The Effectiveness of Integrative Approach Logotherapy and Hope Therapy on Dysfunctional Metacognitive Beliefs of Mothers of Autistic Children

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Quantitative Study

Abstract

Background: Raising a child with a disability can often present parents with a multitude of obstacles that range from being socially isolated and experiencing emotional stress and depression to grappling with feelings of grief and struggling with financial burdens. The present study seeks to investigate the effectiveness of the integrated method (logotherapy and hope therapy) on the dysfunctional metacognitive beliefs of mothers of children with autism spectrum disorder (ASD).

Methods: The research study at hand followed a semi-experimental and pretest-posttest design, with a 3-month follow-up stage. The statistical population of the study comprised all mothers of children with autism in the summer and fall of 2023 in Shiraz, Iran. Through purposive sampling, 27 mothers of children with ASD were selected and randomly grouped into two experimental and control groups. The experimental groups' intervention consisted of an 8-session treatment protocol, 90 minutes a week, relying on the integrated method (logotherapy and hope therapy). The control group received no special treatment. The research instrumentation consisted of the dimensions of dysfunctional metacognition beliefs in the Metacognitions Questionnaire (MCQ-30). Descriptive statistics were calculated for the study, and the multivariate analysis of covariance (MANCOVA) was used in SPSS software.

Results: The results showed that the integrated method (logotherapy and hope therapy) was effective on negative beliefs (P < 0.001) and cognitive uncertainty (P < 0.001) of mothers of children with ASD.

Conclusion: The results of the study demonstrated that the integrated method (logotherapy and hope therapy) affected the dysfunctional metacognition beliefs of mothers of autistic children. Additionally, it became evident that the tendency towards meaning, hope, and achieving the meaning of pain, suffering, and unwanted and tragic

events improves the psychological coherence and quality of life (QOL) of mothers of autistic children in the mentioned difficult situation.

Keywords: Logotherapy; Hope therapy; Dysfunctional metacognitive beliefs; Mothers; Autistic children

Introduction

Autism spectrum disorder (ASD) is a lifelong, complicated neurodevelopmental disorder distinguished by persistent impairments in social communication interaction in various situations, along with constrained and recurrent patterns in behaviors, interests, and activities (Amirlou, Saberi, & Hakim, 2022). Recent research on the issue indicates that the prevalence of autism disorder is one out of every 100 births (Hosein Abadi, Pourshahryari, & Zandipour, 2017). Parents of children with ASD encounter more intense levels of parenting stress than parents of children with regular development, as well as parents of children with other types of developmental delays. Since these special children cannot make much eye contact and are not very interested in being embraced, many damages are caused to the family, especially the mother and caregiver (Ebrahimi & Ebrahimi, 2021). Some of these mothers, because of the unique conditions of their children, are permanently carrying negative emotions and feelings; therefore, they are always subject to destructive behaviors caused by these emotions and negative feelings (Hayati, Hamidipoor, & Razapoormirsaleh, 2020).

Dysfunctional metacognitive beliefs are considered one of the predictors of the emergence of the symptoms of anxiety and depression in the context of stressful events in the lives of mothers of children with ASD since an individual deprived of appropriate metacognitive beliefs cannot gain acceptable control over their lives (Raygani, Esazadeghan, & Zeinali, 2022). In fact, these negative metacognitive beliefs underlie uncontrolled thoughts (Hashemi & Kohansal, 2019). Metacognition is a multidimensional concept that comprises knowledge, beliefs, procedures, and strategies that assess and monitor or control cognition (Falsafinejad, Delavar, Farokhi, & Borjali, 2018). Metacognitive beliefs comprise five categories of negative beliefs, including positive beliefs about worry, uncontrollability, and danger of thoughts, cognitive certainty, the need to control thoughts, and cognitive self-awareness (Ghadampour & Rezaeifar, 2019). In a study conducted by Tsermentseli and Kouklari (2021) on parents of children with ASD, it was maintained that the stress of mothers of autistic children differs depending on the child's educational stage and is connected with poor metacognition. Moreover, Rahnama (2022) demonstrated that there is a significant relationship between spirituality, metacognitive beliefs, and emotion regulation as predictors of anxiety among parents of children with autism. Moreover, another research study indicated that irrational beliefs and negative metacognitive beliefs about positive emotions are paramount cognitive vulnerability factors that help diminish positive emotions in parents of children with ASD (Kanaani & Godarzi, 2017).

Among the compelling variables related to the adjustment of families with children with extraordinary needs is finding meaning in crises and the significant capacity to recognize troublesome circumstances and conditions (Shariat, Yarmohammadian, Solati, & Chorami, 2021). Logotherapy may be a strategy based on meaning, and the meaning of life depends on a person's conditions and characteristics. Each individual is in charge of his/her life, and it is the individual him/herself who characterizes the meaning of his/her life (Sarhangi, Nasab, & PanahAli, 2021). Logotherapy is a philosophical approach to individuals and their existence that deals with prominent themes and issues in life, including death and life, freedom and responsibility towards oneself and others, finding meaning and coping with meaninglessness and the like (Azizmohammadi, Rakebi, Jamshidi, & Zomorodi, 2019). The findings of the research study by Nouri, Falahzade,

Pourebrahim, and Nazarboland (2018) demonstrated that logotherapy increases the psychological coherence and quality of life (QOL) of mothers with autistic students. It was maintained by another study that logotherapy could be used to develop family functioning and the meaning of life for mothers of children with ASDs (Barnameh, Bagheri, & Tanha, 2023). Moreover, Aziz Mohammadi, Mirzmani Bafghi, and Seyed Mahmoud (2018) found that group logotherapy can significantly reduce social anxiety and increase the psychological well-being of mothers with autistic children. In addition, as indicated by Barnameh et al. (2023), therapy causes an increase in the life expectancy of mothers of children with ASD.

Hope is regarded as one of the vital issues for mothers with autistic children. Generally, despair causes the mother of an autistic child to be defenseless and trapped against stressors (Khorshidian, Dosti, Samadaei, & Mortazavi Kiasari, 2017). Hope therapy is built upon a positive psychology approach. Previous research studies have emphasized the influence that this treatment method has on preventing and adjusting anxiety, depression, and stress, increasing feelings of hope and self-confidence, increasing optimism, increasing happiness, and the ability to cope with social stress (Jalali, Tagharrobi, Sooki, & Sharifi, 2020). The study conducted by Salimi, Abbasi, Zahrakar, Tameh, and Davarniya (2017) have clarified the influence hope therapy has on the resilience of mothers of children with autism. Moreover, Soltani, Sadati Firouzabadi, and Samia Sadat (2019) reported that hope therapy affects the well-being of mothers with autistic children. Furthermore, Bakhshipoor, Shahideh, and Aghdasi (2021) claimed that group hope therapy could be regarded as an influential intervention for the improvement of the mental health of mothers who have intellectually disabled children.

Parents who have autistic children encounter numerous hardships. Meanwhile, mothers experience more psychological pressure than fathers do. The majority of the mothers, when their children's autism disorder is diagnosed, experience denial and confusion and exhibit various emotions, including anger, sadness, crying, and mourning (Aghababaei & Taghavi, 2020). Therefore, it is essential to consider treatment methods that can have an influence on dysfunctional metacognitive beliefs of the mothers and help them through. Nonetheless, little to no research has concentrated on the effectiveness of the integrated method (logotherapy and hope therapy) on the dysfunctional metacognitive beliefs of mothers of children with autism. The research study at hand is one of the first studies conducted specifically on this topic. The present research sought to investigate the effectiveness of the combined method (logotherapy and hope therapy) on the dysfunctional metacognitive beliefs of mothers of children with autism. It aimed to answer the question of whether or not the combined method (logotherapy and hope therapy) is effective on the dysfunctional metacognitive beliefs of mothers of children with autism.
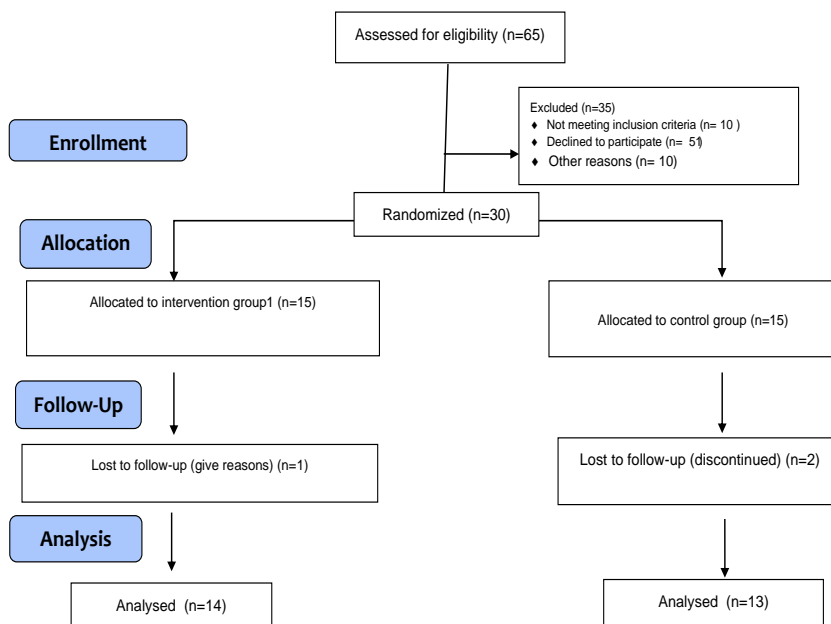
Methods

Study design and participants: The present semi-experimental research was conducted with a pretest-posttest and follow-up design. The statistical population of the study included all mothers of children with autism in 2022 in Shiraz, Iran. Using purposive sampling method, 27 mothers of children with ASD were selected as the study participants. The study inclusion criteria were non-participation in other treatment programs at the time, and signing the formal written consent distributed among all participants. The exclusion criteria comprised the attendees' absence from the treatment for more than a session, simultaneous participation in other drug and non-drug

programs, and reluctance of attendees for further collaboration. The ethical issues of the study included maintaining the confidentiality of participants' information.

After making the necessary arrangements with the welfare organization, rehabilitation centers of Shiraz city, and mothers, a pretest was administered by the use of available instrumentations. In the next step, educational interventions based on the integrated method (hope and logotherapy) were implemented over 8 weekly 90-minute sessions in the welfare organization of Shiraz by the researcher for the experimental group. Logotherapy was based on the model of Schulenberg, Schnetzer, Winters, and Hutzell (2010) and hope therapy was designed by Bahari (2009). However, the control group received no treatments. At the end of the last treatment session, a posttest was conducted on both groups. After a 3-month interval, the research variables were reassessed through the implementation of the pretest, posttest, and follow-up procedures. Ultimately, the results of the two groups were compared with each other. Moreover, after the research was completed, training sessions were held for the attendees of the control group who wanted to receive specialized help. To comply with the ethical principles, the mothers of the control group received 5 training sessions after the research.

Sample size: The sample under investigation included 30 participants (one experimental group and one control group; N = 15 for each group) from among mothers of children with ASD who had a file in the welfare organization of Shiraz city. The attendees were randomly selected through purposive sampling method. The participants were placed into two groups (control and experimental) using the random table method. The sample size was determined using G*Power software at a significance level of 0.05, test power of 0.90, and effect size of 1.42. From the experimental group, 1 participant and from the control group, 2 participants withdrew from the research. The CONSORT flow chart is depicted in figure 1.

Figure 1. CONSORT flow diagram

Table 1. Summary of treatment sessions based on the integrated method

Session	Content
First	Introducing and getting to know the group members: introducing the group members to the group leader so they can get to know each other, establishing a therapeutic relationship and building trust, explanation of the goals and rules of the group by the group leader, briefly explaining the logotherapy and stating the goals of the intervention program based on the theory of hope
Second	Working towards understanding meaning, value, and personal attitude: preparing the group to start the work by discussing meaning and value, implementing the attitude change technique with the group members, providing homework for the attitude change technique, and getting to know the concept of hope, understanding the difference between hope and optimism, introductory understanding of the components of hope, understanding how hope grows and its necessity in life
Third	Working towards acceptance of responsibility: checking the assignments of the previous session, discussing and providing feedback about the homework given, discussing the responsibility of individual choices, presenting homework to prepare a checklist of individual choices and increasing courage, additional familiarity with the components of hope, reviewing the life story and explaining the life story based on the three components of hope
Fourth	Working towards awareness of personal values: starting the session by reviewing the assignment of the previous session, implementing the technique of awareness of values with the participation of group members, providing homework for the technique of awareness of values and understanding having a purpose in life, practical practice of goal setting, writing goals for essential areas of life and prioritizing goals
Fifth	Identification of personal values: checking the assignments presented in the previous meeting and providing feedback, continuing the technique of awareness of values, completing the checklist of personal values as homework and recognizing the characteristics of suitable goals, identifying suitable goals, final prioritization of goals expressing in the group and defending the most important goals
Sixth	Continuing to identify personal values: checking the assignments presented in the previous meeting and providing feedback, performing the mountain range exercise with the participation of members, completing the checklist of personal values as homework and understanding the importance of will in life, knowing ways to increase strength Will, identifying the obstacles to improving will and trying to overcome them.
Seventh	Identifying the role of values in life: checking the assignments given in the previous session and providing feedback, performing video exercises with members' collaboration, completing the checklist of personal values as homework and providing different and diverse solutions to achieving the goals, choosing the best A solution to achieving goals and implementing them
Eighth	Summarizing and finishing the meetings: reviewing the assignments given in the previous meeting and providing feedback, general review of the checklist prepared by each person about personal values and discussing the meaning of each person's life, providing a summary of the meetings and summarizing the group's work, receiving group members' feedback on the group's performance, discussing the strengths and weaknesses of individuals' solutions, increasing the power of their will to achieve goals in life, summarizing the meetings, thanking the participants, and re-implementing the questionnaires as a posttest and finishing the group's work

Instruments and Variable

Metacognitions Questionnaire (MCQ-30): Metacognitions Questionnaire 30 (MCQ-30) was developed by Cartwright-Hatton, Mather, Illingworth, Brocki, Harrington, and Wells (2004) to assess individual differences in terms of their metacognitive beliefs which are focused upon in the metacognitive theory of generalized anxiety disorder. The questionnaire consists of 30 items including the 5 subscales of positive beliefs about worry (questions 28, 23, 19, 10, 7, and 1), negative beliefs about the controllability of thoughts and risks related to worry (questions 21, 15, 11, 9, 4, and 2), cognitive uncertainty (questions 29, 26, 24, 17, 14, and 8) , the need to control thoughts (questions 27, 25, 22, 20, 13, and 6), and metacognitive processes which evaluate cognitive self-awareness (questions 30, 18, 16, 12, 5, and 3). The items of the

MCQ-30 are rated on a 4-point Likert scale ranging from 1 (completely agree) to 4 (completely disagree). In addition, the validity of this questionnaire in Iran was reported to be 0.91 for the whole scale and 0.71-0.87 for the subscales using the internal consistency method and Cronbach's alpha formula (Saed, Yaghobi, Roshan, & Soltani, 2011). In this research, the researcher reported the reliability of the scale to be 0.81 based on the Cronbach's alpha.

Analyses: The collected research data were analyzed using descriptive statistics (mean and standard deviation) and multivariate analysis of covariance (MANCOVA) at a significance level of 0.05 in the SPSS statistical software (version 27; IBM Corp., Armonk, NY, USA).

Ethics: All ethical principles have been considered in this article. Participants were aware of the purpose of the study and the stages of its implementation. They were also assured of the confidentiality of their information and were free to leave the study whenever.

Results

In the present research, the data were gathered in three stages: pretest, posttest, and follow-up in the experimental and control groups on two groups, including 27 people. In the beginning, the researcher investigated the research variables (Table 2). In terms of employment status, the researcher divided participants into two groups: housewives and employed. Likewise, the participants were placed into two groups of boys and girls regarding gender. Considering the age of the participants, the researcher divided them into three groups: 20-30 years old, 31-40 years old, and 41 years old and above. Concerning education, the researcher grouped the participants into six groups: high school, diploma, associate degree, bachelor's degree, master's degree, and Ph.D.

Table 2. Demographic characteristics in the experimental and control groups

Variables	Groups	Experimental group	Percent	Control group	Percent	Chi-Square	P
Employment status	Housewife	8	61.5	5	38.5	0.942[a]	0.332
	Employed	6	42.9	8	57.1		
	Total	14	51.9	13	48.1		
Gender of the child	Boy	5	45.5	6	54.5	0.304[a]	0.581
	Girl	9	56.3	7	43.8		
	Total	14	51.9	13	48.1		
Age (year)	20-30	7	50.0	7	50.0	0.074[a]	0.964
	31-40	5	55.6	4	44.4		
	+41	2	50.0	2	50.0		
	Total	14	51.9	13	48.1		
Education	High school	3	75.0	1	25.0	3.786[a]	0.581
	Diploma	4	36.4	7	63.6		
	Associate degree	4	50.0	4	50.0		
	Bachelor's degree	1	50.0	1	50.0		
	Master's degree	1	100	0	0		
	Ph.D.	1	100	0	0		
	Total	14	51.9	13	48.1		
Marital status	Divorced	3	60.0	2	40.0	0.163[a]	0.686
	Married	11	50.0	11	50.0		
	Total	14	51.9	13	48.1		

[a]: $P < 0.001$

Regarding marital status, participants were divided into two groups, divorced and married; only 5 of the participants were divorced. The results of the chi-square test showed that the difference between the participants in terms of demographic variables was not significant (P > 0.05).

In the next step, the mean and standard deviation of the research variables were investigated in three stages: pretest, posttest, and follow-up in the experimental and control groups. Then, relying on the analysis of covariance (ANCOVA), the researcher examined the differences between the groups.

According to table 3, the mean of the negative beliefs variable and cognitive uncertainty variable in the pretest stage did not differ much between the experimental and control groups. However, a difference was identified in the average between the two posttest and follow-up stages in the control and experimental groups. Accordingly, it is evident that the mean of the negative beliefs variable and cognitive uncertainty variable has diminished in both the posttest and follow-up stages compared to the pretest stage. In table 4, the researcher explored the difference between the research groups in the study stages using MANCOVA.

As indicated in table 4, based on the P-value of the between-group test, a significant difference was identified between the experimental and control groups in the negative beliefs variable at the posttest stage (P = 0.005) and at the follow-up stage (P = 0.001). The resulting effect size of the posttest (28.8%) and follow-up stages (34.9%) demonstrates the variation in the large effect size between the two groups. As is evident in table 4, relying on the between-group test p-value, a significance was reported regarding the difference between the two experimental and control groups in the cognitive uncertainty variable at the posttest stage (P < 0.001) and at the follow-up stage (P < 0.001). The effect size resulted in the posttest stage (47.8%), and the follow-up stage (59.6%) also reveals the difference in the large effect size between the two groups. Next, the researcher utilized the Bonferroni test to investigate the pairwise difference between the pretest, posttest, and follow-up measurement periods.

As can be seen in table 5, a significant difference was identified in the mean of the negative beliefs variable between the pretest and posttest stages (P = 0.032); however, no significant difference was detected between the follow-up and posttest stages (P > 0.999). Accordingly, it is concluded that the combined method (logotherapy and hope therapy) was effective on the negative beliefs variable and diminished it even though this method had no lasting effects on the negative beliefs variable. Additionally, a significant difference was witnessed in the mean of the cognitive uncertainty variable between the pretest and posttest stages (P = 0.023). In contrast, no significant difference was observed between the follow-up and posttest stages (P > 0.999). It is therefore concluded that the integrated method (logotherapy and hope therapy) affected the variable of cognitive uncertainty and caused a decrease in it; however, this method did not have lasting effects on the variable of cognitive uncertainty.

Table 3. Mean ± Standard deviation (SD) of the research variables in experimental and control groups

Variables	Groups	Mean ± SD		
		Pretest	Posttest	Follow-up
Negative beliefs	Experimental	16.7857 ± 3.2623	12.2857 ± 2.3996	11.3571 ± 3.2724
	Control	16.4615 ± 3.2046	16.0769 ± 3.7296	16.2308 ± 3.6321
Cognitive uncertainty	Experimental	16.6429 ± 2.0979	12.2857 ± 2.3996	11.3571 ± 3.2724
	Control	16.3846 ± 1.3253	16.6923 ± 2.3588	17.0769 ± 1.3821

SD: Standard deviation

Table 4. Multivariate analysis of covariance

Variables	Source	Variables	SS	df	MS	F	P	Eta squared
Negative beliefs	Corrected model	Posttest	97.793[a]	2	48.896	4.872	0.017	0.289
		Follow-up	160.109[b]	2	80.055	6.458	0.006	0.350
	Intercept	Posttest	159.412	1	159.412	15.883	0.001	0.398
		Follow-up	172.904	1	172.904	13.948	0.001	0.368
	Group	Posttest	97.600	1	97.600	9.725	0.005	0.288
		Follow-up	159.731	1	159.731	12.885	0.001	0.349
Cognitive uncertainty	Corrected model	Posttest	131.100[a]	2	65.550	11.124	< 0.001	0.481
		Follow-up	240.558[b]	2	120.279	20.313	< 0.001	0.629
	Intercept	Posttest	66.843	1	66.843	11.344	0.003	0.321
		Follow-up	144.699	1	144.699	24.438	< 0.001	0.505
	Group	Posttest	129.360	1	129.360	21.954	< 0.001	0.478
		Follow-up	209.370	1	209.370	35.359	< 0.001	0.596

[a]???, [b]:???

SS: Sum of squares; df: Degree of freedom; MS: Mean square

Discussion

In the present study, the effectiveness of the combined method (logotherapy and hope therapy) on the dysfunctional metacognitive beliefs of mothers of children with autism were investigated. According to the findings of the research, the integrated method (logotherapy and hope therapy) affected and decreased the variable of negative beliefs in mothers with children with autism disorder; however, this method has no lasting effects on the variable of negative beliefs. Moreover, the integrated method (logotherapy and hope therapy) was also effective on the variable of cognitive uncertainty and reduced it, but it did not have lasting effects on this variable either.

Regarding the influence of the combined method (logotherapy and hope therapy) on the negative and dysfunctional beliefs of mothers of children with autism and reducing their negative beliefs, this research is in agreement with previous researches by Drigas, Mitsea, and Skianis (2022), Tsermentseli and Kouklari (2021), Alipor, Rahmanian, and Alibakhshi (2019), Moghtaderi, Saffarinia, Zare, and Alipour (2020), Koohpayezadeh, Motamdi, Eskandari, and Farrokhi (2019), and Qavami (2015). Research findings demonstrated that hope therapy is an efficient way of reducing dysfunctional attitudes in patients (Alipor et al., 2019). The findings of another study demonstrated that hope therapy based on positive psychotherapy results in improved self-efficacy due to having hope therapy and positive psychotherapy methods (Moghtaderi et al., 2020). Tsermentseli and Kouklari (2021) conducted a study on mothers of children with ASD and intellectual disability, and they also concluded that mothers' stress is different regarding the child's educational stage, which is associated with poor meta-cognition.

Table 5. The Bonferroni test

Variable	TIME (I)	TIME (J)	Mean difference	SE	P
Negative beliefs	Pretest	Posttest	2.519[*]	0.914	0.032
		Follow-up	2.926[*]	1.027	0.025
	Posttest	Follow-up	0.407	0.604	> 0.999
Cognitive uncertainty	Pretest	Posttest	2.111[*]	0.731	0.023
		Follow-up	2.407[*]	0.894	0.037
	Posttest	Follow-up	0.296	0.497	> 0.999

SE: Standard error
[*] $P < 0.001$

Koohpayezadeh et al. (2019) also reported that, due to cultural and religious affinity, logotherapy can be more influential in reducing feelings of loneliness and increasing self-efficacy compared to other treatment methods. Moreover, the findings of the study by Qavami (2015) highlight the effectiveness of group logotherapy in increasing the total score of the self-efficacy scale and its dimensions. Ghorban Shiroodi (2016) concluded that hope therapy has a significant effect on reducing depression and feelings of loneliness among female students, but there was no difference in the experimental groups regarding self-efficacy.

In explaining the present issue, it should be maintained that logotherapy is a process that aims at obtaining the ability to reach the true self, expand the view of oneself and the surrounding world, and clarify the things that give meaning to one's present and future life. Negative beliefs and attitudes about oneself are regarded as the main section of changes, and through logotherapy, people learn to use novel experiences, which lead to more regular beliefs, such as alternative and more adaptive beliefs. Mothers who have children with autism, due to their children's special conditions, are permanently carrying negative emotions and feelings (Hayati et al., 2020). In circumstances like this, the existence of purpose and meaning in life can help these people and, by accentuating meaning, purpose, and values, give rise to the responsibility towards life in these people. By burdening the mentioned responsibility and accepting his/her current condition, a person is encouraged to work and try to develop him/herself, which provides the basis for improving self-efficacy (Koohpayezadeh et al., 2019). It is to be noted that positive emotions, along with their increase, are vital principles in the approach of positive psychology, especially in hope therapy. The implementation of hope therapy helps individuals notice the bright side of their lives by diminishing negative attitudes, which consequently decreases dysfunctional attitudes and increases happiness through hope and hope therapy. Hope therapy, by emphasizing the capabilities of mothers of children with autism disorder and developing their talents, can be effective in developing self-confidence and decreasing dysfunctional attitudes (Alipor et al., 2019).

Additionally, in association with another finding of the present research, i.e., the influence that the combined method (logotherapy and hope therapy) has on the variable of cognitive uncertainty and the reduction of this variable in mothers of children with autism disorder, it must be taken into account that this research is a pioneer in the examination of the integrated method (logotherapy and hope therapy) in association with the variable of cognitive uncertainty. Therefore, there was no consistent and inconsistent research background that directly dealt with the mentioned variable and the specific sample group. Accordingly, we tend to account for and justify our research findings in association with the research backgrounds that are connected to the variable from a therapeutic dimension, which means that logotherapy and hope therapy are effective (Nouri et al., 2018; Movallali, Tayebi Ramin, & Rezaee Madani, 2016; Bakhshipoor et al., 2021; Salimi et al., 2017; Mohammadi, Dokaneifard, & Heidari, 2023; Hemmati & Aghaei, 2022; Imani, Zanganeh Motlagh, & Abbasi, 2022; Yadollahi Ardestani, Keykhosrovani, & Amini, 2022; Nouri Deh Chenashek, Akbari, & Shafiabadi, 2023). In this regard, research findings demonstrated that logotherapy can be used to expand family functioning and the meaning of life among mothers with autistic children (Nouri et al., 2018). The results of the study also illustrated that group logotherapy causes an improvement in the QOL of mothers with hearing-impaired children regarding physical health, mental health, and environmental health (Movallali et al., 2016). According to other

findings of the present study, the effect of hope therapy on resilience among mothers of children with autism was confirmed (Salimi et al., 2017). Bakhshipoor et al. (2021) also concluded that group hope therapy can be regarded as an effective intervention for the improvement of the mental health of mothers of mentally retarded children.

Regarding this issue, it should be considered that fundamental concepts of logotherapy counseling include the search for meaning in life, individual failure, psychotic irritation, thought struggle, empty and meaningless life, the meaning of love, and the meaning of suffering in the course of therapy. Mothers of children with autism disorder can become depressed, hopeless, absurd, sad, and aimless people, depending on the circumstances. Therefore, logotherapy can give meaning to their lives. With logotherapy, it is possible to revive the excitement, effort of thought, and activity in them, all of which are essential for surviving life. Over the course of therapy, clients learn not to emphasize getting rid of the problem, but to live with their problem by accepting it (Yosefi, 2012). People, including mothers of children with autism, often encounter 'shoulds' and 'do nots,' which prevent them from interacting with others. They have to be capable of questioning these needs and imperatives. People usually want to enjoy their solitude, their social relationships, or their work and entertainment; however, their false conceptualizations do not allow them to reach their goals. Wrong beliefs result in wrong views and wrong behavior. When people believe that what they want should happen, emotional disturbance occurs. This disorder occurs especially when a person has a low tolerance for failure (Gharibi, Javanmardi, & Rostami, 2016). A thing that can help these conditions and cause positive feelings, including feelings of pleasure, euphoria, intoxication, and comfort, is hope therapy. Hope therapy helps these mothers deal with everyday incidents more actively and effectively by using coping strategies. Hope therapy can decrease the negative attitudes that make these mothers not see many positive aspects of their lives. This treatment, emphasizing the development of capabilities and talents, can improve self-esteem and increase positive feelings, emotions, and positive thinking while reducing dysfunctional attitudes. Increase in happiness along with decrease in dysfunctional attitudes are factors indicating mental health among mothers of children with autism (Alipor et al., 2019).

The results of this research study must be considered in accordance with its limitations. The selection of the sample group of mothers of children with ASD in Tehran, Iran, the absence of fathers, and the limited number of samples were among the limitations of this study. Generalizing the results of this study should be cautiously done to other mothers of children with ASD in other cities and age groups. It is also suggested that further research studies be conducted on the effect of hope therapy and logotherapy on fathers' dysfunctional metacognitive beliefs. Moreover, one of the other limitations of the research was the implementation of pretests among the mothers of children with autism disorder; it was difficult to focus the concentration of some of them on completing the questionnaires at some points due to the stress and the tension they encountered which caused problems. Furthermore, the research adopted self-report questionnaires to collect the required data, which is subject to bias due to motherly feelings in responding to the questions. Therefore, it is suggested that other data collection instruments, such as interviews and observations, be used in future works.

Conclusion

The research findings demonstrate that the combined method (logotherapy and hope

therapy) has been effective on the dysfunctional metacognitive beliefs of mothers of autistic children. Consequently, it seems that the tendency towards meaning, hope, and achieving the meaning of pain and suffering and unwanted and tragic events improve psychological coherence and QOL in the difficult contexts mentioned for mothers of autistic children. Therefore, it is suggested that this treatment method be used in other mothers with autistic children. Moreover, since this research was conducted only on mothers, it is better to conduct this research on fathers of autistic children for the sake of the generalizability of the research findings. Furthermore, it is suggested that a longer follow-up period (at least 6 months) be considered in future research.

Conflict of Interests

Authors have no conflict of interests.

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