

# Psychological Distress among Villagers in the Indonesian Fishing Community: A Cross-Sectional Study

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## ABSTRACT

**OBJECTIVE:** The prevalence of mental disorders continues to rise, increasing in Disability-Adjusted Life Years (DALYs). This study investigated factors associated with psychological distress (PD) in the community.

**METHODOLOGY:** The cross-sectional study with 220 samples was taken from the total adult population of a village in Banda Aceh by convenience sampling. The Kessler Psychological Distress Scale (K6) instrument was used in this study.

**RESULT:** Respondents aged 20-44 years (45.8%), female (79.7%), low education (78.0%), married (74.6%), and experiencing high somatic symptom disorder (33.9%) tend to experience PD. There was a significant relationship between age ( $p=0.036$ ), gender ( $p=0.018$ ), educational status ( $p=0.001$ ), marital status ( $p=0.006$ ), and somatic symptom disease ( $p=0.022$ ) on PD.

**CONCLUSION:** Education is a triggering factor for PD. The influence of marriage on psychological distress in the community needs to be re-evaluated regarding family support and coping strategies in resolving family conflicts.

**KEYWORDS:** Psychological Distress, Determinants, Society, prevalence, Indonesia

## INTRODUCTION

Mental disorders belong to the ten most significant global contributors to disability-adjusted life years (DALYs)<sup>1</sup>. In 2019, 1 in every eight people, or 970 million people worldwide, had a mental disorder, anxiety and depressive disorders being the most common<sup>2</sup>. Because of the COVID-19 pandemic, the number of people living with anxiety and depression increased significantly by 2020<sup>3</sup>. High prevalence, duration, and risk of recurrence of mental disorders burden health and social systems and reduce productivity<sup>4</sup>.

In Indonesia, screening for mental health problems begins at the age of 15 years, with a higher prevalence of emotional distress and depression among older ages, females, out of school, unemployed, and rural populations<sup>5</sup>. According to a recent study, 14% of the adult population suffered from common mental disorder<sup>6</sup>. An earlier study found that 21.8% of adults had moderate or severe depression symptoms<sup>7</sup>.

Psychological distress (PD) is an essential indicator of mental health<sup>8</sup>. PD can be defined as a state of

individual emotional suffering due to the inability to adapt to stressors characterized by symptoms of depression and anxiety<sup>8,9</sup>. Several studies have found a relationship between socio-demographics and PD<sup>6</sup>. Population surveys and epidemiological studies revealed that women report a higher mean level of PD than men. Disparities in PD and other health problems are primarily associated with differences in lifetime exposure to specific risk factors. Some risk factors commonly associated with PD include low educational level, unemployment, and low social support<sup>8</sup>. Furthermore, the determinants of PD in Indonesian communities have been rarely documented in the literature. This study is aimed to assess the associated factors of PD in this community.

## METHODOLOGY

### Study design and Participants

A cross-sectional study among 220 residents of a small fishing village in Banda Aceh, Indonesia. A convenience sampling method was employed to select study participants.

### Measurements

#### Independent variables

The independent variables in the study were age, gender, marital status, educational status, and somatic symptoms. Somatic Symptom Scale-8 (SSS-8) assessed the respondent's somatization symptoms in the previous seven days. It has been frequently used to evaluate the Somatic Symptoms of a population. Each item was assessed on a Likert scale ranging from none (0) to very much (4). The possible cumulative score varies from 0 to 32, with the severity of somatization load split into five categories: none to

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minimal (0-3), low (4-7), moderate (8-11), high (12-15) and very high (16-32)<sup>10</sup>.

**Dependent variable**

PD was measured by the Kessler psychological distress scale (K6). The K6 consists of six questions regarding the prevalence of PD over the past 30 past. K6 has been frequently used to assess the prevalence of PD among the population<sup>11-13</sup>. The Indonesian version of K6 has been validated among adolescents and has good reliability and sensitivity<sup>13</sup>. Each item is rated on a Likert scale (0-4), which is divided into two categories: no psychological distress (0-12) and psychological distress (13-24)<sup>14</sup>.

**Data Collection**

Data were collected by interviewing eligible subjects using a structured questionnaire. The questionnaire, which was in the local language, included questions that assessed demographic data, psychological distress, and somatic symptom disease.

**Data Analysis**

The proportion and percentage of sociodemographic and other study variables were reported using descriptive statistics. The chi-square test investigated the relationship between the independent factors and PD. Data were analyzed using SPSS Statistical software.

**Ethical Permission**

This study was approved by the Ethics Committee of the Faculty of Nursing, Universitas Syiah Kuala (113015231122).

**RESULTS**

**Descriptive Statistics**

More than half of the respondents were aged between 20 and 44 (59,1%), female (66,4%), had low education (59.1%), and were married (84.5%). Approximately a quarter of them experienced psychological distress (26.8%), while one-third suffered from somatic symptom disorder (29.5%). A detailed sociodemographic profile of study respondents is presented in Table I.

**Table I:**  
**Sociodemographic profile of study respondents**

Variables	(f)	(%)
<b>Age, years</b>		
20-44	130	59.1
45-59	61	27.7
≥60	29	13.2
<b>Gender</b>		
Female	146	66.4
Male	74	33.6
<b>Educational Level</b>		
Low	130	59.1
Middle	67	30.5
High	23	10.5
<b>Marital Status</b>		
Single	15	6.8
Married	186	84.5
Widow/Divorce	19	8.6

<b>Occupation</b>		
Worker	87	39.5
Unemployment	133	60.5
<b>Religion</b>		
Islam	220	100
<b>Psychological Distress (PD)</b>		
No	161	73.2
Yes	59	26.8
<b>Somatic Symptom Disorder</b>		
None	27	12.3
Low	41	18.6
Medium	50	22.7
High	65	29.5
Very High	37	16.8

**The Associated Factors of Psychological Distress**

Psychological distress was found to be associated with age ( $\chi^2=6.6, p=0.036$ ), gender ( $\chi^2=5.5, p=0.018$ ), educational status ( $\chi^2=14, p=0.001$ ), and marital status ( $\chi^2=10.2, p=0.006$ ). The rate of PD was higher among females (79.7%), lower educated individuals (78.0%), married participants (74.6%), and also higher among 20-44-year-olds (45.8%). In this study, we reported that physical problems (somatic symptoms) contributed to PD ( $\chi^2= 11.4, p=0.022$ ). A detail of the associated factors of PD is presented in Table II.

**Table II:**  
**Factors Associated with Psychological Distress**

Variable	Psychological Distress		X <sup>2</sup>	P
	No	Yes		
<b>Age, years</b>				
20-44	103 (64.0%)	27 (45.8%)	6.664	0.036
45-59	41 (25.5%)	20 (33.9%)		
≥60	17 (10.6%)	12 (20.3%)		
<b>Gender</b>			5.598	0.018
Female	99 (61.5%)	47 (79.7%)		
Male	62 (38.5%)	12 (20.3%)		
<b>Educational Level</b>			14.016	0.001
Low	84 (52.2%)	46 (78.0%)		
Middle	60 (37.3%)	7 (11.9%)		
High	17 (10.6%)	6 (10.2%)		
<b>Marital Status</b>			10.297	0.006
Single	11 (6.8%)	4 (6.8%)		
Married	142 (88.2%)	44 (74.6%)		
Widow/Divorce	8 (5.0%)	11 (18.6%)		
<b>Somatic Symptom</b>			11.484	0.022
None	25 (15.5%)	2 (3.4%)		
Low	32 (19.9%)	9 (15.3%)		
Medium	38 (23.6%)	12 (20.3%)		
High	45 (28.0%)	20 (33.9%)		
Very High	21 (13.0%)	16 (27.1%)		

**DISCUSSION**

Aging reflects biological, psychological, and social factors that change throughout life. The influence of age on PD has been repeatedly observed, and the average level of distress begins in early adulthood and tends to decrease with age<sup>15</sup>. In this study,

respondents between the ages of 20 and 44 tended to experience predominantly mental distress compared to respondents over the age of 60. Younger respondents tended to experience PD generally, consistent with the previous findings<sup>7</sup>, but contrary to Reuter et al. (2020), who found higher PD among older respondents. This difference is attributed to cohort effects during aging. The term cohort effect describes the variation in the characteristics of a population over time among individuals, which is determined by their life experiences and each individual's exposure to stressors<sup>16</sup>. In a longitudinal study, age has a consistent U-shaped relationship with PD after controlling for gender. For females, average PD decreased steadily from age 18 and reached its minimum in the 60-69 age range before rising again without reaching levels seen in young adults. For males, mean PD remained steady in the 20s and followed a similar pattern to that of women<sup>8,17</sup>. Previous studies consistently suggest that women have higher rates of mental disorders than men. This study's findings align with previous research, indicating that female respondents experience greater PD than their male counterparts. Moreover, women tend to experience more general mental disorders, a trend that corroborates previous findings<sup>6,18,19</sup>. Women are at heightened risk for depression compared to men, with a two to three times greater likelihood of suffering from this mental health condition during their reproductive lifespan between menarche and menopause. Hormonal fluctuations that impact mood and trigger depression are attributed to this trend. These physiological differences may explain why women are often considered 'sensitive'<sup>20</sup>. Married women often experience greater PD due to dissatisfaction with daily activities, including childcare responsibilities, lack of time for personal interests and hobbies, and inequitable distribution of household chores with male partners. Female distress triggers vary. For instance, a study of dizygotic twins revealed that women demonstrated higher sensitivity to interpersonal relationships, while men exhibited greater sensitivity to external and goal-oriented careers<sup>21</sup>. Social factors, such as differences in physical strength, patriarchal customs, gender discrimination, and misogynistic victimization, also contribute to the risk of depression in women. Women tend to be more inclined to overthink than men, leading to a greater susceptibility to stress<sup>22</sup>. In problem-solving situations, women employ more emotion-focused strategies, while men use more problem-focused strategies<sup>23</sup>. Low-educated respondents in this study tended to PD compared to their higher-educated counterparts. Reuter et al. (2020) (P=0.001) and Arvind et al. (2019) (P=0.001) also found that individuals lacking education experience a greater degree of general mental disorders. Significant evidence demonstrates that education substantially impacts individual

well-being through employment status and reducing health issues-consequently, the employment factor functions as a bridge connecting the education-health link. Highly educated individuals have a greater likelihood of securing employment, receiving health benefits, earning higher wages, experiencing improved work conditions, and maintaining a stable career. These factors are positively associated with reducing PD<sup>24</sup>.

In the study mentioned above, the most significant proportion of respondents (35.0%) were found to have lower levels of education and were not currently employed. Education serves as a means of regulating stress and related coping strategies. The greater the individual's coping strategy, the lower the chances of vulnerability to stressful situations. The level of education correlates with the development of coping strategies. Those with lower education tend to employ less effective coping mechanisms<sup>25</sup>. Higher education positively correlates with reduced PD, as found in a 27-year cohort study conducted in Sweden through social and labor market resource mechanisms. Additionally, Assari (2018)<sup>26</sup> reported that women experience more significant improvement in mental health and educational status than men. Low levels of education are associated with PD; this pertains to the influence of employment and income on PD. In contrast to Molarius and Granström's (2018) findings, no significant correlation was established between education level and PD. However, individuals with higher education had greater PD than those with low and secondary education after considering age, employment status, and social support.

Marriage benefits physical and emotional well-being, but marital quality is also an essential determinant of health and well-being. Over time, the possibility of marital discord and strain may be unavoidable. The relationship between marital strain and PD is well established, and strain affects marital quality and well-being. The results of this study show that married respondents tend to experience PD more than widows/widowers. Married respondents experience more PD, which is consistent with the findings of Garcia & Umberson (2019); this contrasts with Reuter et al. (2020) findings that widowed and divorced participants had a greater risk of general mental disorders (p<0.05) and were twice as likely to experience mental disorders as married participants. Social dysfunction is the leading cause of mental disorders. Poor social acceptance and lack of support can negatively affect mental health. However, research shows that obtaining social support can positively impact health outcomes by mitigating mood disturbances and enhancing quality of life and personal well-being. Strong social support is also associated with lower levels of anxiety (r = -0.151, P < 0.001), indicating that more outstanding social support corresponds with decreased anxiety levels<sup>27</sup>. Sources of social support are typically derived from

individuals closest to the person, such as family members and close friends. Research has extensively examined the correlation between marital status and social support and its impact on mental health due to the potential of predisposing individuals to developmental disorders. Married partners, including spouses, bear rights and responsibilities that ought to be met to benefit their relationship. Such obligations extend to financial matters, the provision of emotional support and affection, biological fulfillment, and other aspects. However, conflicts and tensions will likely arise when either role fails to fulfill its duties. Various factors create burdens and pressures in households, such as stress related to household chores, perceptions of fairness, assumptions of responsibility, and inequality in the division of work and childcare<sup>28</sup>. Another possible conflict in marriages is related to pregnancy and having children. Childfree and childless are commonly used to describe couples who choose not to have children. Childfree refers to choosing not to have children in marriage, while childless refers to the inability to conceive. Deciding to live a child-free life is a complex decision. Pronatalists in the general public categorically reject this choice, arguing that it goes against the natural order and is seen as more harmful than childless<sup>29</sup>. Couples experiencing childlessness may face significant emotional distress due to being diagnosed with infertility<sup>30</sup>; this can lead to diminished psychological functioning, quality of life, and overall health<sup>31</sup>. Somatic symptom disease is an objective indicator for measuring PD and its prevalence. The results of this study indicate that individuals who experience high levels of somatic symptom disease are likely to experience PD. The results of this study suggest that individuals who experience high levels of somatic symptom disease are likely to experience PD. Somatic symptom disorder is a chronic physical condition that persists due to stress experienced by individuals. It is characterized by persistent, distressing, or impairing physical symptoms that may or may not be accompanied by diagnosed medical conditions. Somatic symptom disorder presents as physical ailments affecting various systems, including cardiovascular, digestive, and respiratory, or areas impacted by the autonomic nervous system that defy medical explanation. Symptoms may include fainting, dizziness, chest pain, nausea, or abdominal pain<sup>32</sup>. The emergence of somatic symptoms signifies the necessity of healthcare services, leading to increased care and treatment expenses and additional personal distress<sup>28</sup>. The association between socioeconomic and somatic symptoms has been observed and persists throughout life. The family's less favorable social and material living conditions should be considered. The economic perspective reveals the connection between psychological distress and somatic symptom disorder, as treatment is significantly costly. Compared to other

disorders, individuals with somatic symptom disorder undergo twice as many visits to healthcare services, leading to a more significant economic burden and diminished social functioning. Individuals with somatic symptom disorder face medical expenses and reduced productivity at work due to taking excessive days off<sup>33</sup>. Studies have found a positive association between the severity of somatic symptoms, medical costs, and indirect impacts on patients with somatic symptom disorder. Such burdens certainly cause significant pressure on individuals and impact their emotional well-being and mental health. Reuter et al. (2020)<sup>6</sup> reported physical issues as the primary contributor to PD while noting that negative emotions can significantly impact work productivity ( $P < 0.01$ ). Therefore, the enduring link between socioeconomic and somatic symptoms underscores the importance of considering the family's social and material living conditions, particularly as somatic symptom disorder is associated with substantial healthcare costs and reduced productivity, placing significant economic and emotional strain on affected individuals.

## CONCLUSION

The findings of this study regarding the amount of PD in educated communities are expected to be a reference in improving educational status. Finally, the influence of marriage on PD in the community needs to be re-evaluated regarding family support and coping strategies used in families in resolving family conflicts.

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**Conflict of Interest:** The authors declare no conflict of interest for publication of this study.

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**Data Sharing Statement:** The data supporting this study's findings are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

## AUTHOR CONTRIBUTION

Ayu DP: Designed the study, data collection, data analysis, wrote the initial manuscript  
 Nurhasanah: Designed the study, data collection, data analysis,  
 Marthoenis: Supervised data collection, data analysis and manuscript preparation  
 All authors have agreed for the final version of the manuscript.

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