The Effectiveness of Giving Cognitive Behavior Therapy (CBT) and Mindfulness Therapy on Adolescents' Social Anxiety Levels

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ABSTRACT

Social anxiety is a serious problem occurring in early adolescence characterized by a high level of worry, negative evaluation, and avoidance behavior in various social situations. The existence of fear, worry, and unconsciousness in recognizing negative thoughts that cause avoidance in adolescents with social anxiety problems can be overcome by providing CBT and Mindfulness therapy. This study aims to identify the effectiveness of Cognitive Behavior Therapy (CBT) and mindfulness therapy on adolescent social anxiety problems. This research is a research quasi-experimental pre-test post-test control group design. There were 40 participants in this study, namely 20 students in the control group and 20 students in the treatment group. The results obtained from this study were that there were differences in the effectiveness of giving CBT with a combination of CBT and mindfulness in adolescent social anxiety with a p-value of 0.002 (0.002 <0.05) which was marked by a decrease in the average score of social anxiety in the group given the CBT combination intervention and mindfulness were greater compared to adolescents who were only given CBT. So it can be concluded that the effectiveness of giving a combination of CBT and mindfulness is better than giving CBT to adolescents who experience social anxiety problems.

Keyword:
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Kata kunci:
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INTRODUCTION

Social anxiety is a common mental disorder in early adolescence, which is destructive and naturally has a slow healing rate characterized by a high level of worry about negative evaluations that lead to fear and avoidance of various social situations. (De Lijster et al., 2018). Symptoms of physiological, cognitive, and behavioral disturbances characterize social anxiety in adolescents. Physiological disorders that can be found are shaking, excessive sweating, flushed face, often saying the wrong words, looking excessively anxious, and seeming incompetent. Leigh & Clark, (2018). The visible physical symptoms compensate for the cognitive impairment experienced, whereas before the physical symptoms appear it is preceded by feelings of real and excessive fear about one or more social situations, fear of being evaluated negatively by other people, and negative thoughts about social situations. (Vogel et al., 2021). This causes avoidance behavior when making social contact with teachers and peers.

Social anxiety is the third biggest mental problem after drug use and depression, it is estimated that the prevalence in the general population is around 3% - 13% in various countries. (Yuniardi, 2019) Early adolescents (13-18 years) experience many social anxiety disorders, where the number of female sufferers is higher than male adolescents (Lassen et al., 2019; Jefferies & Ungar, 2020). The high number of adolescents who experience social anxiety requires immediate treatment so that adolescent social anxiety does not continue which can cause negative effects on their future lives such as the risk of developing chronic depression in adulthood, suicidal ideation, alcohol use, drug abuse, and anxiety disorders. and behavioral problems withdrawing from society (Mekuria et al., 2017; Scott et al., 2019). The existence of negative impacts that will appear in the future shows the importance of developing appropriate interventions to overcome the problem of social anxiety in adolescents.

Adolescents who experience social anxiety problems have negative thinking conditions of fear and worry about something that may not necessarily happen, causing avoidance behavior in social situations. Adolescents who experience social anxiety problems tend to find it difficult to control anxiety which causes stress in dealing with social situations. Conditions of stress occur because adolescents who experience social anxiety problems are not fully aware of recognizing thoughts, feelings, and physical sensations that are felt so they cannot identify negative thought patterns and interpret experiences that occur as threats and unpleasant things that cause them difficulties in controlling. emotions that ultimately lead to negative behavior in the form of avoidance.

CBT is a psychological therapy that is widely used to improve patient welfare in various mental and physical health problems including social anxiety by identifying maladaptive thoughts and behaviors and then changing them into adaptive thoughts and behaviors. (Fordham et al., 2018). Whereas Mindfulness therapy increases the identification of negative thoughts and tendencies to think about the past (ruminative) and their triggers by observing thoughts, feelings, and physical sensations in the present with an attitude of nonjudgmental acceptance. Providing mindfulness therapy to adolescents with social anxiety will change the adolescent’s perspective on events, and the responses that are felt can be seen as mental events rather than representations of reality so that this can be a motivation to increase behavior change. (Carlton et al., 2020; Shirotsuki & Noda, 2018; Ebrahimeinjad et al., 2016). By giving a combination of CBT and mindfulness it is hoped that adolescents will experience full awareness in recognizing thoughts, feelings, and physical sensations that are felt without judgment so that they can more easily control their emotions and change negative thought patterns that lead to avoidance. The purpose of this research is to identify the effectiveness of Cognitive Behavior Therapy (CBT) and mindfulness therapy on adolescent social anxiety problems.

METHOD

The type of research used in this study was a quasi-experimental method with a pre-test and post-test control group design. This study had two groups that were randomly selected consisting of a control group that was given CBT interventions and a treatment group that was given a combination of CBT and mindfulness interventions. The sample was selected by the researchers themselves using screening. The screening was carried out on grade 8 students at the school with a total of 82 participants out of 94 students. 12 people did not attend the screening because they did not attend school. The screening was carried out using the Liebowitz Social Anxiety Scale for Children and Adolescents (LSAS-CA-SR) which has been translated into the Indonesian version by asking students to fill out a questionnaire according to the conditions they have felt over the last 6 months. From the screening results obtained 45 students experienced social anxiety problems. The researcher then determined 40 students as research samples who were by the inclusion criteria, namely being willing to become research respondents as evidenced by being willing to sign an informed consent, permitted by parents/guardians as research respondents as evidenced by a permit signed by parents/guardians of students, having social anxiety scores in the low and moderate categories after the screening, not having other mental disorders enforced by a diagnosis or report from the puskesmas and the exclusion criteria for uncooperative students and students who were not present at the time of screening.

The simple random sampling technique was carried out to determine which students entered the control group or the treatment group using a lottery system. do not have other mental disorders enforced by the diagnosis or report of the health center and the exclusion criteria for students who are uncooperative and students who are not present at the time of screening. The simple random sampling technique was carried out to determine which students entered the control group or the treatment group using a lottery system. do not have other mental disorders enforced by the diagnosis or report of the health center and the exclusion criteria for students who are uncooperative and students who are not present at the time of screening. The simple random sampling technique was carried out to determine which students entered the control group or the treatment group using a lottery system.

The data collection tool used in this study was a questionnaire containing data demographics and a Questionnaire for assessing the level of social anxiety of adolescents using the Liebowitz Social Anxiety Scale for Children and Adolescents Self Report (LSAS-CA-SR). The LSAS-CA-SR provides a valid and reliable measure of social anxiety with internal consistency (Chronbach Alpha value) of 0.81 to 0.94, and correlate which contains assessments of situations of social interaction and work situations with 24 item statements assessing the level of fear and avoidance.
The LSAS-CA-SR uses a Likert scale with 4 levels of fear and 4 levels of avoidance. Fear level was assessed as 0=never, 1=mild, 2=moderate, 3=severe and avoidance 0=never, 1=sometimes, 2=rarely, 3=often. The fear and avoidance assessments each have 24 questions and each has a score range of 1-72. Social anxiety is assessed by adding up the results of fear and avoidance scores with a score range of 1-154. Assessment for social anxiety the higher the score obtained, the higher the social anxiety in adolescents. (Schmits et al., 2014). The technique used to collect data in this study is using observations and interviews, distribution of questionnaires, and documentation in the form of photos, evaluation sheets for CBT and mindfulness administration, therapy workbooks, assessment sheets for the Liebowitz Social Anxiety Scale for Children, and Adolescents Self Report (LSAS-CA-SR) before and after an intervention.

Univariate analysis in this study included the general data of the respondents, namely age and sex which were analyzed using frequency, the basic assumption test consisting of the normality test, and the homogeneity test which was carried out using the SPSS 23 program. From the results of the normality test, it was found that the data were not normally distributed. The analysis used to determine the effectiveness of CBT in the control group with a combination of CBT and mindfulness in the treatment group used the Wilcoxon sign rank while the data analysis used to test the hypothesis there was a difference in effectiveness in the group given CBT and the group given the combination of CBT and mindfulness intervention was using Mann-Whitney non-parametric test. Data analysis was performed using the SPSS 23 program.

RESULTS AND DISCUSSION

RESULTS

The characteristics of research subjects in this study were 40 people who were divided into a control group who were given CBT interventions of 20 people and a treatment group that was given a combination of CBT and mindfulness interventions of 20 people. Most of the research subjects based on age characteristics were the most aged 14 years with a total of 24 people (60%) with the most sex being female with a total of 27 people (67.5%). In this study, based on the homogeneity test, it was found that there were no significant differences in characteristics between individuals who received CBT and individuals who received a combination of CBT and mindfulness, in other words between the control group and the equal treatment group (p-value > 0.05). For more details, see table 1 below.

### Table 1 Distribution of frequency characteristics of research subjects based on age and sex

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Control Group (CBT) (n=20)</th>
<th>Treatment Group (a combination of CBT and mindfulness) (n=20)</th>
<th>Total (n=40)</th>
<th>p-values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13 years</td>
<td>5</td>
<td>10</td>
<td>15</td>
<td>0.688</td>
</tr>
<tr>
<td>14 years</td>
<td>14</td>
<td>10</td>
<td>24</td>
<td>0.002</td>
</tr>
<tr>
<td>15 years</td>
<td>1</td>
<td>-</td>
<td>1</td>
<td>0.381</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Man</td>
<td>8</td>
<td>5</td>
<td>13</td>
<td>0.688</td>
</tr>
<tr>
<td>Woman</td>
<td>12</td>
<td>15</td>
<td>27</td>
<td></td>
</tr>
</tbody>
</table>

Source: Primary Data 2022

The results obtained to see the effectiveness of the therapy before and after the intervention was given were that CBT given to adolescents who experience social anxiety shows that there is a significant difference in the average value of social anxiety before and after the intervention is given, which is marked by a decrease in the average score of the fear dimension by 8.2 and avoidance by 3.1. The average value after being given CBT is lower than the value before being given CBT. This illustrates that CBT is effective in reducing social anxiety. The results of the analysis also found that the average score of social anxiety before and after being given the intervention in the group given the combination of CBT and mindfulness was significantly different where the average score of social anxiety decreased by 23.80 in those given the combination of CBT and mindfulness therapy which is marked by a decrease in the average score of the fear dimension of 15.25 and avoidance of 7.45, so it can be said that giving a combination of CBT and mindfulness is effective in reducing social anxiety. From these results, it can be concluded that giving CBT to the control group and giving a combination of CBT and mindfulness therapy to the treatment group were both effective in reducing social anxiety because both had significant differences in social anxiety scores before and after giving the intervention with a p-value of 0.000 (0.000<0.05). For more details, see table 2 below.

### Table 2 The effectiveness of giving CBT and a combination of CBT and mindfulness on adolescent social anxiety (N = 20)

<table>
<thead>
<tr>
<th>Group</th>
<th>Category</th>
<th>Intervention</th>
<th>Min</th>
<th>Max</th>
<th>Means</th>
<th>Std. deviation</th>
<th>p-values</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBT</td>
<td>Social anxiety</td>
<td>before</td>
<td>54</td>
<td>89</td>
<td>70.35</td>
<td>11.127</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>after</td>
<td>52</td>
<td>79</td>
<td>68.30</td>
<td>10.746</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>difference</td>
<td>2</td>
<td>2</td>
<td>2.05</td>
<td>0.381</td>
<td></td>
</tr>
<tr>
<td>Afraid</td>
<td>before</td>
<td></td>
<td>27</td>
<td>53</td>
<td>36.70</td>
<td>7.299</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>after</td>
<td></td>
<td>15</td>
<td>40</td>
<td>28.50</td>
<td>6.387</td>
<td></td>
</tr>
<tr>
<td></td>
<td>difference</td>
<td></td>
<td>12</td>
<td>13</td>
<td>8.2</td>
<td>0.624</td>
<td></td>
</tr>
<tr>
<td>Avoidance</td>
<td>before</td>
<td></td>
<td>23</td>
<td>41</td>
<td>33.65</td>
<td>5.914</td>
<td>0.002</td>
</tr>
<tr>
<td></td>
<td>after</td>
<td></td>
<td>21</td>
<td>40</td>
<td>30.55</td>
<td>5.236</td>
<td></td>
</tr>
</tbody>
</table>
CBT and Mindfulness

<table>
<thead>
<tr>
<th>Category</th>
<th>control group (CBT)</th>
<th>Treatment group (Combination of CBT and Mindfulness)</th>
<th>p-values</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean difference</td>
<td>Mean difference</td>
<td></td>
</tr>
<tr>
<td>Social Anxiety</td>
<td>2.05</td>
<td>23.8</td>
<td>0.002</td>
</tr>
<tr>
<td>Afraid</td>
<td>8.20</td>
<td>15.25</td>
<td>0.002</td>
</tr>
<tr>
<td>Avoidance</td>
<td>3.10</td>
<td>7.45</td>
<td>0.314</td>
</tr>
</tbody>
</table>

Source: Primary data 2022

DISCUSSION

Based on the results of the study, it was found that CBT given to adolescents who experienced social anxiety showed a significant difference in the average value of social anxiety before and after the intervention was given, which was marked by a decrease in the average scores of fear and avoidance. The results of this study are in line with previous studies which stated that CBT given either individually or in groups is effective in reducing symptoms of social anxiety and increasing psychosocial functioning and reducing avoidance behavior in social situations. (Telman et al., 2020). CBT is an active medication therapy, focusing on time-limited problems to reduce emotional distress and increase adaptive behavior in individuals with mental disorders. (Denecke et al., 2022). This therapy is a gold standard in dealing with anxiety problems in adolescents (Pegg et al., 2022). CBT given to adolescents who experience social anxiety aims to build skills to reduce and overcome social anxiety and train new skills in dealing with social anxiety. CBT can provide cognitive and behavioral changes for adolescents who experience social anxiety. (Telman et al., 2020)

This study found that cognitive and behavioral changes occurred in adolescents who experienced social anxiety after giving CBT, there was a significant decrease in the average score of fear and avoidance. This is in line with previous research which stated that the cognitive changes that occurred after giving CBT therapy to adolescents with social anxiety were indicated by the ability of adolescents to be better able to control fear and reduce avoidance behavior from social situations. (Asbrand et al., 2020).

The results obtained to see differences in the effectiveness of giving CBT with a combination of CBT and mindfulness in this study found that there were differences in the effectiveness of giving CBT with a combination of CBT and mindfulness on adolescent social anxiety with a p-value of 0.002 (0.002 <0.05). Giving a combination of CBT and mindfulness can significantly reduce the average value of social anxiety by 23.80 while giving CBT alone can significantly reduce social anxiety with an average value of 2.05. This means that the decrease in the average score of social anxiety in the treatment group who was given CBT and mindfulness interventions was 10 times greater than the decrease in the average score in the control group who was given CBT only, this is evidenced by a significant decrease in the score of the fear dimension 2 times greater and a decrease that is not significant in the score of the avoidance dimension. So it can be concluded that the effectiveness of giving a combination of CBT and mindfulness to adolescents who experience social anxiety has better effectiveness than giving CBT alone. More details can be seen in table 3 below.

Table 3. Differences in the effectiveness of giving CBT with a combination of CBT and mindfulness on adolescent social anxiety (N = 20)

<table>
<thead>
<tr>
<th>Category</th>
<th>control group (CBT)</th>
<th>Treatment group (Combination of CBT and mindfulness)</th>
<th>p-values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Anxiety</td>
<td>before</td>
<td>57</td>
<td>70.60</td>
</tr>
<tr>
<td>Afraid</td>
<td>before</td>
<td>14</td>
<td>36.85</td>
</tr>
<tr>
<td>Avoidance</td>
<td>before</td>
<td>20</td>
<td>33.75</td>
</tr>
<tr>
<td>Social Anxiety</td>
<td>after</td>
<td>80</td>
<td>46.80</td>
</tr>
<tr>
<td>Afraid</td>
<td>after</td>
<td>43</td>
<td>21.60</td>
</tr>
<tr>
<td>Avoidance</td>
<td>after</td>
<td>44</td>
<td>26.30</td>
</tr>
<tr>
<td>Social Anxiety</td>
<td>difference</td>
<td>23</td>
<td>23.80</td>
</tr>
<tr>
<td>Afraid</td>
<td>difference</td>
<td>8</td>
<td>15.25</td>
</tr>
<tr>
<td>Avoidance</td>
<td>difference</td>
<td>0</td>
<td>7.45</td>
</tr>
</tbody>
</table>

Source: Primary data 2022

The effectiveness of giving CBT with a combination of CBT and mindfulness was 10 times greater than the decrease in the average score in the control group who was given CBT only, this is evidenced by a significant decrease in the score of the fear dimension 2 times greater and a decrease that is not significant in the score of the avoidance dimension. So it can be concluded that the effectiveness of giving a combination of CBT and mindfulness to adolescents who experience social anxiety has better effectiveness than giving CBT alone. More details can be seen in table 3 below.
mindfulness were obtained there is a significant difference. The average value of social anxiety in the treatment group and the control group had different results, where the group given CBT had a lower average value compared to the group given the combined CBT and mindfulness intervention, this indicated that the effectiveness of the CBT combination and mindfulness is higher than the effectiveness of CBT alone. The findings from this study are in line with previous research which stated that giving CBT was less effective for adolescents with social anxiety than giving CBT to adults and children who experienced general anxiety. (Telman et al., 2020). One of the strategies used to overcome social anxiety in adolescents is by providing therapy according to individual needs or providing combination therapy with other therapies, in other words, the therapy given must choose the type of therapy and therapeutic techniques according to the individual's condition. (Telman et al., 2020).

This study combines CBT with mindfulness therapy. The provision of mindfulness therapy is carried out to help adolescents who experience social anxiety not to experience a reassessment of post-event events which they consider to be very disturbing stressors so that they can provide prior awareness of the present by observing, feeling the sensations of the body, mind, and emotions that are felt without judgment which will cause adolescents to be able to make adjustments to their feelings or needs according to certain conditions and situations. This feeling of acceptance of the conditions that are being experienced will make adolescents calmer and will be more focused on undergoing CBT. This research is in line with other studies which reveal that mindfulness exercises teach adolescents to accept the current situation and also learn to accept facts that aim to make adolescents more sensitive in understanding events that occur and increase self-control. (Pure, 2020).

The combination of CBT and mindfulness have given to adolescents with social anxiety has better effectiveness than CBT alone. Giving CBT to adolescents with social anxiety aims to change cognition and behavior resulting from wrong thinking which they consider to be an undeniable truth. Researchers argue that giving CBT alone to adolescents with social anxiety can only change cognition and behavior without teaching acceptance and judgment without judging, causing effects that are less effective in reducing social anxiety. This statement is in line with other research which states that giving a combination of therapies may be needed to treat mental disorder problems in which the combination is adapted to the circumstances of the individual receiving therapy (Telman et al., 2020). Other research states that giving a combination of CBT therapy with a combination of other therapies (psychodynamic therapy) is more effective in reducing adolescent social anxiety. (Salzer et al., 2018). This proves that combination therapy can be used to address adolescent mental health, in this case, social anxiety.

This study also found that giving a combination of CBT and mindfulness was significantly effective in reducing fear dimensions and less significant in reducing avoidance dimensions. This is to previous research which states that giving mindfulness can reduce negative thoughts and can be more flexible in changing perspectives on a negative event. Other research states that mindfulness therapy can reduce the habitual tendency to react emotionally and think about temporary thoughts and physical sensations which will result in an increased capacity to escape from unpleasant emotional stimuli and allow for better emotional flexibility. (Philippe R. Goldin, 2017). The score for changes in the dimensions of avoidance as a behavior elicited by adolescents experiencing social anxiety did not have a score difference between the CBT group and the CBT and mindfulness combination group, this was evidenced by the decrease in the average avoidance score which was not significant because the decrease was very small in both groups given the CBT intervention or in the group given a combination of CBT and mindfulness. Researchers argue that this happens because adolescents are not used to doing this therapy so changes in avoidance behavior are still not very good, that various other factors cause behavior changes including individual characteristics, such as education, economy, family, school, workplace, surrounding environment (Mollborn, 2015). These factors cause changes in behavior that are not the same in adolescents.

CONCLUSIONS AND RECOMMENDATIONS

From the results of the study, it can be concluded that there are differences in the effectiveness of giving CBT and giving a combination of CBT and mindfulness in reducing adolescent social anxiety. The combination of CBT and mindfulness is significantly more effective in reducing social anxiety than CBT alone. The advice that can be given in this study is that giving CBT and mindfulness has been shown to have better effects than giving CBT alone in dealing with adolescent social anxiety, therefore it is suggested that this therapy can be used by schools in dealing with social anxiety in early adolescents, especially adolescents who are still in secondary education (SMP).

Suggestions are that future research can examine other factors that can increase the effectiveness of providing a better combination of CBT and mindfulness therapy. Future research is expected to be able to develop or modify other therapies that are better at dealing with social anxiety problems in adolescents.

ETHICS CONSIDERATIONS

This research was conducted by research ethical standards and all research protocols received ethical approval from the research ethics committee of the Faculty of Health, the University of Brawijaya Malang with No.4679/UN10.F17.10/TU/2022

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Conflict of Interest

There is no conflict of interest in this research

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