AN ANALYSIS OF THE ASSOCIATION BETWEEN SOCIODEMOGRAPHIC FACTORS AND ANXIETY LEVELS IN GENERATION Z

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ABSTRAK

Background: Generation Z refers to adolescents and young adults born between approximately the mid-1990s and the early 2010s. Adolescents experience various physical, psychological, and social changes that increase their risk of anxiety. Anxiety in adolescents can stem from academic pressure, social relationships, family issues, concerns about the future, and parental expectations. Common symptoms of anxiety experienced by adolescents include heart palpitations, difficulty concentrating, chest pain, nausea, and restlessness. Sociodemographic factors shape each individual's social environment and potentially affect how they respond to stress. In an educational context, untreated anxiety can impact learning, concentration, academic achievement, and even long-term mental health. This study aimed to identify the correlation between various sociodemographic factors and anxiety in Gen Z.

Methods: This study is an analytical observational quantitative study with a cross-sectional approach. The population consisted of 321 respondents, with a sample size of 76 selected through stratified random sampling using the Slovin formula. The research instrument was the Beck Anxiety Inventory (BAI), which had been previously validated for its reliability. Data analysis in this study used Spearman's Rho test.

Results: The results of the Spearman's Rho test for gender with anxiety showed a p value = 0.1 (p < 0.05), economic status with anxiety showed a p value = 0.12 (p < 0.05), and age with anxiety showed a p value = 0.4 (p < 0.05) which means there is a relationship between sociodemographic characteristics and anxiety levels in Gen Z.

Conclusion: Sociodemographic characteristics influence the anxiety levels of Generation Z.

Keywords: anxiety, generation z, sociodemographic characteristics

INTRODUCTION

Adolescence is a critical stage in the human developmental cycle, representing a transitional phase toward healthy adulthood (Arsyila & Santoso, 2019). Adolescents are defined as individuals between the ages of 10 and 19 years (Pristianto et al., 2022). This stage marks the shift from childhood and is characterised by significant physical, psychological, and social changes. Furthermore, the developmental tasks of adolescence are accompanied by the growth of intellectual capacity and the emergence of new aspirations, which, if unmet, may lead to mental health problems (Suswati et al., 2023).

The majority of adolescents experience mental health problems between the ages of 15 and 19 years (Aziz et al., 2021), with anxiety being the most prevalent mental disorder in this age group (WHO, 2024). Anxiety functions as a warning signal, alerting individuals to potential threats and motivating them to take action in response to discomfort or fear often without conscious awareness. It typically emerges during periods of stress, producing feelings of tension and worry alongside physical responses such as increased heart rate and elevated blood pressure (Widyaningrum & Mansoer, 2023). Anxiety in adolescence may occur between the ages of 12 and 21 years, with those aged 15–19 years classified as middle adolescence being more prone to feelings of unease due to unfulfilled aspirations, leaving them with a persistent sense of discomfort. Anxiety restlessness is one of the observable symptoms in individuals experiencing (Renidayati et al., 2023)

Generation Z refers to adolescents and young adults born approximately between the mid-1990s and early 2010s (Arum et al., 2023). Many are currently in adolescence, a period of rapid physical and psychological development that plays a crucial role in identity formation. Those in high school or the early years of higher education often experience high levels of anxiety due to academic pressures (Pradiningsih et al., 2024).

Globally, 5.5% of adolescents aged 15–19 experience anxiety disorders (WHO, 2024). In Indonesia, the prevalence reached 47.7% in the following year (Kemenkes, 2021). A 2022 survey reported that 15.5 million Indonesian adolescents had mental health problems, such as anxiety, in the preceding 12 months. The primary causes were internal factors, such as difficulty adjusting and academic performance, and external factors, such as socioeconomic conditions. Among individuals aged 15–24 years, anxiety was the most common mental health problem, affecting 3.7% (I-NAHMS, 2022). In Central Java, the prevalence of adolescent anxiety increased from 4.7% in 2013 to 7.1% in 2018—an increase of approximately 3.01% (Riskesdas, 2018).

Feelings of discomfort accompanied by worry can act as signals of danger, and such threats may escalate if not addressed appropriately (Lape et al., 2021). Adolescent anxiety can affect both the school and family social environment. If left untreated, it can increase the risk of other psychological disorders, including depression, behavioral disorders, eating disorders, post-traumatic stress disorder (PTSD), attention deficit hyperactivity disorder (ADHD), and, in severe cases, suicidal behavior (Shokiyah & Syamsiar, 2022).

A preliminary study conducted by the researcher in November 2024 at SMAN 1 Andong involved 10 randomly selected 11th-grade students assessed using the Beck Anxiety Inventory (BAI). The results showed that six students experienced moderate anxiety and four students experienced severe anxiety. Of these, six students came from families with incomes below the Boyolali Regional Minimum Income, while four students were from families earning at or above the UMR, suggesting that socioeconomic status may influence anxiety levels. Currently, the school has not implemented preventive measures to address or manage student anxiety. Based on this problem, the present study aims to examine the relationship between sociodemographic characteristics and anxiety levels among Generation Z.

RESEARCH METHOD

This study is an analytical observational quantitative with a cross-sectional approach. The research was conducted at SMAN 1 Andong in February 2025. The study population consisted of 321 students, from which a sample of 76 was selected using stratified random sampling. Inclusion criteria were students experiencing anxiety, willing to participate in the study, and enrolled in the 11th grade of SMAN 1 Andong. Exclusion criteria included students who did not complete the study procedures or were absent during data collection.

Data were collected using a sociodemographic questionnaire and the Beck Anxiety Inventory (BAI), which had been previously tested for validity (r-table value: 0.361) and reliability (Cronbach's alpha: 0.948) (Utami & Dewi, 2024). The Beck Anxiety Inventory has 21 statement items with interpretations of mild anxiety levels of 0-21, moderate anxiety 22-35, and severe anxiety >35. Data analysis in this study employed Spearman's Rho test, which aims to measure the relationship between two variables when they do not meet the normality assumption. This research was approved by the Health Research Ethics Committee with approval number 246/II/HREC/2025.

RESULTS

The result revealed that the majority of respondents were 16 years old, female, and from families with an economic status below the regional minimum income. The correlation between sociodemographic factors and anxiety was analysed using Spearman's Rho, which indicated a p-value of <0.05.

Table 1. Distribution of Age

Age (year)	Frequency	Percentage (%)
15	5	6,6
16	52	68,4
17	19	25
Total	76	100%

Table 1 shows that of the 76 respondents, the largest age group was 16 years old, 52 respondents (68.4%).

Table 2. Distribution of Gender

Gender	Frequency	Percentage (%)
Male	17	22,4
Female	59	77,6
Total	76	100

Table 2 shows that of the 76 respondents, the largest gender was female, 59 respondents (77.6%).

Table 3. Distribution of Economic

Economic	Frequency	Percentage (%)
< regional minimum income	36	47,4
regional minimum income	28	36,8
> regional minimum income	12	15,8
Total	76	100

Table 3 shows that of the 76 respondents, the largest economic status was below the minimum income with 36 respondents (47.4%).

Table 4. Correlation of Sociodemographic an Anxiety

		Anxiety	Gender	Economic	Age
Anxiety	R	1.000			
	p-value	.			
	N	76			
Gender	R	.268*	1.000		
	p-value	.019	.		
	N	76	76		
Economic	R	-.256*	-.245*	1.000	
	p-value	.026	.033	.	
	N	76	76	76	
Age	R	-.226*	-.116	-.055	1.000
	p-value	.049	.320	.635	.
	N	76	76	76	76

Table 4 shows a significant relationship between anxiety and gender (r = 0.268*, p = 0.01 < 0.05), indicating that higher anxiety levels were associated with a higher proportion of females experiencing anxiety. This finding suggests a positive direction of association, with a weak correlation strength. Furthermore, a significant relationship was found between anxiety and economic status (r = -0.256*, p = 0.02 < 0.05), indicating that higher anxiety levels were associated with a greater proportion of respondents from families with an income below the UMR. This relationship demonstrates a negative direction of association, with a weak correlation strength. Lastly, a significant relationship was observed between anxiety and age (r = 0.226*, p = 0.04 < 0.05), indicating that higher anxiety levels were more frequently found among respondents aged 16 years. This also suggests a positive direction of association, with a weak correlation strength.

DISCUSSION

The results of this study showed that most respondents were 16 years old, with 52 respondents (68.4%) falling into this category. A previous study reported that the majority of adolescents aged 16 years experienced anxiety (Komang et al., 2024). This age represents middle adolescence, a stage characterized by identity exploration, interest in the opposite sex, the development of abstract thinking skills, and thoughts about sexual activity (Rossi et al., 2023).

Adolescents undergo hormonal, physical, and neurological changes while navigating increasingly complex social environments. Physical maturation is believed to influence brain development, social cognition, and peer relationships, which may increase the risk of mood disorders and anxiety, leading to heightened fear (Harlia et al., 2023). Adolescents often experience irrational worry and restlessness, which can result in behavioral changes such as social withdrawal, difficulty concentrating, poor appetite, irritability, low emotional regulation, and hypersensitivity (Zalukhu & Rantung, 2020). The level of individual maturity can influence anxiety. During middle adolescence, individuals are more susceptible to anxiety compared to older age groups because they tend to rely on maladaptive coping mechanisms when faced with unexpected situations (Dewi, 2021. Based on these findings, the researchers assume that 11th-grade high school students—

typically aged between 15 and 17 years—are in middle adolescence and face academic pressures, social relationships, family issues, future uncertainty, and parental expectations, all of which may trigger anxiety (Hidayati & Purwandari, 2023).

The findings also revealed that most respondents were female (59 respondents, 77.6%). Females more commonly experience anxiety, as they tend to be more sensitive, emotionally expressive, and easily affected by feelings. In contrast, males tend to be more rational, emotionally restrained, and behaviorally dominant (Prawiranegara et al., 2023). Biological differences contribute to this disparity; estrogen, which is more prevalent in women, is known to be involved in mood disorders. Additionally, female brain structures are more active in areas related to memory, language, auditory processing, and emotions. Women often internalize their feelings when faced with problems, which can increase emotional reactivity (Assyifa et al., 2023). Females are reported to be twice as likely to experience anxiety compared to males and exhibit higher "error-related negativity," reflecting a greater fear of making mistakes and heightened sensitivity to situations perceived as wrong (Puspitasari et al., 2021). Social pressures regarding appearance and academic performance further increase anxiety risk among adolescent girls (Andini & Kurniasari, 2021). Based on this, the researchers conclude that gender influences individual anxiety levels. Since most high school students in this study were female, their higher susceptibility to emotional influence may explain their higher anxiety prevalence compared to males.

Regarding family economic status, the study found that most respondents (36 respondents, 47.4%) came from households with income below the regional minimum income. Adolescents from lower-income families often face greater challenges in accessing education, fulfilling basic needs, and participating in extracurricular activities that support social development (Fatimah et al., 2020). Adolescents are aware of their families' economic difficulties, which can impact emotional distress and developmental outcomes (Park & Lee, 2023). Parents serve as the primary source of support, and financial instability is associated with risks to children's socio-emotional development (Fatimah et al., 2020). A stable family income contributes to better mental well-being, enabling family members to achieve developmental milestones more easily (Safira et al., 2021).

In conclusion, family economic status plays a vital role in adolescent mental health. Adolescents from more stable economic backgrounds may feel more secure and better able to focus on personal goals and developmental tasks. In contrast, those from economically unstable households often experience financial-related stress and unfulfilled desires, which can heighten emotional distress and potentially lead to anxiety and stress disorders.

CONCLUSION

This study demonstrates a significant relationship between sociodemographic characteristics specifically age, gender, and family economic status and anxiety levels among Generation Z high school students. The majority of respondents were 16 years old, female, and from families with income below the regional minimum income. Female students exhibited higher anxiety levels than males, which may be attributed to biological, psychological, and social factors. Adolescents from lower-income households also reported higher anxiety, likely due to financial instability and its associated psychosocial stressors. Middle adolescence, particularly at age 16, appears to be a vulnerable period for anxiety due to academic pressure, social relationships, family issues, and future uncertainties. These findings highlight the importance of targeted mental health interventions that

consider age, gender, and socioeconomic background to reduce anxiety among adolescents effectively.

RECOMMENDATIONS

This study can serve as a reference for future research by expanding the range of demographic variables examined, such as school type, parental educational background, and social media usage, which may influence anxiety levels. Researchers may also consider including academic grade level as an additional variable to explore the dynamics of anxiety across different academic phases and learning pressures.

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