

## SOCIAL ANXIETY DISORDER IN ADOLESCENCE AND INTERNET-BASED COGNITIVE BEHAVIOR THERAPY AS A FUTURE TREATMENT: A CROSS-SECTIONAL STUDY

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### ABSTRACT

Adolescents in social development are susceptible to social anxiety disorder (SAD). Adolescents need social support and self-acceptance in a social environment which in the process is often stressful to experience social anxiety. This study aims to identify social anxiety disorder in adolescents based on sociodemographic factors such as age, gender, family status, and residence as well as plans to use internet-based behavior therapy to be used as a treatment in future studies. This research approach is quantitative with a cross-sectional survey design. This study uses probability sampling with simple random sampling. The number of samples in this study is 458. This study used Social Anxiety Scale (SAC) questionnaire and data analysis using descriptive statistical tests, ANOVA tests, and Mann-Whitney tests. The results showed that the social anxiety category of adolescents was moderate, and only the age and place of residence had an effect on adolescent social anxiety. To overcome social anxiety, adolescents use internet-based Cognitive Behavior Therapy (I-CBT) as a future treatment.

### Keywords

cognitive behavior therapy, social anxiety, adolescence

### ABSTRAK

Remaja dalam aspek perkembangan sosial rentan mengalami gangguan kecemasan sosial, hal ini disebabkan karena remaja memerlukan dukungan sosial dan penerimaan diri di lingkungan sosial yang dalam prosesnya sering membuat remaja stress hingga mengalami kecemasan sosial. Penelitian ini bertujuan untuk mengidentifikasi gangguan kecemasan sosial pada remaja berdasarkan faktor sosiodemografi seperti usia, jenis kelamin, status keluarga, dan lokasi tempat tinggal serta rencana penggunaan terapi kognitif perilaku berbasis internet yang akan digunakan sebagai treatment dalam penelitian selanjutnya. Pendekatan penelitian ini adalah kuantitatif dengan desain *cross-sectional survey*. Penelitian ini menggunakan *probability sampling* dengan jenis *simple random sampling*, Jumlah sampel dalam penelitian ini sebanyak 458. Instrument dalam penelitian ini adalah angket Social Anxiety Scale (SAC), analisis data menggunakan uji statistic deskriptif, uji ANOVA dan uji *mann-whitney*. Hasil penelitian menunjukkan kecemasan sosial remaja di kota kediri masuk kategori sedang, dan hanya faktor usia dan tempat tinggal yang berpengaruh terhadap kecemasan sosial remaja. Untuk mengatasi kecemasan sosial remaja menggunakan internet-based Cognitive Behavior Therapy (I-CBT) sebagai treatment masa depan.

### Kata Kunci

terapi kognitif perilaku, gangguan kecemasan sosial, remaja

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## INTRODUCTION

The stages of development in adolescence include physical, cognitive, emotional, and social. At the stage of social development there are problems that are vulnerable to adolescents, namely related to symptoms of social anxiety disorder, which is characterized by constant fear and worry about one or more social situations. Symptoms of social anxiety are also an antecedent to feelings of loneliness (O'Day et al., 2019) and depression in adolescence (Danneel et al., 2019). Individuals who experience depression due to social anxiety are caused by decreased attention and increased rumination (Kraft et al., 2021). In some cases continuous anxiety and fear can also cause adolescents to commit suicide, this is because individual suicide rates are positively correlated with self-stigma, social anxiety, depression levels, and danger avoidance (Vrbova et al., 2018). So, individuals with these symptoms must be monitored to avoid suicidal ideation.

Some of the factors that cause social anxiety disorder in adolescents include comparisons of appearance with others and the condition when they use social media along with perceived attractiveness. (Rapee et al., 2022). Negative body image related to social media can cause symptoms of online social anxiety and depression, they even find it more difficult to make new friends, and are socially isolated. (Charmaraman et al., 2021). Also related to the use of social media, one of the causes of social anxiety and depression in adolescents is Instagram addiction (Foroughi et al., 2022), this has an impact on academic performance/achievement as a positive predictor of life satisfaction. Another study showed that neuroticism can influence cell phone addiction through online social anxiety disorder, then someone with an extroverted personality type can also influence cellphone addiction through beliefs about the dangers of cyberspace. (Cejudo et al., 2018), Thus cognitive treatment according to the perception of online social anxiety and cyber danger is recommended to reduce the level of mobile phone addiction. Problematic smartphone use / PSU also has a positive and significant relationship with social anxiety (Annoni et al., 2021), especially for individuals who have a tendency to trust others. So wise use of smartphones is recommended.

In addition to the influence of technology use, family conditions, especially conflicts in parental marriage, also have a positive correlation with social anxiety (Adare et al., 2021). This can make adolescents have negative perceptions related to interpersonal relationships with the opposite sex. Unlike the situation described, in the Covid-19 situation yesterday, especially with the existence of self-isolation and quarantine, social anxiety and depression have also increased (Carlton et al., 2022). This affects safety behavior and maladaptive coping mechanisms in dealing with stressful conditions during the COVID-19 period, it is hoped that vaccines can be an alternative in reducing social anxiety and stress during the COVID-19 pandemic.

Apart from the above, self-compassion can also predict higher social anxiety than depression symptoms and individual anxiety symptoms, thus treatment that targets self-compassion will be able to help individuals with social anxiety symptoms. (Gill et al., 2018). In addition, adolescents who are affected by negative life events (NLE) and potentially traumatic events were significantly associated with social anxiety symptoms (Aune et al., 2021), and social

support and self-efficacy can help individuals reduce social anxiety disorder. thus, interventions with modifying self-efficacy and social support may help reduce symptoms of social anxiety disorder in at-risk adolescents.

Social anxiety disorder can be reduced by several things, including high emotional intelligence which can reduce stress and social anxiety levels (Cejudo et al., 2018). Furthermore, in the context of learning, improving academic self-efficacy is very important to reduce social anxiety (Hood et al., 2021), this is related to how students perceive and perform in an active learning environment. In addition to this, social anxiety can be treated by using therapy-based treatments carried out by experts such as psychiatrists, psychologists, and counselors.

From the explanation above, one form of treatment that can be used to treat adolescent social anxiety is cognitive-behavioral therapy (CBT). Several studies have shown that CBT can be used to treat social anxiety, among others, an experimental study showed internet-based cognitive behavior therapy (I-CBT) effectively used for depression, anxiety disorders, and panic disorders (Niles et al., 2021). The same research related to internet-delivered cognitive behavioral therapy (ICBT) effective for treating social anxiety disorder for both children and adolescents (Nordh et al., 2021). A meta-analysis study related to the use of I-CBT also showed that I-CBT is a treatment for treating social anxiety disorder, and this treatment can be used in the long term. (Guo et al., 2020). Other studies related to CBT have shown that CBT can reduce the frequency of suppression, increase self-efficacy, and decrease social anxiety disorder (Kivity et al., 2021). Furthermore, experimental research related to the development of CBT treatment is imagery-enhanced CBT (IE-CBT) dan verbally-based CBT (VB-CBT) both of which can treat social anxiety disorder (McEvoy et al., 2022). From these studies, it can be concluded that CBT is effectively used to treat social anxiety disorder in adolescents.

This study is a cross-sectional study that aims to identify social anxiety disorders in adolescents in the city of Kediri in terms of sociodemographic factors such as age, gender, family status, and location of residence as well as plans for using internet-based cognitive behavioral therapy to be used as treatment in further research.

## **METHOD**

This study is using quantitative with cross-sectional survey design, which is a research design that collects data at one time on the research sample (Creswell & Creswell, 2018). The cross-sectional survey design was chosen with the consideration that it can measure social anxiety variables in terms of several aspects such as age, gender, family status, and location of residence. This research was conducted in Kediri, in October 2022. The subjects of this study were high school students throughout the city of Kediri. The sampling technique used is probability sampling with the type of simple random sampling where all the selected populations have the same opportunity to be sampled. The number of samples in this study was 458 from a total population of 9337 which was determined based on the Slovin Instrument formula. Data collection used a Social Anxiety Scale (SAC) questionnaire with a Likert scale of 1-5 and the results were included in 3 categories (high, medium, and low). Furthermore, the analysis of this

research data uses descriptive statistical tests to determine the category of adolescent social anxiety, then to find the effect of each variable using simple linear regression analysis and multiple regression with the help of the SPSS program which previously created a dummy variable for each independent variable (x). Furthermore, to see the variation in each independent variable both age, gender and place of residence using the one-way ANOVA test (independent variable with three categories, it's residence variable) and the Mann Withney test (independent variable with two categories age, and gender).

## RESULT

This study aims to collect data at one time related to adolescent social anxiety in the city of Kediri in terms of age gender, and place of residence. Participants in this study were aged around 14 to 18 years or high school age level with domicile in rural urban, and Islamic boarding schools. The results of descriptive statistical tests related to adolescent social anxiety obtained an average value of 64.37 and a median value of 64, then the minimum value was 22 and the maximum value was 102. Thus, the category for adolescent social anxiety was divided into three, namely high (interval 76 -102), medium (49-75 interval) and low (22-48 interval). From the average value, it can be concluded that the social anxiety of adolescents in the city of Kediri is in the medium category.

### Linear Regression Test Results

The results of linear regression analysis are divided into three, namely the effect of age on social anxiety, the effect of gender on social anxiety and the effect of residence on social anxiety. Furthermore, the description will be described in the following table.

**Table 1. Effect of Age, Gender and Place of Residence on Adolescent Social Anxiety**

Sosiodemographic Factor	R-value	R Square	Sig.
Age	0,189	0,036	0,000
Gender	0,044	0.002	0,349
Residence	0, 103	0.011	0,027

Dependent variable: social anxiety

In the age factor, the R value which is the correlation coefficient value shows the number 0.189, this means that the relationship between the two variables (age and social anxiety) is in the low category. Furthermore, the value of R Square or the coefficient of determination (KD) obtained a number of 0.036, this indicates that age has an influence of 3.6% on social anxiety and then 96.4% is influenced by other factors. At the significance value obtained a number of 0.000 <0.05 which means that there is an influence between age on social anxiety.

In the sex factor, the R value which is the correlation coefficient value shows the number 0.044, this means that the relationship between the two variables (gender and social anxiety) is in the low category. Furthermore, the value of R Square or the coefficient of determination (KD) obtained a number of 0.002 this indicates that gender has an influence of 0.2% on social anxiety and then 99.8% is influenced by other factors. At the significance value obtained a number of 0.349 > 0.05, which means that there is no influence between genders on social anxiety.

On the sex factor, the R value which is the correlation coefficient value shows the number 0.103, this means that the relationship between the two variables (residence and social anxiety) is in the low category. Furthermore, the value of R Square or coefficient of determination (KD) obtained a number of 0.011, this indicates that the place of residence has an influence of 1.1% on social anxiety and then 98.9% is influenced by other factors. At the significance value obtained a number of 0.027 < 0.05, which means that there is an influence between the place of residence on social anxiety.

### **ANOVA and Mann-Whitney Test Result**

The results of the ANOVA and Mann-Whitney tests to see the variability of the data based on variations within and between groups both in variations in age, gender and place of residence on adolescent social anxiety. The ANOVA test was used to test the residence variable and the Mann-Whitney test was used to test the age and gender variables. Furthermore, the description will be described in the following table.

**Table 2. Variability of Each Factor (Age, Gender, Residence)**

<b>Sosiodemographic Factor</b>	<b>Mean Rank</b>	<b>Sig.</b>
<b>Age</b>		0,000
14-16	249,88	
17-19	187,10	
<b>Gender</b>		0,363
Woman	243,90	
Man	230,05	
	<b>Mean Difference</b>	<b>Sig.</b>
<b>Residence</b>		0,076
Rural-urban	1,051	1,000
Rural-pesantren	2,697	0,258
Urban-pesantren	-3,745	0,175

Dependent variable: social anxiety

The table above describes the respective means and levels of significance for the independent variables. For the variables of age and sex using the Mann Whitney test and the variable of residence using the ANOVA test. In the age variable, the mean rank or the average rank for each group, namely, adolescents aged 14-16 years is 249.88, which is greater than the age of adolescents 17-19 years is 187.10. Furthermore, the age variable has a significance level of 0.000 < 0.05, which means that there is a difference in meaning between the two age groups.

In the gender variable, the average rating or average rating for each group, namely, female is 243.90, which is greater than male youth, which is 230.05. Furthermore, the gender variable has a significance level of 0.363 > 0.05, which means that there is no difference between the two sex groups.

In the variable of residence, the rural and urban groups have a mean difference of 1.051 with a significance level of 1 > 0.05. Thus, there is no difference in social anxiety between urban and rural adolescents. For rural and pesantren, it has a mean difference of 2.697 with a significance level of 0.258 > 0.05. Thus, there is no difference in social anxiety between rural adolescents and pesantren. Furthermore, the urban and pesantren have a mean difference of -3.745 with a significance level of 0.175 > 0.05. Thus, there is no difference in social anxiety between urban adolescents and pesantren. Overall, the residence variable has a significance

level of  $0.076 > 0.05$ , which means that there is no significant difference between each group of residence (rural, urban, and pesantren).

## **DISCUSSION**

The results showed that adolescents in the city of Kediri had a moderate level of social anxiety. Then the factors that influence anxiety are age and place of residence, while gender does not have a direct influence on adolescent social anxiety. The following is a description of adolescent social anxiety and future treatments that can be used. Based on the results of previous research studies, the use of I-CBT is effectively used to treat adolescent social anxiety.

### **Adolescent Social Anxiety**

Adolescence is a period that shows many changes in various aspects of life, such as cognitive, physiological, emotional and social changes. In the social aspect, relationships with peers are more important than relationships with parents, because they need social support and become sensitive about their position in the peer environment. (Blöte et al., 2022). The need for self-acceptance in the circle of peers is prone to stress adolescents, and stress that cannot be overcome makes adolescents experience social anxiety which is a mental health disorder. Adolescents are vulnerable to stigma related to mental health problems, this has an impact on their quality of life and the way they get help (Lynch et al., 2021).

The results showed that age is one of the factors that influence social anxiety, especially adolescents aged 14-16 years. A study shows the lifetime prevalence of social anxiety is more experienced in childhood and adolescence than in adulthood (Peyre et al., 2022). Another study showed that individuals under 40 were 1.6 times more likely to develop social anxiety disorder than those aged 40 or older (Ambusaidi et al., 2022). Age factor is a moderating variable of the relationship between friendship quality and social anxiety (Chiu et al., 2021). This is related to the causes of social anxiety, which include the quality of friendship, peer rejection, and peer victimization.

The results also showed that there was no effect of gender/gender on social anxiety, but this was different from the study of Lynch, et al, which revealed that gender can predict personal stigma and perceptions of depression and social anxiety. Furthermore, males score higher on measures of personal stigma while females score higher on perceived stigma (Lynch et al., 2021). Similar research also states that in adolescence the symptoms of social anxiety increase rapidly, especially in girls (Woody et al., 2022), This is due to the increasing conflict between parents and children in adolescents. Furthermore, women are 1.3 times more likely to show caseness for social anxiety disorder than men (Ambusaidi et al., 2022). Another study states that social anxiety, age and gender are antecedents in social media addiction in adolescents (Stănculescu & Griffiths, 2022), this means that the age factor has a correlation with social anxiety.

Regarding the place of residence, the results of the study show that there is an influence between the individual's residence and the social anxiety experienced. A study shows that rural people have lower self-adjustment than urban people (Chaitanya & G.C, 2022). This has an impact on the way individuals behave and behave in a social environment. Poor

adjustment has an impact on stress that causes individuals to experience social anxiety. Individuals who experience high social anxiety will make decisions with hesitation compared to individuals with low social anxiety (Hengen & Alpers, 2021).

### **I-CBT Treatment for Social Anxiety Disorder in Adolescents**

The problem of social anxiety in adolescents can be overcome with various psychological approaches, one of which is using the cognitive behavior therapy (CBT) approach. Cognitive therapy for social anxiety disorder (CT-SAD) was recommended by NICE (2013) as a first-line intervention that uses CBT and focuses on changing individual cognitive and behavior, it is suitable for use in dealing with adolescent social anxiety (Clark et al., 2022). Several other studies related to the effectiveness of CBT, among others, CBT can reduce symptoms of social anxiety disorder and improve social functioning, especially in social motivation (Bemmer et al., 2021). The application of CBT is also carried out to reduce the social anxiety of overseas students in the first semester (Warizki, 2022).

In providing treatment to reduce social anxiety in the current era, it requires several innovations in its implementation. Such as the use of internet-based media in carrying out relief efforts. A study shows web-based psychosocial support can reduce social anxiety in adolescents who are distressed by visible differences (Zelihić et al., 2022). The internet-based version of the treatment, namely internet-cognitive therapy for dealing with social anxiety disorder (iCT-SAD) with the support of a remote therapist, can also achieve changes in the client's cognitive processes for less therapist time. (Clark et al., 2022). iCT-SAD itself is a therapist-guided modular online treatment model based on Clark and Wells's (1995) social anxiety cognitive model. This is to replicate the face-to-face cognitive therapy (CT-SAD) model. (Thew et al., 2022). In iCT-SAD, therapists communicate with their clients through various telecommunication media such as short messages, phone calls, and video calls within a predetermined time. In addition to internet-based cognitive therapy, internet-based cognitive behavior therapy (I-CBT) has also been developed.

A study reveals that a group-based web-based CBT program can be used to treat social anxiety disorder (Sigurðardóttir et al., 2022). Furthermore, internet-based CBT (I-CBT) which is done alone with the support of a peer coach can also be used to reduce individual social anxiety (Bautista et al., 2022). Studies in other countries have proven that clients' satisfaction in using I-CBT to reflect their thoughts and behavior, especially to reduce social anxiety, is no different from face-to-face CBT treatment.

Some of the advantages in conducting I-CBT include the ease and convenience of using the I-CBT program as well as high proficiency with online materials, time efficiency, low cost, and easy to follow with the help and support of peer trainers (Bautista et al., 2022).

### **CONCLUSIONS AND SUGGESTIONS**

This study aims to identify social anxiety disorders in adolescents in the city of Kediri in terms of sociodemographic factors such as age, gender, family status, and location of residence as well as plans for using internet-based cognitive behavioral therapy which will be used as treatment in future research. The results showed that the social anxiety of adolescents

in the city of Kediri was in the moderate category. Each of the factors that affect anxiety include age, gender and place of residence. The results of data analysis showed that only age and place of residence had an effect on adolescent social anxiety. To overcome social anxiety and adapt to the digital era, the use of an internet-based treatment model is recommended. Thus the internet-based Cognitive Behavior Therapy (I-CBT) model will be a treatment plan that will be used by researchers to overcome adolescent social anxiety. Suggestions in this study are to develop an I-CBT model to overcome social anxiety according to the context of local wisdom and to test the effectiveness of the treatment and in various population settings.

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