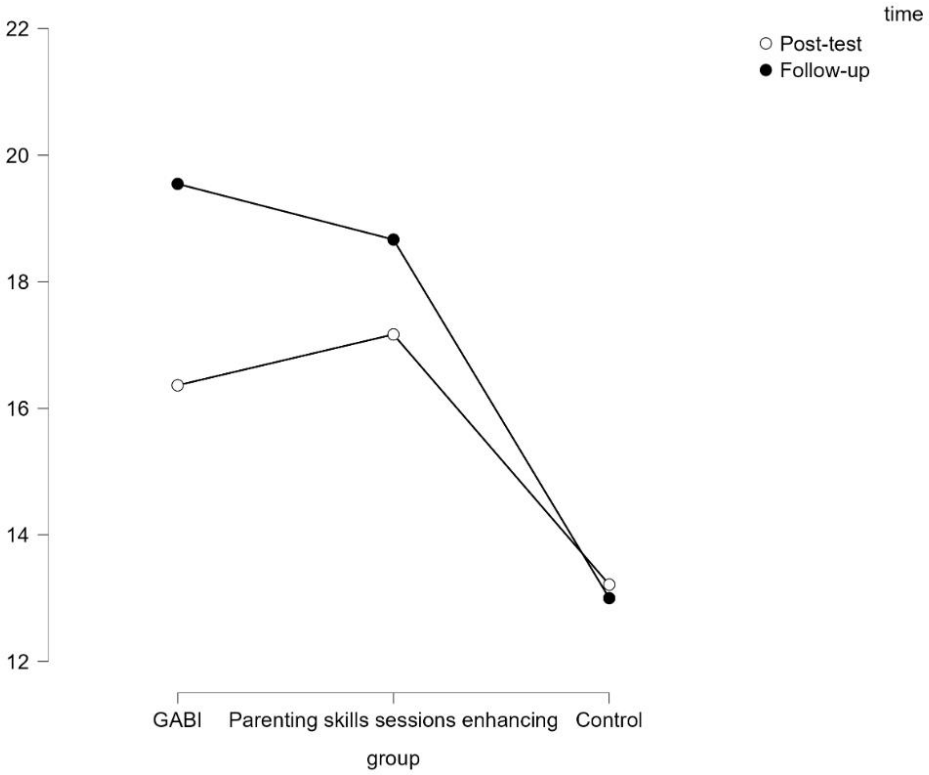

Figure 3. Pairwise analysis of the interaction effects between TIME and home adjustment variable.

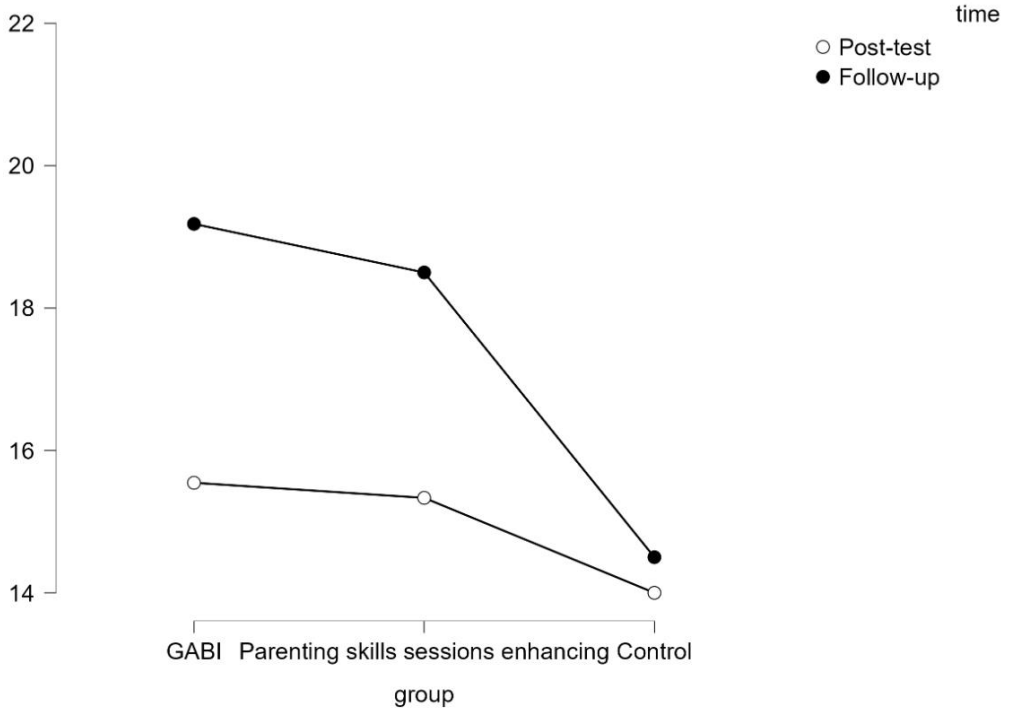

Figure 4. Pairwise analysis of the interaction effects between TIME and Job adjustment variable.

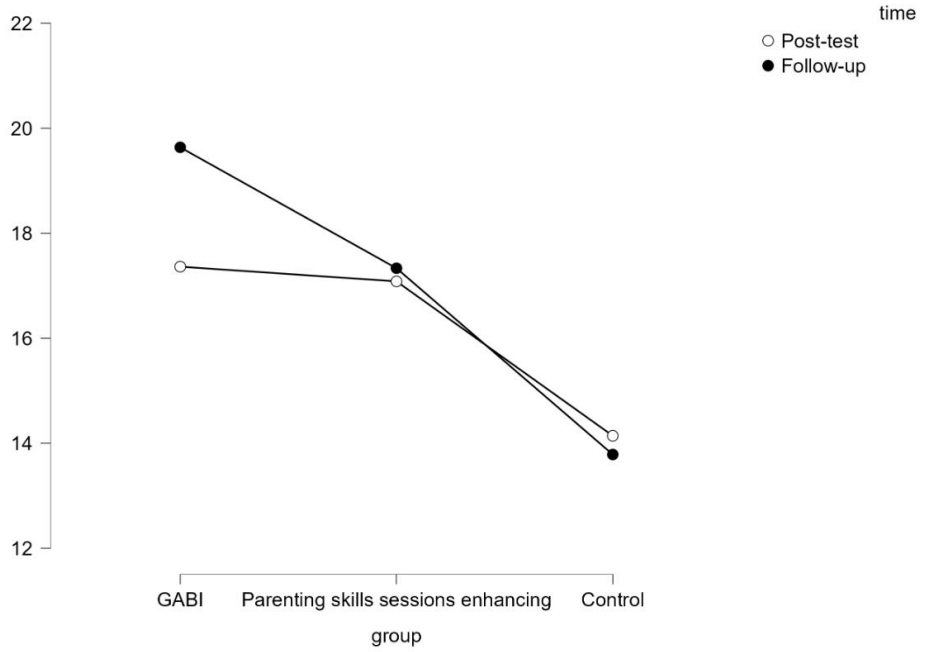

Figure 5. Pairwise analysis of the interaction effects between time and emotional adjustment variable.

Table 7. Bonferroni's Post Hoc Test to Examine Differences between Three Groups

Variables	TIME	(I) Group	(J) Group	MD	SE	P
Resilience	Post-test	GABI	Parenting skills sessions enhancing	1.06	0.69	0.401
			Control	4.78*	0.65	p<0.001
		Parenting skills sessions enhancing	Control	3.71*	0.67	p<0.001
	Follow-up	GABI	Parenting skills sessions enhancing	1.26	0.82	0.401
			Control	5.96*	0.78	p<0.001
		Parenting skills sessions enhancing	Control	4.69*	0.79	p<0.001
Social adjustment	Post-test	GABI	Parenting skills sessions enhancing	0.02	0.62	1.000
			Control	5.23*	0.58	p<0.001
		Parenting skills sessions enhancing	Control	5.21*	0.58	p<0.001
	Follow-up	GABI	Parenting skills sessions enhancing	0.20	0.49	1.000
			Control	5.31*	0.46	p<0.001
		Parenting skills sessions enhancing	Control	5.10*	0.46	p<0.001

Based on Table 7, there was a notable difference in the level of resilience between the GABI and parenting skills sessions when compared to the control group (P<0.001). The difference between the groups and the increase in mean scores in this variable during the post-test and follow-up stages in the experimental groups indicated that both intervention approaches in the study had an impact on resilience, which remained stable over time. However, there was no significant difference between the experimental groups, suggesting that the intervention methods did not differ significantly. The GABI and parenting skills enhancing sessions displayed a noticeable distinction when compared to the control group regarding resilience (P<0.001). The importance of the distinction between the groups and the rise in mean scores in this variable in the post-test and follow-up stages in the experimental groups, in comparison to the control group, confirms that both intervention strategies in the study had an impact on enhancing the social adjustment variable. This impact remained steady, although there was no significant difference within the experimental groups. Consequently, there was no discernible variance between the intervention techniques.

Discussion

The current research aimed to compare the effectiveness of the GABI and parenting skills sessions on the adjustment and resilience of parents with disabled children. The findings from the study indicate that both interventions, focusing on GABI and improving parenting skills, enhance resilience, home, job, social, and emotional adjustment. Despite the GABI being more effective in

improving emotional adjustment, there was no significant difference between the two methods in the other aspects. According to the research findings, interventions focusing on parent-child attachment and parenting skills can enhance the resilience and adjustment of parents. While this research stands out due to the distinct variables it focuses on, it cannot be directly compared to past programs aimed at supporting parents of children with disabilities. However, it is still connected to previous research studies [12, 14, 17, 18]. Previous research has shown that interventions based on attachment theory can lead to more positive parent-child interactions, decreased parental stress, and improved psychosocial adjustment in children [14]. Another study suggested that incorporating psychotherapeutic interventions, particularly attachment-oriented ones, alongside medical treatments can aid in recovery and overall health [12] . Additionally, research has shown that positive parenting interventions can increase mothers' self-efficacy and resilience [17]. Another study found that programs focusing on facing parenting challenges can improve parenting functions and promote greater adjustment [18].

Explaining why GABI is a better approach to enhance emotional adjustment stems from the fact that insecure attachment in adults is correlated to parenting behaviors characterized by low involvement, negative orientation, failure to respond to the child's signals, and intrusion into the child's privacy. Encouraging parents to talk about their previous experiences within their own families can help them gain insight into their emotional connections with their children, leading to improved coping skills and emotional well-being. Attachment therapy in these parents is associated with improving existing attachment relationships, forming new ones, and reducing problematic symptoms and behaviors [26]. Research has highlighted the significance of the child-caregiver relationship in shaping individuals' attachment patterns, emphasizing the importance of addressing the emotional, cognitive, and behavioral aspects of this relationship in attachment-focused interventions. Interventions that aim to improve behavioral, cognitive, and emotional aspects by incorporating principles of attachment theory and health research could demonstrate how effectively enhancing adjustment and resilience can be achieved in individuals [12].

The parenting skills and personal history of parents are crucial factors, with parents who have experienced difficult childhoods being more prone to displaying emotional detachment or violent behavior towards their children. These parents often lack emotional connection with their children [13].Furthermore, rather than GABA, parenting skills sessions can also effectively prevent negative consequences such as child maltreatment and mental health issues. It is important to note that the challenges faced by caregivers of children with disabilities are distinct from those in traditional resilience studies, as their resilience is characterized by positively adapting to the unique challenges of caring for children with developmental disabilities [27]. Family skills programs equip caregivers with the tools necessary to employ positive parenting techniques, enabling them to navigate the challenges of raising children. The primary goal of these programs is to enhance the relationship and attachment between caregivers and their children by enhancing parenting skills that foster essential family protective factors like communication, trust-building, problem-solving, conflict resolution, and ultimately enhancing resilience among parents of children with disabilities [28].

While the current research has important implications, it is important to recognize several limitations. Caring for a disabled child permanently imposes limitations on their parents, presenting challenges in conducting research. Moreover, issues arose from the numerous commitments made by parents to attend meetings, failure to adhere to meeting intervals, and difficulties in controlling variables such as family support levels and the severity of the disabled children. The research specifically examined parents of children with disabilities, leading to conclusions that can be analyzed and utilized by the research community. This indicates the importance of conducting similar studies in other regions in the future. The current research is limited by the measurement tool used, which relied on self-assessment tools. Individual interests could have influenced the completion of the questionnaires, while anonymity might have impacted the scores on the scales. To address this limitation, future research should consider using alternative measurement tools for increased certainty. Some parents were unable to attend in person because of their caregiving duties, which affected the research. To improve outcomes for parents of children with disabilities, communication training and psychological management programs should be developed. Additionally, future research should focus on identifying barriers to parental intervention adherence and comparing GABI with other approaches.

Conclusion

The results of the present research suggest that although raising disabled children may be difficult, parents can improve their ability to cope and adjust by participating in interventions that emphasize parent-child bonding and parenting skills sessions. The results of this research may aid in enhancing and advancing counseling and support programs for parents of disabled children. Professionals and service providers can improve the resilience and adjustment of families by focusing on GABI and offering parenting skills sessions. This approach also aims to enhance the quality of care given to the children in these families. The recommendation is for the government to create educational and vocational training initiatives for parents of disabled children. This is important because these parents often struggle to meet their children's fundamental needs. Parents can acquire the necessary skills from these programs to enhance the well-being and joy of their children. Additionally, parent training and group counseling offered by the municipal guidance and counseling coordinator and school counselor can aid parents in social adjustment and connecting with other parents facing similar challenges. To promote parents'

adjustment, self-awareness, and emotional well-being, guidance, and counseling services should be coordinated by government officials, psychologists, and counselors at the national level.

Conflict of interest

There authors declare no conflicts of interest.

Ethical Approval

The content of this paper is sourced from the authors' project with the Ethics Code of: IR.IAU. Z.REC.1403.132.

Declaration of Generative AI and AI-Assisted Technologies:

During the preparation of this work the authors used Open AI translator in order to Improve writing. After using this tool, the authors reviewed and edited the content as needed and take full responsibility for the content of the publication.

Acknowledgment

The authors would like to extend appreciation to all the individuals who participated in the study.

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