



Correlation Between Peer Pressure and Anxiety Level in Medical Student

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Abstract

Background: Peer pressure is defined as the pressure to conform from peers, which can occur both directly and indirectly. This can be strongly influenced by the interaction among peers. Anxiety is the most common mental disorder, caused by several factors, such as peer pressure. Several studies have found that peer pressure affects anxiety level. However, studies investigating the correlation between peer pressure and anxiety level in medical students have not been widely carried out in Indonesia, therefore it is necessary to study the correlation between peer pressure and anxiety level among medical students.

Objective: To determine the correlation between peer pressure and anxiety level among medical students.

Methodology: This study is a cross sectional study. Subject of this study are medical students of Pelita Harapan University, Tangerang, Banten , Indonesia. There are 2 questionnaires used in

this research: Negative Peer Pressure Inventory (NPPI) and Taylor Manifest Anxiety Scale (TMAS).

Results: There were 153 respondents participating in this research, consisted of 47 men (30.72%) and 106 women (69.28%). Average NPPI score was 14.62 ± 10.15 and average TMAS score was 22.02 ± 8.93 . The data was then analyzed using the Spearman correlation test, and it was found that there is a significant correlation between peer pressure and anxiety levels ($p < 0.05$; $r = 0.601$) among medical students at Pelita Harapan University.

Conclusion: There is a significant correlation between peer pressure and anxiety level in medical students.

Keywords: *Peer pressure, Anxiety level, Medical students.*

1. Introduction

Adolescence is defined as a transition period from childhood that depends on their parents to adulthood. According to the World Health Organization (WHO), adolescents are defined as individuals in the 10-19 years age group, while young people are individuals in the 10-24 years age group.¹ Adolescence begins with puberty and ends when there is a desire to no longer depend on parents for their lives. The environment and the people around them, such as peers, greatly influence the development of adolescence.²

In this age period there will be various kinds of changes and developments in all aspects of the individual, including biological, cognitive, psychosocial, and emotional aspect. In addition, relationships and self-regulation also undergo changes in this period. Peers and partners become the center of their life which was previously parent-centered.³ These peers will greatly influence the psychosocial development of adolescents.⁴ The influence of peer can have either good or bad influence on the development of an individual. The pressure that someone gets from his peers to have the same behavior, which is called peer pressure, can be in the form of direct or indirect pressure. Sometimes this pressure can be reinforced by social sanctions if they don't do what others do. These sanctions can be as simple as being removed from their circle.^{4,5}

Every individual has a tendency to interact in a group of friends, both in smaller and larger groups. In a group of friends, members will share experiences, feelings, and also solve the

problems they face. In addition, the group will also be the main reference in how they dress up, talk, their sexual behavior, use of illegal substances, as well as criminal behavior.⁶ The relationship between individuals in a group of friends is able to influence to act the same as their peers, both in positive and negative terms.⁴ On the other hand, the lack of friendship will lead to social isolation which causes limitations in developing social interaction and social relations skills.⁶

Anxiety is an emotion spectrum that has the characteristic of disturbances in mood, thinking, behavior, and physiological activities. Anxiety is one of the most common psychiatric disorders.⁷ In a population study conducted by Mondin et al, it was stated that the prevalence of anxiety in young people was 20.9%.⁸ Based on the data from *Riset Kesehatan Dasar (RISKESDAS)* conducted by the Ministry of Health of the Republic of Indonesia in 2018, it was found that the prevalence of mental disorder in population of 15 years old and older is 9.8%. This number is an increase compared to 2013.⁹ Anxiety disorders were also found in medical students. According to Lasheras et al, about 28% of medical students experienced anxiety which was caused by various factors.¹⁰

Medical students have a tendency to spend most of their time with their peers. This high amount of time is due to differences in the curriculum with other faculties and also the participation of various student organizations. In addition, the study and play group formed by each student also increase the intensity with their peers.¹¹ This interaction between individuals can lead to either motivational support or peer pressure, which can be directly or indirectly. Peer pressure and academic pressure that handled poorly can lead to anxiety disorders in students.⁵

Research on the correlation between peer pressure and anxiety levels in medical students has not been widely carried out, and has never been carried out in the population of Pelita Harapan University medical students. This study was done to know the correlation between peer pressure and anxiety levels in Pelita Harapan University medical students, so it can be used as a reference to prepare any program needed to reduce anxiety levels in medical students.

2. Method and Materials

2.1 Research design

This research was an observational cross sectional study that conducted in Pelita Harapan University.

2.2 Research population and sample

The population of this research was medical students of Pelita Harapan University. Inclusion criteria were medical students of Pelita Harapan University batch 2019 and willingness to participate in the research as shown by e-signed informed consent.

2.3 Data analysis

The data initially tested for normality with the Kolmogorov – Smirnov test. Spearman was the selected statistical test for this research. The data were analyzed using SPSS version 26.

3. Results

This research involved 174 respondents from the medical faculty of Pelita Harapan University who met the inclusion criteria. There were 19 respondents who met the exclusion criteria: 10 respondents had academic problems, 2 respondents had a history of psychiatric drug usage, 3 respondents had childhood trauma, 4 respondents had anxiety due to the COVID-19 pandemic, 1 respondent had a history of chronic disease, and 1 respondent had economic problems. Therefore, the total respondents after deducting the exclusion criteria were 153 respondents.

Among the 153 respondents, 47 respondent were males (30.72%) and 106 were females (69.28%). The age range was 19-25 years old, which is dominated by the age 20 years old (73 respondents = 47,71%) (see Table 1).

Table 1. Respondent's Demographic Characteristics

Variable	Category	N	Percentage (%)
Gender	Male	47	30,72
	Female	106	69,28
Age	19	11	7,19
	20	73	47,71
	21	16	10,46
	22	3	1,96

	23	1	0,65
	25	2	1,30
Total		153	100

In this research, the average value of Negative Peer Pressure based on the Negative Peer Pressure Inventory (NPPI) questionnaire was 14.62 ± 10.15 . The highest value was 55 and the lowest was 0.

The average level of respondents' anxiety was 22.02 ± 8.99 . The highest level of anxiety obtained in this study was 46 and the lowest was 4 (see Table 2).

Table 2. Distribution of Negative Peer Pressure and Anxiety Levels

Variable	Mean \pm SD	Maximum	Minimum
Peer Pressure (NPPI)	14,62 \pm 10,155	55	0
Level of Anxiety (TMAS)	22,02 \pm 8,993	46	4

The collected data was tested with the Kolmogorov – Smirnov test to see the distribution of the data. Table 3 shows the results of the data normality test with p value = 0.001 for the Peer Pressure (NPPI) variable and 0.048 for the anxiety level variable (TMAS). Both p-values obtained are less than 0.05 hence, the data is not normally distributed. Furthermore, to see the correlation between the two research variables, the Spearman correlation test was used. The results of the Spearman correlation test between peer pressure and anxiety levels are listed in table 3.

Table 3. Kolmogorov-Smirnov Normality Test Results

Variable	N	Significance (p)
Peer Pressure (NPPI)	153	0,001
Level of Anxiety (TMAS)	153	0,048

Table 4 shows the results of the correlation test using the Spearman method between the peer pressure variable and the level of anxiety in medical students at Pelita Harapan University. A significance value (p) is <0.001 ($p < 0.05$). This indicates a significant correlation between the two variables. Table 4 also shows the Spearman correlation coefficient (r) of 0.601 (0.6- <0.8) which indicates a statistically strong correlation between variables with a positive correlation direction.

Table 4. Spearman Correlation Test Results

	N	Significance (p)	Spearman Coefficient
<i>Peer Pressure</i>	153	$<0,001$	0,601

4. Discussion

This research was an observational analytic study using cross sectional method to determine the correlation between peer pressure and anxiety levels in medical students at Pelita Harapan University. There were two questionnaires used, the Taylor Manifest Anxiety Scale (TMAS) questionnaire to assess the level of anxiety and the Negative Peer Pressure Inventory (NPPI) to assess peer pressure.

Based on the results, the Spearman correlation value was 0.601 with a significance of $p < 0.001$. This means that there is a positive correlation between peer pressure and anxiety levels, it can be said that the greater the peer pressure experienced by students, the higher the level of anxiety. This can be caused by fear of ostracism and ridicule from peers, or it can be caused by desire to seek acceptance. This was also proved in the study done by Pickering et al which states that low peer acceptance and poor peer experience are related to the emergence of anxiety in individuals.¹²

The results obtained from this study are also suggest the same thing as the research by Kapoor et al who examined the correlation between peer pressure and social anxiety disorder. The study was conducted on 520 adolescents in Punjab, India. In this study, there was a positive correlation between peer pressure and social anxiety disorder with a coefficient value of 0.45 at $p = 0.01$.¹³

Another study conducted by Tillfors et al., conducted on 1528 adolescents consisting of 754 girls and 774 boys in Sweden, shows that peer relationships have an important role in adolescent mental health and social anxiet. Disorders that occur in relationships with peers

will interfere with the mental health of adolescents, especially in adolescent anxiety disorders.¹⁴

In this study, the authors did not find any similar studies that had contradictory results. This may be due to the limited number of studies that examine the relationship between anxiety levels and peer pressure. Research on this matter has not been widely carried out, both in Indonesia and abroad.

5. Conclusion

In conclusion, it can be said that there is a strong correlation between the level of medical college students in Pelita Harapan University. The correlation is positive, meaning that the higher the negative peer pressure value, the higher the level of anxiety.

Acknowledgements

Limitations of the study

In this research, there are still some limitations such as the presence of various confounding factors that were not controlled which can affect independent variables such as gender, the influence of the family environment, and the personality of each individual. Research conducted online has a high risk of bias in filling out the questionnaires. The respondents may have filled the questionnaires dishonestly and carelessly due to the absence of supervision from the researcher. Another limitation of this research is that the scope of this research is still relatively small, which is limited to medical students of Pelita Harapan University.

Ethical considerations

The Ethics Committee of the Faculty of Medicine, Pelita Harapan University has approved this study through recommendation letter No. 173/K-LKJ/ETIK/XI/2021.

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