



Does Online Counseling Reduce Anxiety in Parents of Children with Autism Spectrum Disorders During Coronavirus Disease 2019 Pandemic?

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Abstract

Edited by: Mirko Spiroski
Citation: Lestari NE, Anindya I. Does Online Counseling Reduce Anxiety in Parents of Children with Autism Spectrum Disorders During Coronavirus Disease 2019 Pandemic? Open Access Maced J Med Sci. 2021 Sep 09; 9(G):66-70. https://doi.org/10.3889/oamjms.2021.6492
Keywords: Anxiety; Autism spectrum disorder; Coronavirus disease 2019; Online counseling
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Received: 20-May-2021
Revised: 15-Aug-2021
Accepted: 28-Aug-2021
Copyright: © 2021 Nur Eni Lestari, Isti Anindya
Funding: This study was supported by Head of Sekolah Tinggi Ilmu Kesehatan Indonesia Maju
Competing Interests: The authors have declared that no competing interests exist
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BACKGROUND: Coronavirus disease 2019 (COVID-19) pandemic has made governments in a number of countries to issue and implement a regulation of social and physical restriction. It leaves a serious impact, one of which is anxiety experienced by parents of children with autism spectrum disorder (ASD) as the only access to therapy and education for their children has to be done online.

AIM: The purpose of this study was to determine the optimization of online counseling on the anxiety in parents of children with ASD during COVID-19 pandemic.

MATERIALS AND METHODS: The design of this study used pre-test-post-test design without control. The sampling technique used purposive sampling with 46 respondents. The instrument used online counseling design and Generalized Anxiety Disorders-7 which has been tested for validity and reliability. This study used marginal homogeneity test.

RESULTS: The result showed that the majority of respondents' anxiety before and after online counseling had severe and minimal anxiety (16 respondents, 34.8% and 15 respondents, 32.6%, respectively) with $p = 0.012$.

CONCLUSIONS: There was an effect of online counseling on anxiety in parents of children with ASD during COVID-19 pandemic. This can serve as a recommendation in providing online counseling to reduce anxiety in parents of children with ASD during COVID-19 pandemic.

Introduction

Coronavirus disease 2019 (COVID-19) pandemic and the policies of social and physical restrictions in various countries to slow the spread of the virus have had a reasonably severe impact on people's mental health. A study in China described one of the severe effects of people's mental health as high anxiety and severe depression [1], [2]. Anxiety generally occurs because there is too much information that is difficult to confirm. In addition, the closure of public facilities also triggers anxiety in the community, such as the closure of schools and therapy centers which increases parents' anxiety about their child's development [3], [4].

Anxiety and worry in society globally affect many aspects. Recent studies have shown that individuals who experience isolation and quarantine experience significant stress in anxiety, anger, confusion, and symptoms of post-traumatic stress [5]. All groups of people can experience the psychological impact of the COVID-19 pandemic. One of them is families with children with special needs, such as autism spectrum disorder (ASD). ASD is a developmental disorder characterized by deficits in social interaction

and communication skills, verbal and nonverbal, limited interests, and stereotyped behavior. Manifestations of ASD symptoms can range from mild to severe and vary from individual to individual. It is estimated that 1 in 160 children worldwide is identified as ASD. In Japan, the prevalence of children with ASD is 161 children per 10,000. In the United States, one child per 68, while in Indonesia, one child per 99, new ASD children of 500 children/year [3], [6], [7]. Studies in America illustrate that parents who have children with ASD will experience anxiety. It will increase if the parents previously had anxiety comorbid [8]. Another study reported that mothers had higher anxiety disorders than fathers. Fathers can control their emotions more than mothers. This may impact the care provided between mothers and fathers concerning child development [9]. If anxiety is experienced by parents with ASD children continuously, it will impact monitoring and child development that is not optimal.

Children with ASD need therapy and education, but during the COVID-19 pandemic, this access is limited and replaced by other methods online. This causes parents to experience anxiety about their child's development. One of the efforts that can be done to overcome this is the use of telehealth. Many

health workers and the public have benefited from this digital tool. Telehealth is one of the right solutions to provide mental health care in the crisis experienced by the community [10]. A study conducted on 409 students in Malaysia illustrates that around 35% of respondents reported using online counseling services. Online counseling is considered an effective and highly accessible method of providing mental health counseling. This study also recommends that online counseling can be an effective way for many counseling centers [11]. A study in New York reports that telehealth or telemedicine can be an alternative used during the COVID-19 pandemic. Many advantages can be felt if health consultations are carried out online. Namely, the cost is cheaper and safer in that situation [12].

Parents of children with ASD who experience psychological stress during the pandemic require special treatment to reduce the level of stress. Levels of stress and anxiety that are too high will directly impact the care of children with ASD who must adapt to minimal situations. In addition to focusing on handling therapy and online schooling of children, parents also need counseling services to reduce anxiety levels. An excellent psychological condition for parents will undoubtedly positively impact the development of their children [13]. A study has described the effectiveness of counseling and training programs for parents of children with ASD. The special counseling and training program they designed was effective in improving mothers' skills in dealing with stress. After undergoing the program, mothers' stress coping skills improved and could decrease their desire to escape. In addition, this study found that the mother's anxiety and depression decreased. The study results also show that increasing the stress coping skills of mothers can reduce the externalization problem of their autistic children [14]. Based on the facts in the previous studies, this study was conducted to find out how effective online counseling is in reducing the anxiety of parents with ASD children during the COVID-19 pandemic. This counseling program is expected to be one way to help parents of children with ASD reduce the psychological symptoms they feel during the COVID-19 pandemic and have a positive impact on their children.

Methods

This study is a quasi-experimental study using a pre-test-post-test design without control. The variables of this study consisted of the characteristics of respondents, namely, the parents' age, gender, education, occupation, income, and level of knowledge; online counseling as independent variable; and anxiety as dependent variable. The study population were 120 parents of children with ASD in ASD care community.

The sampling technique was using purposive sampling with a sample size of 46 respondents with the inclusion criteria were parents of children with ASD who were <11 years old.

Online counseling was carried out 2 times a week in 4 weeks with supportive counseling. The instrument used in this study was standard operational procedure online for online counseling using online counseling design and the standard Bahasa Indonesia version of Generalized Anxiety Disorders-7 (GAD-7) questionnaire. GAD-7 questionnaire consists of seven statement which the interpretation was none/minimum anxiety, mild anxiety, moderate anxiety, and severe anxiety. GAD-7 questionnaire has been tested for validity and reliability. The validity was above R table value of 0.468 for all statements so that the GAD-7 questionnaire is declared valid. The reliability test results obtained Cronbach's Alpha value of 0.888 so the GAD-7 questionnaire is declared reliable.

Data analysis was conducted using univariate and bivariate analysis. Univariate analysis consisted of the characteristics of respondents with mean, standard deviation, and frequency distribution. Bivariate analysis in this study used marginal homogeneity test. This study has been tested by Research Ethics Committee of Sekolah Tinggi Ilmu Kesehatan Indonesia Maju with registration number of 1673/Sket/Ka-Dept/RE/STIKIM/VIII/2020.

Results

The result of this study illustrated that the average age of parents was 32 years old with average age of ASD children was 4 years old. The majority of respondents resided in the western part of Indonesia with a total of 40 respondents (87%), were female with a total of 43 respondents (93.5%), hold an education background of bachelor degree with a total of 28 respondents (60.9%), were stay-home mothers with a total of 28 respondents (60.9%), and with income below regional minimum wage (UMR) with a total of 28 respondents (60.9%). Meanwhile, the majority of children with ASD in this study were boys with a total of 40 respondents (87%) and most of them had ASD siblings with a total of 28 respondents (60.9%). The result showed that there were as many as 16 parents of children with ASD (34.8%) who experienced severe anxiety before online counseling and there were as many as 15 respondents (32.6%) who did not experience any anxiety or experienced minimum anxiety after online counseling was carried out.

Based on Table 1, it is described that there was a relationship between parents' domiciles, gender, occupation, income, children's gender and number of ASD siblings with parents' anxiety with $p < 0.05$ (0.000). Meanwhile, in other characteristics, there was not any relation between parents' age, children's age, and

parents' education with parents' anxiety with p-value $p > 0.05$ (0.154; 0.528; and 0.35).

Table 1: The relationship between parents' characteristics and anxiety in parents of children with ASD during COVID-19 pandemic (n = 46)

Characteristics of Respondents	Anxiety				Total	p-value
	None/Minimum	Mild	Moderate	Severe		
Parents' age						
Average of 32 years old	10	11	9	16	46	0.154
ASD Children's age						
Average of 4 years old	10	11	9	16	46	0.528
Domicile						
Western Indonesia	9	9	7	15	40	0.000
Central Indonesia	1	1	1	1	4	
Eastern Indonesia	0	0	1	0	1	
Abroad	0	1	0	0	1	
Total	10	11	9	16	46	
Parents' gender						
Male	3	0	0	0	3	0.000
Female	7	11	9	16	43	
Total	10	11	9	16	46	
Education						
Junior high school	0	1	0	0	1	0.735
Senior high school	2	1	1	2	6	
Associate degree	1	1	1	3	6	
Bachelor degree	5	7	6	10	28	
Master degree	2	1	1	1	5	
Total	10	11	9	16	46	
Parent's Occupation						0.000
Private sector employee	2	1	0	1	4	
Public servant	3	1	1	2	7	
Entrepreneur	0	0	0	1	1	
Stay-home mother	4	8	5	11	28	
Others	1	1	3	1	6	
Total	10	11	9	16	46	
Parents' income						
<UMR (minimum wage)	5	7	5	11	28	0.000
>UMR (minimum wage)	5	4	4	5	18	
Total	10	11	9	16	46	
Children's gender						
Boy	9	9	8	14	40	0.000
Girl	1	2	1	2	6	
Total	10	11	9	16	46	
Number of ASD sibling						
None	3	4	6	5	18	0.000
One or more	7	7	3	11	28	
Total	10	11	9	16	46	

ASD: Autism spectrum disorder, COVID-19: Coronavirus disease 2019.

Table 2 describes that the majority of anxiety in parents of children with ASD before the intervention of online counseling was severe anxiety which experienced by 16 respondents (34.8%). Meanwhile, after the intervention of online counseling, the majority of respondents as many as 15 parents (32.6%) did not have any anxiety or minimum anxiety. This indicated that there was an effect of online counseling on anxiety in parents of children with ASD during COVID-19 pandemic ($p = 0.012$).

Table 2: Optimization of online counseling on the anxiety of parents of children with ASD during COVID-19 pandemic (n = 46)

Anxiety	None/Minimum (%)	Mild (%)	Moderate (%)	Severe (%)	Total (%)	p-value
Before Online Counseling	10 (21.7)	11 (23.9)	9 (19.6)	16 (34.8)	46 (100)	0.012
After Online Counseling	15 (32.6)	13 (28.3)	9 (19.6)	9 (19.6)	46 (100)	

ASD: Autism spectrum disorder, COVID-19: Coronavirus disease 2019.

Discussion

This study found that there was an effect of online counseling on the anxiety of parents of

children with ASD during COVID-19 pandemic. Online counseling involves challenging respondents' negative thoughts and beliefs as well as anxiety to change behavior patterns and, ultimately, to cope with their conditions. Online counseling facilitates respondents in discussing their anxiety, sharing experiences, and gaining knowledge in overcoming the anxiety they experience.

Online counseling facilitates respondents to discuss the anxiety they experience and share experiences and gain knowledge that affects their ability to cope with anxiety. The online counseling in this study is in line with the parent training program conducted in Kyoto. This parent training program involves small groups. The results show that the parent training program effectively improves mothers' skills in dealing with stress, reducing anxiety and depression. Result of program that the increased coping skills of mothers' stress impact decreasing the externalization problems of their autistic children [14]. Other similar studies also describe that parents of children with ASD need emotional support. In addition, they also need the support of experts who hope to improve the way they intervene with children. Trained parents can accompany their children well. In addition, it can also reduce stress levels and increase their competence in caring for children with special needs. This study also stated that the group of parents of ASD children who participated in this program had lower stress levels than those who did not participate in the program [15].

Educational programs provided to parents of children with ASD have proven to increase knowledge and understanding of ASD. In one study, educational programs significantly reduced parents' stress, and their self-efficacy also increased significantly. Parents also felt delighted with the educational program seen from a significant increase in changes in parental stress [16]. Research in India also described the same thing. They stated that the psycho-educational intervention module could be considered a small step to empower Indian parents of children with ASD. Parents reported feeling more comfortable when using this intervention at home, as the natural form of the intervention considering more accessible to fit into existing family routines [17]. A review of parental training of children with ASD also illustrates that training programs can provide effective results promote a child's skills or behavior change [18].

In this study, parental anxiety decreased after the research program was in line with various previous studies. Counseling services have a positive impact on parents of children with ASD, especially during this pandemic. Anxiety and other psychological disorders in parents need to handle properly. In a study conducted by Wu *et al.*, they found older people with symptoms of depression and anxiety during the COVID-19 pandemic. The research showed that the mental health of parents should be considered during the pandemic. These psychological symptoms can affect marital relationships,

social support, and family harmony. This study also provides an important basis for the psychological intervention of parents during the pandemic to keep their psychological symptoms from affecting their children [19]. Another similar study also found 112 mothers of children with ASD (67.1%) suffered from anxiety and depressive symptoms. The overall prevalence of anxiety and depressive symptoms in mothers with autistic children is at a higher level than mothers with non-autistic children. The positive rate (boundary value >5) for depression symptoms in mothers was 72.5%, and anxiety was 80.2%. It appears that mothers of children with ASD experience more symptoms of depression and anxiety. Mothers of children with ASD show high levels of anxiety and depressive symptoms. This study provides a strong positive correlation between children's autistic symptoms and maternal anxiety and depressive symptoms. Their research suggests that medical institutions should provide psychological support or advice for mothers to seek medical help to reduce these emotional symptoms [20].

The accumulation of stress on parents during the pandemic increases the risk of child abuse [21]. Other studies have also described mother's children with ASD who have high anxiety and depression when caring for their autistic child so that the level of parental distress becomes uncontrollable. Maternal cortisol hormone levels also confirmed this. Parents of children with ASD had higher stress levels than the non-ASD control group. Mother has a higher stress level than father [22]. The research is also in line with the results of this study which illustrates that the majority of the sex of the parents are female, with 43 respondents (93.5%). There is a relationship between the sex of the parents and the level of anxiety of the parents old with $p < 0.05$ (0.000).

Early intervention in children with ASD will impact good cognitive development and communication and significantly help reduce existing ASD symptoms. The main objective of the intervention is to improve the child's behavior, which this process will have an impact on parents. Bad child behavior can harm parents. If parents are increasingly stressed, it will again harm their child's development. Stress does not only come from children's behavior. A stressful environment and lack of social support can also affect parents' stress levels. The characteristics of parents who are optimistic and enthusiastic about intervening with their children are the keys to children's success and have an extraordinary impact on parents' mental and physical health. Good coping strategies for parents will also help reduce stress on parents [23].

In the end, the skills of parents to reduce their anxiety level need to be trained continuously through various types of programs that can support them psychologically. Appropriate treatment of parents of children with ASD can support improvements in good mental health. Parents who can carry out coping

strategies independently and sustainably will positively impact their child's development, especially during the COVID-19 pandemic. Parents' awareness to recognize their anxiety also needs to be increased to encourage them to deal with anxiety well.

Conclusions

This study found a decrease in the level of parental anxiety after the counseling program. Online counseling has an effect on the anxiety of parents with children with ASDs during the COVID-19 pandemic. Finding this study could serve as a recommendation in providing online course to reduce anxiety in parents of children with ASD during COVID-19 pandemic.

Acknowledgment

The authors are pleased to acknowledge The ASD Care Community who provided respondents, and Head of Sekolah Tinggi Ilmu Kesehatan Indonesia Maju, who provided funds for this research.

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