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## Gender Issues on the Geography of Emotions About Covid-19 in Adolescents

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### ABSTRACT

**Introduction:** The COVID-19 pandemic emerged abruptly and is characterized by its high transmissibility, resulting in heightened levels of anxiety and depression within the community. Indonesia represents one of the nations significantly impacted by the COVID-19 pandemic. Since the onset of the virus, children and adolescents have experienced increased feelings of anxiety and stress. Emotional disorders can be precipitated in children and adolescents exhibiting symptoms of anxiety, fear, stress, restlessness, or worry.

**Objective:** The objective of this study was to explore gender-related issues in the emotional landscape of COVID-19 among junior high school students. **Method:** The research employs a quantitative approach. Data collection was executed through a Google Form containing a series of statements. The instrument utilized for data gathering was the 2020 COVID Stress Scales (CSS), which comprises 36 statement items. The population under investigation consisted of 1,640 students, from which a sample of 328 junior high school students was selected based on predefined inclusion and exclusion criteria. **Results:** The findings indicated that the emotional geography of students exhibited the highest mean score in the Xenophobia domain, with an average value of 3.394, while the lowest mean score was observed in the Compulsive Checking Emotional Geography, with an average value of 2.107; moreover, a statistically significant difference in mean values was noted. Emotional geography, particularly within the socio-economic domain, displayed differences between boys and girls, with a p-value of 0.000. **Conclusion:** Distinct emotional differences between boys and girls were identified in relation to contamination, xenophobia, and socio-economic ramifications. It is imperative for schools and parents to provide psychological support, facilitate the dissemination of information, and offer behavioral guidance at both individual and community levels.

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## 1. INTRODUCTION

Pandemic is characterized as the proliferation of specific categories of diseases across multiple nations. The COVID-19 epidemic has disseminated to nearly every region of the globe. A pandemic represents a scenario wherein the disease disseminates in an uncontrollable manner. The transmission of the coronavirus disease 2019 (COVID-19) surpasses the limitations of a traditional epidemic, thereby rendering the propagation of COVID-19 as a pandemic outbreak (ALMI (Indonesian Young Scientist Academy). 2020). This virus induces ailments within the respiratory system. The illness attributed to COVID-19 manifests rapidly. On March 12, 2020, the World Health Organization (WHO) proclaimed that the occurrence of COVID-19's spread constituted a pandemic (Siemaszko C. 2020). The WHO officially classified the COVID-19 illness as a global pandemic (WHO. 2020).

Indonesia emerged as one of the numerous nations impacted by the COVID-19 pandemic. Instances of COVID-19 have disseminated across 350 districts or urban areas within 34 provinces. By May 2021, a cumulative total of 12,776 individuals had been confirmed positive, while 2,381 individuals had recovered, and 930 individuals had succumbed to the virus, as documented. The extensive transmission of the virus, resulting in a significant number of infections, necessitated prompt intervention (GTPP (Gugus Tugas Percepatan Penanganan) COVID-19. 2020).

Cimahi is one of the cities in West Java where the incidence of COVID is quite high. Based on the data on August 25, 2021, the incidence of close contact was 6360 people, the suspected number was 1089, and the positive confirmation was as many as 171 people. In this case, the most positive COVID-19 confirmations were in South Cimahi Subdistrict, with 61 people, Central Cimahi with 57 people, and North Cimahi with 53 people. One of the state junior high schools in the South Cimahi in Cimahi City, which has 1640 students in 38 classes from grade 7 to grade 9. This poses a high risk even though the students learn from home because the majority of students live in the South Cimahi sub-district.

Research conducted in China revealed that over 25% of the general populace exhibited stress levels indicative of moderate to severe stress symptoms in reaction to COVID-19 (Wang Y, Di Y, Ye J, Wei W. 2021). These results align with those documented during the SARS epidemic and the H1N1 pandemic of 2009 (Cheng SKW, et al. 2004 & Rubin GJ, et al. 2009). Prior investigations into epidemics and pandemics have established that anxiety constitutes a significant behavioral motivator (Taylor, S, et al. 2019). Individuals experiencing mild anxiety regarding the transmission of the virus are less inclined to participate in hygiene practices, such as handwashing, adhering to physical distancing measures, and receiving vaccinations when available (Taylor S, et al. 2019). Conversely, individuals with heightened anxiety frequently engage in extreme social behaviors, including stockpiling substantial quantities of goods or food, exhibiting panic, and making numerous visits to medical facilities upon encountering minor ailments, interpreting them as indicators of severe infection (Asmundson GJG, Taylor S. 2020).

Anxiety elicits behavioral reactions to viral outbreaks, which may both alleviate and exacerbate the transmission of infection; thus, it is imperative for public health policymakers, health authorities, and healthcare practitioners to thoroughly understand the nature and scope of detrimental psychological reactions to the COVID-19 pandemic (Taylor S, et al., 2019). In the

context of a pandemic, numerous individuals exhibit responses associated with stress or anxiety, encompassing fears of contracting the virus, apprehensions regarding contact with contaminated objects or surfaces, anxieties about strangers who may be carriers of the infection (i.e., xenophobia linked to illness), concerns regarding the socio-economic ramifications of the pandemic, compulsive behaviors of checking and seeking reassurance concerning potential threats related to the pandemic, as well as symptoms of traumatic stress associated with the pandemic, including nightmares and intrusive thoughts (Taylor S, et al., 2020). Effectively communicating information about the pandemic and the quarantine measures associated with COVID-19 can pose significant challenges, particularly when addressing younger audiences (Tiwari S., 2020).

Children and adolescents have felt more anxious and depressed since the virus began (NSPCC Learning, 2020). Much of their distress is caused by fear of being exposed or spreading it. Children lose school friends and other family members, as well as fight more at home. Children suffer when there is no quiet room for study or when they feel as if they were chastised under their parents' command (NSPCC Learning, 2020).

The students miss learning in class and worry about the future (NSPCC Learning, 2020). It was also reported that some of the children experienced abuse and negligence (NSPCC Learning). Children and adolescents suffer from anxiety, fear, stress, uneasy feelings, and worry. Fall into the category of emotions. Emotions are conceptualized as "episodic, relatively short-lived biologically rooted patterns of perception, experience, physiology, action, and communication that arise in response to specific physical and social challenges and opportunities." These perceptual and experiential patterns are subjectively evaluated as either pleasant (positive) or unpleasant (negative). According to Pekrun's Control Value Theory [CVT, 4,19–21], the influence of positive activating emotions (e.g., enjoyment) on participants' performance may be facilitated through participants' engagement in the learning process. Conversely, negative emotions (e.g., boredom) may negatively impact participants by diminishing their engagement in learning or while performing cognitive tasks (Nordmeyer. N. V, Lemaire. P. 2025).

Given that stress or anxiety is very important, it is unwise not to treat them, as it can affect the physical and mental health of the children. Stress, or anxiety, is one of the emotion groups that can affect a person's physiology and behavior. Under stressful conditions, the adrenal glands secrete the epinephrine and norepinephrine hormones. These two hormones will raise blood pressure by affecting the heart, while norepinephrine will constrict blood vessels so that it will indirectly raise blood pressure.

Understanding the geography of emotions in adolescents during the COVID-19 pandemic is crucial as it provides insights into their emotional well-being and the psychosocial challenges they face. The pandemic has significantly impacted adolescents' emotional states, leading to a range of negative emotions such as anxiety, boredom, and sadness, while also fostering some positive emotional growth. This understanding is essential for developing strategies to support adolescents' mental health during such crises. Adolescents reported experiencing a variety of negative emotions during the pandemic, including boredom, anxiety, sadness, and fear. These emotions were often linked to the disruption of daily routines, social isolation, and uncertainty about the future. (Perasso, et al. (2024).

Emotional geography research on COVID-19 in junior high school students has not been specifically conducted in Indonesia, despite this aspect being very important in children and affecting the stages of their development, especially for junior high school students. In this case, even though there has been previous research on COVID-19, there is still a small proportion, in particular the one related to the emotional geography of junior high school students. Therefore, the researchers are very interested in researching emotional geography dealing with COVID-19 in students of junior high school students in Cimahi City.

## **2. METHODS**

### **Research Design**

The research design uses a descriptive quantitative research with an independent T-test, namely analyzing each statement item to identify the emotional geography of students towards COVID. to identify the emotional geography of COVID-19 in students junior high school students in Cimahi City West Java.

### **Population and Sample**

The population in this study were all junior high school students in Cimahi City totaling 1640 students. Based on the results of the sample size calculation, there were 390 students. Because some did not fill in, the total sample collected was 328 junior high school students who met the inclusion and exclusion criteria.

### **Instrument**

The research utilized the standardized COVID Stress Scales (CSS) 2020 instrument, which consists of 36 statement items. The researcher undertook the adaptation of this instrument from the Taylor Journal 2020 by translating it into the Indonesian language. The outcomes of the validity and reliability assessments of the instrument yielded a Cronbach alpha coefficient of 0.95, indicating that the instrument possesses substantial reliability, with each statement item demonstrating a valid correlation value exceeding 0.2 (Nisfiannoor, 2009).

### **Research Procedure**

The instrument employed for data collection consisted of the 2020 COVID Stress Scales (CSS), which encompasses a total of 36 declarative items. The investigator modified these items based on the Taylor Journal published in 2020 by effectuating a translation of the instruments into the Indonesian language. The data collection technique employed was distributing instruments to students online via a Google Form link. When beginning to fill in, the students were given information on the purpose and objectives of the research, and then the agreement was filled in to become the respondents in the YES or NO options. The students who answer yes then fill out the statement items in the questionnaire provided.

### **Data Analysis**

Data analysis used univariate and bivariate analysis with an independent T test, which is to analyze each item of a statement to identify the geography of students' emotions on COVID.

### Ethical Clearance

This study was approved by the participants, and before each data collection and questionnaire, anonymity, confidentiality, the right to withdraw at any time without any penalty, and the purpose of the study were explained to the participants. This research has obtained ethical approval from the Research Ethics Commission of the STIKES Jenderal Achmad Yani Cimahi, with the reference number 02/KEPK/IV//2021.

### 3. RESULT

Table 1 illustrates that the domains exhibiting the most elevated mean scores in the study of emotional geography were primarily located within the xenophobia domain, which recorded an average value of 3.394, succeeded by the danger domain with an average value of 3.327. Conversely, the domain exhibiting the lowest average value was identified as the compulsive domain, which registered an average value of 2.107.

**Table 1. Psychological Profiles (Emotions)**

Domain	Mean	Std deviasi
Danger	3.327	1.326
Contamination	2.856	1.43
Xenophobia	3.394	1.29
Socio-economic Consequences	3.002	1.35
Compulsive Checking	2.107	1.251
Traumatic Stress	2.675	1.271

Table 2 shows that the age characteristics of students' emotional geography indicate that the six domains are interrelated. The statistical test results obtained that age is significant for emotion and is strongly related to emotion and geography.

**Table 2. Analysis of the Correlation between Age Characteristics and Students' Emotion Changes**

Control Variables			D	C	Xe	Se	Cc	Ts
Age	Danger (D)	Correlation	1.000	.654	.626	.615	.344	.408
		Significance	.	.000	.000	.000	.000	.000
		df	0	325	325	325	325	325
	Contamination (C)	Correlation	.654	1.000	.795	.615	.545	.612
		Significance	.000	.	.000	.000	.000	.000
		df	325	0	325	325	325	325
	Xenophobia (Xe)	Correlation	.626	.795	1.000	.560	.458	.433
		Significance	.000	.000	.	.000	.000	.000
		df	325	325	0	325	325	325
	Social_economic_consequences (Se)	Correlation	.615	.615	.560	1.000	.424	.495
		Significance	.000	.000	.000	.	.000	.000
		df	325	325	325	0	325	325
	Compulsive_checking (Cc)	Correlation	.344	.545	.458	.424	1.000	.554
		Significance	.000	.000	.000	.000	.	.000
		df	325	325	325	325	0	325
	Traumatic_stress (Ts)	Correlation	.408	.612	.433	.495	.554	1.000
		Significance	.000	.000	.000	.000	.000	.
		df	325	325	325	325	325	0

Table 3 shows that the gender characteristics of all aspects of the six domains affect students' emotional geography. The results of statistical tests showed that  $p\text{-value} = 0.000$ , which means that at 5% alpha, gender significantly affects students' emotions.

**Table 3. Gender Correlation to Students' Emotion Geography**

Control Variables			D	C	Xe	Se	Cc	Ts
Gender	Danger (D)	Correlation	1.000	.651	.624	.613	.340	.408
		Significance	.	.000	.000	.000	.000	.000
		df	0	325	325	325	325	325
	Contamination (C)	Correlation	.651	1.000	.790	.605	.542	.615
		Significance	.000	.	.000	.000	.000	.000
		df	325	0	325	325	325	325
	Xenophobia (Xe)	Correlation	.624	.790	1.000	.539	.452	.439
		Significance	.000	.000	.	.000	.000	.000
		df	325	325	0	325	325	325
	Social_economic_consequences (Se)	Correlation	.613	.605	.539	1.000	.418	.502
		Significance	.000	.000	.000	.	.000	.000
		df	325	325	325	0	325	325
	Compulsive_checking (Cc)	Correlation	.340	.542	.452	.418	1.000	.554
		Significance	.000	.000	.000	.000	.	.000
		df	325	325	325	325	0	325
	Traumatic_stress (Ts)	Correlation	.408	.615	.439	.502	.554	1.000
		Significance	.000	.000	.000	.000	.000	.
		df	325	325	325	325	325	0

Table 4 shows that the average emotion geography of students is in the socioeconomic domain for boys with 15.59 with a standard deviation of 6.41. whereas for girls the average was 18.40 with a standard deviation of 7.08. The statistical test results showed that the  $p\text{ value} = 0.000$  which means that at 5% alpha, there is a significant difference in the geographic average of students' emotions, especially in the socio-economic domain of boys and girls.

**Table 4. The Effect of Gender on Student Emotion Geography**

Variable	Gender	N	Mean	Std. Deviation	Std. Error Mean	P Value
Danger	Male	147	19.4558	5.64623	.46569	0,000
	Female	181	20.3702	5.79856	.43100	
Contamination	Male	147	17.0952	5.92572	.48875	
	Female	181	18.7569	5.99134	.44533	
Xenophobia	Male	147	18.9252	6.36675	.52512	
	Female	181	21.5304	5.49094	.40814	
Social_economic_consequences	Male	147	15.5850	6.41044	.52872	
	Female	181	18.3978	7.08102	.52633	
Compulsive_checking	Male	147	15.5646	5.82045	.48006	
	Female	181	16.4475	5.36695	.39892	
Traumatic_stress	Male	147	12.5306	5.58043	.46027	
	Female	181	12.7348	5.33712	.39670	

#### 4. DISCUSSION

Based on the results of the analysis of the domains of emotion geography, comprising danger contamination, xenophobia, social\_economic\_consequences, compulsive\_checking, and traumatic\_stress, it was found that the average value of emotion geography of students was the highest in the domain of xenophobia with an average score of 3,394. This might be because COVID-19 is new or unfamiliar, so the students have no idea about it. In everyday life, people often see emotions from a negative angle. Emotions are defined as emotion words, which are then expressed in a variety of unkind behaviors, such as loud, dirty words and even aggressive behaviors such as hitting, shattering objects, and using words that hurt people's hearts. In this case, the basic emotions of fear (xenophobia) include anxiety, horror, worry, restlessness, goosebumps, doubt, shame, and jealousy. In addition, emotions can also be seen from the positive side, which can benefit others. Emotion is the emotional state of a situation or event. This situation has a physiological component, a situational component, and a cognitive component. Emotion is related to subjective experience, meaning that the expression of emotions depends on the response given by each individual. At large, emotions are classified into two groups: positive and negative emotions. Positive emotions include those such as happiness, joy, excitement, and love. Negative emotions are those such as fear, anger, sadness, and anxiety. The emotional expression of a person can be seen in their words or verbal and non-verbal behavior (Taylor, et., al, 2019).

Based on their developmental characteristics, the childrens attending junior high school in Cimahi City, West Java, can be delineated as belonging to the early adolescent phase. Adolescence is conventionally segmented into three discrete phases: early adolescence (ages 12–15), middle adolescence (ages 16–18), and late adolescence (ages 19–20) (Saam Z. 2014 & Ningsih E. Saam Z. Umari T. 2021). In this developmental phase, adolescents manifest significant emotional fluctuations, exhibit a wide array of interests, and possess heightened physical and cognitive abilities, thereby engaging in increasingly complex and demanding activities (Hockenberry M. J, Wilson D. 2018). As a result, the role of parents becomes exceedingly critical, particularly in the development of a child's self-concept. The manner in which parents foster their children profoundly impacts the children's self-evaluation. If a child encounters positive familial interactions, it is probable that they will cultivate an affirmative self-image as well. The existence of warmth within the familial structure is essential for the formation of a child's self-concept. When a nurturing dynamic prevails between the child and the parents, the child is more inclined to display social, cooperative behaviors and sustain emotional equilibrium, which promotes self-acceptance and respect for others. Throughout the COVID-19 pandemic, the sudden onset of the viral infection precipitated widespread experiences of anxiety, depression, and a multitude of other stress-related responses.

Emotional responses caused by stress are a series of emotional experiences that accompany a person in a negative emotion state such as depression, anxiety, panic, disappointment, or fear. The main behavioral changes caused by stress are anxiety, lack of attention, reduced problem-solving skills, slow action, frequent anger, coercive behavior (excessive disinfection and repeated hand washing), crying easily, smoking, alcohol abuse, etc (Wang et al, 2021). .

Our investigation revealed emotional disparities between genders regarding contamination, xenophobia, and the socioeconomic ramifications thereof. Gender is significantly correlated with

anxiety, wherein females exhibit a heightened susceptibility to anxiety compared to their male counterparts. The emotional responses of women are characterized by a greater degree of tenderness and sensitivity than those of men. Consequently, women are more prone to experiencing anxiety. In the context of an outbreak, the majority of individuals affected are compelled to remain at home, thereby allocating additional time to reflect upon various aspects of life, including familial health and safety, employment circumstances, and household income, which frequently results in heightened concern. Hence, their apprehensions warrant serious consideration (Wang et al, 2021).

With the imposition of novel constraints in daily routines and social engagements for individuals over an indeterminate timeframe, the broader societal fabric is likely to experience heightened levels of stress and anxiety, potentially resulting in a diminished sense of self-efficacy, which consequently affects overall mental health. Hence, it is imperative to comprehend and assess the psychological landscape amidst the prevailing tumultuous circumstances, thus emphasizing the necessity for the dissemination of information, knowledge, behavioral guidance, and psychological assistance from governmental bodies across all tiers. Moreover, there exists a pressing requirement for communal support from familial networks and mental health resources (Wang et al, 2021).

The COVID-19 pandemic has significantly increased xenophobia, particularly among junior high school students, due to a combination of social, psychological, and media factors. This environment of fear and misinformation has a major impact on young students, who are particularly vulnerable to social influences and peer pressure. The pandemic's disruption of normal social interactions and educational routines has further exacerbated these issues, leading to increased anxiety and xenophobic attitudes among junior high school students. Social media platforms became a breeding ground for xenophobic bullying, with a significant portion of online content perpetuating racist stereotypes (Sainju et al., 2022).

## 5. CONCLUSION

The emotional geography of students during the pandemic highlights the importance of addressing xenophobia, supporting adolescent development through family warmth, and providing targeted mental health interventions to mitigate the long-term impact of such crises on young individuals. Gender differences also play a role, with women showing higher levels of anxiety and sensitivity compared to men. This aligns with studies indicating that women are more prone to anxiety during crises due to their heightened emotional sensitivity. The COVID-19 pandemic has universally exacerbated stress, anxiety, and other negative emotions due to prolonged uncertainty and lifestyle disruptions. These emotional states manifest in various behaviors such as compulsive checking, excessive disinfection, and social withdrawal. To address these challenges, it is essential to provide psychological support, information dissemination, and behavior guidance at both individual and community levels.

Implications that can be described as follows:

1. The importance of handling xenophobia with educational programs and social campaigns that emphasize tolerance, empathy, and appreciation for diversity to prevent and reduce xenophobia in schools and communities.



2. Support for adolescent development through family warmth with parental involvement in providing emotional support, strengthening family communication, and providing resources for families experiencing difficulties.
3. Targeted mental health interventions through the development of specific mental intervention programs for adolescents, including psychological counseling, group therapy, and easily accessible online support services.

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## 7. CONFLICT OF INTEREST

The authors declare that they do not have conflict of interest with respect to this manuscript.

## 8. STUDY LIMITATION

Studi limitation is sample size and diversity: The study sample was drawn from a single middle school, limiting the diversity of the sample. This may affect the generalizability of the findings to other regions or demographic groups. Non-Response Bias: Out of a calculated sample size of 390 students, only 328 responses were collected, which may affect the conclusions of the study.

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