ORIGINAL ARTICLE

The Association between Anxiety, Depression, Trauma and Insomnia Symptoms with Marital Intimacy during the COVID-19 Pandemic in Indonesia

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ABSTRAK

Pandemik COVID-19 telah menyebabkan masalah kesihatan mental dari ringan sehingga yang teruk, termasuklah kebimbangan, kemurungan, trauma dan gangguan tidur. Ia juga menjejaskan kesihatan psikoseksual. Kesihatan seksual adalah aspek penting dalam kehidupan yang memerlukan perhatian untuk mengekalkan kualiti hidup yang baik. Walau bagaimanapun, tidak banyak kajian telah mengkaji korelasi antara keintiman antara pasangan suami isteri dan masalah psikologi yang berlaku semasa pandemik COVID-19. Kajian ini bertujuan untuk menentukan masalah kesihatan mental (gejala kebimbangan, kemurungan, trauma dan insomnia) yang merupakan ramalan utama keintiman perkahwinan semasa pandemik di Indonesia. Dalam kaedah tinjauan dalam talian, daripada 930 responden berkahwin, didapati keintiman mempunyai korelasi negatif dengan gejala kebimbangan (rs = - 0.28, p<0.001), gejala kemurungan (rs = - 0.35, p<0.001), gejala trauma (rs = - 0.37, p<0.001) dan gejala insomnia (rs = - 0.32, p<0.001). Kemurungan didapati sebagai faktor ramalan yang paling utama di antara semua masalah kesihatan mental terhadap keintiman. Hubungan ini dikaitkan dengan beberapa faktor, termasuk penurunan libido pasangan, fungsi ereksi, komunikasi yang tidak berkesan, perpisahan, keletihan, disregulasi emosi dan kesunyian. Satu program untuk mengurangkan masalah ini perlu dirancang dalam peringkat penjagaan kesihatan primer dan kerajaan.

Kata kunci: COVID-19; keintiman; kesihatan mental

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ABSTRACT

The COVID-19 pandemic has caused mild to severe mental health problems, including anxiety, depression, trauma and sleep disorders. It also affects the psychosexual health. Sexual health is an important facet of life that needs attention to maintain a good quality of life. However, not many studies have examined the correlation between these dyads, specifically intimacy between married couples and the psychological problems occuring during the COVID-19 pandemic. This study aimed to determine which mental health problems (symptoms of anxiety, depression, trauma, and insomnia) were the most predictors of marital intimacy during the pandemic in Indonesia. In an online survey method, from the results of 930 married respondents, intimacy was found to have a negative correlation with anxiety symptoms (r_s = - 0.28, $p < 0.001$), depression symptoms (r_s = - 0.35, $p < 0.001$), trauma symptoms (r_s = - 0.37, $p < 0.001$) and insomnia symptoms (r_s = - 0.32, $p < 0.001$). Depression is found to be the most predictive factor among all mental health problems to intimacy. This relationship was associated with several factors, including decreased partner's libido, erectile function, ineffective communication, separation, fatigue, emotional dysregulation and loneliness. A program to mitigate these problems should be planned for primary and governmental healthcare levels.

Keywords: COVID-19; intimacy; mental health

INTRODUCTION

The World Health Organisation (WHO) officially declared that coronavirus disease 2019 (COVID-19) caused a pandemic. This pandemic has had an impact on the world economy, health crisis, quality of life, and psychosocial life, including mental problems (Banerjee & Rao 2020). The Indonesian Psychiatric Association conducted a survey in 2020 with 1,522 people, finding that 64.8% experienced anxiety symptoms, 61.5% had depression symptoms and 75% were affected by trauma (Sutrisno et al. 2023). Current literature suggests that people affected by COVID-19 may have a burden of mental health, including emotional disorders, depression, anxiety, stress, sleep disorders, posttraumatic stress symptoms, suicidal behavior, and psychosexual health (Hossain et al. 2020). Sexual health refers to the complexity of human beings, including personality and intimacy. There is some evidence that sexual intimacy has benefits for humans, including improving the immune system function. The frequency of sexual relations has decreased significantly during the current COVID-19 pandemic compared to the previous 6-12 months (Omar et al. 2021). Literature related to sexual health and intimacy during the COVID-19 pandemic is still limited at present (Omar et al. 2021). Given the importance of sexuality in people's

lives and its relationship to quality of life and mental disorders, doctors need to remain attentive to this issue. Routine screening of patients' complaints related to sexuality is pivotal, including the role of sexual education for patients who have difficulties in their sexual functioning during the current epidemic in Indonesia. Given the social stigma attached to the topic of sexuality and its sociocultural complexity, the clinically applicable dictum is that "you don't ask, and they don't tell."

Anxiety, depression, trauma and insomnia can have a significant impact on the intimacy of married couples. According to research that specifically addresses the impact of these mental health issues on the intimacy of married couples, these issues can negatively impact their psychological well-being and overall sleep quality (Lin & Fu 2022). This ultimately affects their interpersonal relationships, closeness, and frequency of sexual activity. Subsequently, it leads to marital discord and emotional distance (Banerjee & Rao 2020). Long COVID-19 patients reported significant mental health symptoms and worsening of previous symptoms, especially depression, anxiety, posttraumatic stress disorder (PTSD) and insomnia (Saltzman et al. 2023). Prolonged exposure to the traumatic COVID-19 pandemic can lead to PTSD. PTSD is strongly related to intimacy, which can lead to overall sexual dysfunction, including low sexual desire and sexual dissatisfaction.

These mental health problems are associated with intimacy between couples during the COVID-19 pandemic in several countries (Löfgren et al. 2023; Till & Niederkrotenthaler 2022). Research by Till and Niederkrotenthaler (2022) reported that there is a relationship between anxiety and other psychological factors with the partners' sexual satisfaction and relationship status. Luetke et al. (2020) showed that 35% of couples experienced relationship disruption during the COVID-19 pandemic. This is also reported in Indonesia (Sutrisno et al. 2023). The COVID-19 pandemic has led to an increase in the divorce rate of couples. Couples' disrupted intimacy due to COVID-19 is related to conflicts that occur in the household, such as household economic problems, unbalanced time together, domestic violence, and changing communication patterns (Till & Niederkrotenthaler 2022). Feng et al. (2021) compared those who had an average quality sexual life with respondents who had a good quality sexual life and found that the latter had relatively higher intimacy scores. Sexual behavior and family functioning factors are important independent determinants of couple intimacy. This knowledge can provide invaluable information for health care in developing intervention plans and services to promote harmonious intimate relationships (Feng et al. 2021). However, to the best of our knowledge, there was no research in Indonesia examining the correlation between mental problems and intimacy among married couples. This study aimed to determine which mental health problems (symptoms of anxiety, depression, trauma and insomnia) are

the most predictors of marital intimacy during the COVID-19 pandemic.

MATERIALS AND METHODS

This research was a cross-sectional study with a descriptive-analytic research design. Data was collected based on an online cross-sectional survey of 930 married people. Respondents were recruited by non-probability purposive sampling, i.e., distributing electronic questionnaires online. The sample size estimation was extracted from a previous study in which 479 females and 217 males participated in this research (Omar et al. 2021). We conducted the research from 3 January to 2 April 2022. The data analysis design used the Statistical Package for the Social Science (SPSS) v25.0 program. The inclusion criteria included the adult population who was in a marital relationship with a history of being infected with COVID-19 and who agreed to participate in the study and were asked to fill out an electronic informed consent form via the Google online platform and then filled sociodemographics information such age, gender, education level, occupation, income, and the history of COVID-19 in the same Google form for assessment.

Measurement Tools

Various measurement tools were used to determine the mental health problems during the COVID-19 pandemic.

(i) Depression Anxiety Stress Scale (DASS-21)

DASS-21 is a self-report instrument that measures anxiety, depression, and stress. This instrument is a short form of DASS-42 from Lovibond and Lovibond (1995). DASS-21 has an Indonesian version. The validity and reliability tests for the DASS 21 questionnaire using the results of validity tests conducted by Nada et al. (2022) showed good validity and reliability. The reliability test showed a Cronbach alpha coefficient of 0.912 with the reliability of each dimension, namely the dimensions of depression 0.853, anxiety 0.776, and stress 0.905. Other studies have also shown good internal reliability. Onie et al. (2020) assessed internal reliability using McDonald's omega. The McDonald's omega value of the total DASS was 0.910, with depression subscale values of 0.794, anxiety 0.785, and stress 0.800. The validity value of DASS 21 is measured by the HSCL-25 instrument, which was first validated, and a predictive validity value of the extremely strong evidence category for depression and anxiety subscales was obtained (Onie et al.2020).

(ii) Insomnia Severity Index (ISI) Indonesian Version

ISI is a reliable and valid instrument to measure the severity and impact of insomnia. This instrument is a self-reported questionnaire consisting of 7 items using a Likert scale, and the total score ranges from 0 to 28. A greater total score reflects greater insomnia

symptoms. A total score of 0-7 indicates no insomnia, 8-14 indicates subthreshold insomnia, 15-21 indicates moderate clinical insomnia, and 22-28 indicates severe clinical insomnia. The Indonesian version of the ISI has satisfactory reliability and validity with an alpha coefficient of 0.88 (Shabrina & Asih SR. 2021).

(iii) Indonesian Version of PTSD Checklist-civilian Version (PCL-C)

PCL-C is used to assess posttraumatic stress symptoms and is a self-reported instrument that reflects the symptoms of PTSD based on the DSM-IV. This questionnaire uses a Likert scale in its assessment, which consists of 5 points, namely 1 = "Not at all", 2 = " A little bit ", 3 = " Moderately ", 4 = " Quite a bit ", 5 = " Extremely" based on the feelings and behaviour of the respondent over the past 4 weeks. The Indonesian version of the PCL-C questionnaire used to assess PTSD symptoms, in all its variables (total, re-experience, avoidance, and hyperarousal) has an alpha value with high reliability (α = 0.71-0.75). This indicates that all items are reliable and the entire test is internally consistent as it has high reliability (Conybeare et al. 2012; LeardMann et al. 2021).

(iv) The Indonesian Version of the Personal Assessment of Intimacy Relationship (PAIR)

PAIR is used to assess intimacy and marital satisfaction using a 36-item measure of relationship intimacy. Respondents answer each item on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). A higher score reflects high intimacy in a relationship. The original version showed a reliability coefficient of Cronbach's alpha = 0.7 and was adapted into the African language with a coefficient of 0.76 (Abamara et al. 2018). The scale has been translated into Bahasa Indonesia, revealing a Cronbach alpha reliability coefficient of 0.72 and a Split-half Spearman-Brown reliability coefficient of 0.66, indicating moderate to good reliability.

Procedure

The targeted population was the general population, with inclusion criteria being those who claimed to be married and have a history of being/having been infected with COVID-19. This study has had Ethical Approval Number LB.02.01/X.6.5/337/2021. Participants who agreed and were willing to participate in the study later filled out an electronic informed consent form using a Google form. After that, data were collected using an electronic questionnaire, and data processing from the completed questionnaires using a descriptive data analysis design using the SPSS v25.0 program to present the study results.

Data Analysis

The analysis began by testing the normality of the data for the independent variables (stress, anxiety symptoms, depression, trauma, insomnia) and the dependent variable marital intimacy, using the Kolmogorov-

Smirnov method. The value of $p < 0.05$ was obtained, so it can be said that the data were not normally distributed. The data were then analysed using Pearson correlation and multiple linear regression with SPSS.

RESULTS

The total number of respondents was 930 people, with the mean age (SD) of the subjects was 42.81 (10.20) with median (interquartile range) of 40 (14.25) with percentile Q1=35 and percentile Q13=49.25. Most characteristics described were female 562 (60%), with an education background in D4-S1 440 (47.3%), employed status working 722 (78%), had no change income 514 (55.5%), and no history of COVID infection 51%.

The descriptive statistics for psychiatric symptoms and intimacy showed a range of scores, with anxiety (mean of 5.29), depression (mean of 4.44), stress (mean of 4.38), insomnia (mean of 6.74), and trauma (PTSD) (mean of 25.22). Intimacy mean scores was 39.05 with a standard deviation of 22.384 in Table 1.

TABLE 1: Descriptive statistics of psychiatric symptoms and intimacy

	Mean	Standard Deviation
Anxiety	5.29	6.88
Depression	4.44	6.99
Stress	4.38	4.87
Insomnia	6.74	3.90
Trauma (PTSD)	25.22	11.34
Intimacy	39.05	22.38

The analysis also explored the relationship between demographic factors and intimacy. All demographic variables were found to have significant effects on intimacy scores except COVID-19 infection history. Gender effect was found in female scores being higher than males. Higher education, employment, and increased income were associated with higher intimacy scores (Table 2).

Pearson correlation and multiple linear regression results revealed that psychiatric symptoms were negatively correlated with intimacy. Anxiety, depression, stress, insomnia, and trauma (PTSD) were all significantly correlated with intimacy, with PTSD showing the strongest Correlation ($r = -0.37$). The multiple linear regression model, which included anxiety, depression, stress, insomnia, and trauma (PTSD) as predictors, explained 16.3% of the variance in intimacy scores ($F(5,924) = 35.93$, $p<0.001$). Depression was found to be the most predictive factor among all mental health problems related to intimacy. The unstandardised and standardised regression coefficients (B and Beta) were provided in Table 3.

DISCUSSION

The results of this study show that anxiety, depression, stress, PTSD, and insomnia are associated with the level of intimacy among married couples, *i.e.,* married couples with lower scores on anxiety and depression have higher scores on intimacy. The demographic factors altogether had significant relationships with anxiety

TABLE 2: Descriptive statistics of demographics and in relation to intimacy

Variables	Category	Frequency (%)	Mean (SD)	The test result
Gender	Male Female	368 (40.0) 562 (60.0)	36.88 (21.51) 40.47 (22.85)	$t_{(928)}$=-2.40, p<0.05
COVID-19 infection	No Yes	478 (51.0) 452 (49.0)	38.71 (22.67) 39.40 (22.10)	$t_{(928)}$=-0.47, p>0.05
Education	Junior High Shool Diploma 1-3 Diploma 4- Bachelor Postgraduate	28 (3.0) 134 (11.4) 440 (47.3) 328 (35.3)	24.14 (24.28) 36.12 (21.58) 38.01 (22.90) 42.90 (21.04)	$F_{(3,926)}$= 8.67, p<0.001
Employment status	Not working Employed Self-employed	92 (10.0) 722 (78.0) 102 (12.0)	30.70 (27.79) 40.27 (21.02) 38.12 (24.52)	$F_{(2,913)}$= 7.69, p<0.001
Income status	No income Decreased No change Increased	52 (5.6) 252 (27.2) 514 (55.5) 108 (11.7)	24.62 (32.29) 36.96 (20.40) 40.32 (22.10) 43.87 (19.18)	$F_{(3,922)}$ = 10.48, p<0.001
Age	Pearson correlation coefficient (r)=0.05, p>005			

in the educational environment during the COVID-19 pandemic. There was a strong relationship between demographic characteristics and the incidence of mental health problems during the pandemic. It is suggested that women, school-age communities, or the unemployed community need to be supported to alleviate the impact of COVID-19 on anxiety through several programs (Triastuti & Herawati 2024).

Couples with better intimacy will feel loved and cared for, have better emotional well-being, reduce depression and anxiety, and increase psychological resources such as self-esteem, mastery, and self-confidence (Serapinas & Narbekovas 2022). On the other hand, studies measure anxiety, depression, anger/hostility, and relationship quality of married couples, that if there is anxiety in one partner, it will affect their intimate relationships (Musa et al. 2014).

TABLE 3: Pearson correlation and multiple linear regression results

Psychiatric symptoms	Intimacy				
	r	B	Beta	R square (multiple)	F Anova
(Constant)		55.65**			
Anxiety	-0.28**	0.44	0.13*		
Depression	-0.35**	-0.74	-0.23**	16.3%	$F_{(5,924)}$= 35.93, p<0.001
Stress	-0.29**	0.08	0.02		
Insomnia	-0.32**	-0.87	-0.15**		
Trauma (PTSD)	-0.37**	-0.40	-0.20**		

Note: **=Correlation (r) and Beta are significant at the 0.01 level (2-tailed), *=Correlation (r) and Beta are significant at the 0.05 level (2-tailed)r= Pearson correlation coefficient, B= Unstandardised regression Coefficients, Beta= Standardised regression Coefficients

The spouse's anxiety was negatively related to their relationship quality, and husbands' anger was positively related to their wives' anxiety (Zaider et al. 2010). The relationship between psychiatric symptoms and intimacy can be due to several factors and mechanisms. Anxiety, depression and trauma can lead to decreased sexual libido, which can affect the frequency and quality of marital intimacy. Insomnia, anxiety and depression can cause erectile dysfunction in men, which can lead to difficulty in achieving or maintaining an erection during sexual activity. Trauma and anxiety can cause vaginismus in women, which is a condition where the muscles around the vagina contract involuntarily, making penetration painful or impossible (Kadir et al. 2018). Anxiety, depression and trauma can make it difficult for couples to communicate effectively, which can lead to misunderstandings and conflicts that can affect intimacy. Depression and trauma can lead to emotional numbness or detachment, which can make it difficult for couples to connect and feel close to each other emotionally. Insomnia can lead to fatigue and irritability, which can affect one's mood and desire for intimacy (Joseph et al. 2021).

The impact of PTSD symptom severity on emotional reactions to intimacy in married couples was associated with decreased anger, guilt and sadness between them. Acceptance of intimacy was associated with increased negative emotions in individuals with elevated PTSD symptoms, while providing intimacy was associated with decreased negative emotions. These findings suggested that treatments should consider the emotional context of intimacy provision and acceptance in couple-based interventions for PTSD (Leifker et al. 2015).

According to recent studies, disturbed sleep quality and sleep disorders affect various aspects of human health, including sexual function. The most common sleep problems associated with significant contributors to sexual dysfunction include obstructive sleep apnea, chronic insomnia, shift work disorder and narcolepsy (Agrawal et al. 2022; Pigeon et al. 2023). Sexual activity correlates with better sleep, lower anxiety and lower scores on PTSD psychopathology. The severity of insomnia was negatively correlated with sexual satisfaction ($r = 0.22$, $p<.001$), and the presence of insomnia was associated with higher rates of sexual dysfunction in women (53.8% vs 31.8%; $p<.001$) and men (22.7% vs 12.5%; $p = .036$). In regression analyses by Pigeon et al. (2023), after accounting for depression and anxiety, insomnia had a significant association with sexual function for women ($\beta = 0.12$; $p<.01$) but not for men ($\beta = 0.11$; $p = .60$) (Pigeon et al. 2023).

Changes in sexual expression during the pandemic include a marked decline in quality of life, reduced physical contact, and the rise of virtual or digital access to the expression of sexual functioning. This emphasises the need for mental health professionals to understand the dynamic interplay between sexual factors and psychological well-being

on quality of life. The timeless human need for intimacy and connection is meaningful and stable despite the threatening factors and uncertainty caused by conditions like the pandemic (Mourikis 2023).

Sexual satisfaction and quality of sexual life were found to be significantly related to the level of intimacy. A Chinese study on couples aged 18-44 years with a high level of education and working or studying at home during the COVID-19 pandemic found about 43.3% of participants reported a decrease in the frequency of sexual interactions, and 25% experienced a decrease in sexual desire. Family functioning also plays an important role in a couple's intimacy, with family dysfunction becoming aggravated during the pandemic. The independent contribution of sociodemographic factors to intimacy was 13.0%, sexual behavior factors 38.2%, and family functioning was 48.8%., respectively (Feng et al. 2021). This is consistent with the results from this study, *i.e.,* that intimacy during the COVID-19 pandemic was affected by age, gender, education level, occupation, and income.

Torres-Cruz et al. (2022) examined attachment style and its relationship with sexual self-esteem during the COVID-19 pandemic. COVID-19 has caused changes in the way couples relate to each other, either intimately or sexually, around the world. Some of them found improvements and others an increase in sexual nonjudgements. Torres-Cruz et al. (2022) examined a retrospective pre-post approach in evaluating 120 men and 89 women who were part of a couple during the pandemic in Spain and completed an online survey. The respondents reported their sexual attachment during the de-escalation months, from May 9th until July 1st, 2020, and found that the pandemic confinement had a negative effect on sexual function.

Interestingly, there were different variations in the impact of the pandemic on intimacy from the qualitative analysis of Filisetti et al. (2022). Couples who were newly together during the pandemic reported increased sexual desire, sexual frequency, and quality of sexual intercourse, as well as sexual intimacy. The lack of stress and fear of contagion, together with the intense euphoric state in the early phase of the relationship, may have allowed couples to overcome the barriers posed by lockdown and contributed to the early development of intimacy. Filisetti et al. (2022) suggest that negative changes in relationships are predicted by worsening mental health conditions. On the other hand, engaging in joint activities, constructive communication and autonomy balance were protective factors for mental health and relationship quality (Filisetti et al. 2022). Studies on Australian families during the COVID-19 pandemic have had varying effects on intimacy. Some families reported increased stress and strain on their relationships, with comments about separation or divorce. Pandemic-related stressors exacerbated existing relationship difficulties, and mental health issues made it more difficult to maintain relationship intimacy. However, it is important to note that not all

families experience negative impacts on intimacy. Some families found opportunities for growth in connection and intimacy in the face of challenges, and restrictions resulted in more quality time together for some families (Evans et al. 2022).

The strength of the study was it had a sizeable sample size, and we were using validated questionnaires to assess sexual functioning and sexual intimacy. The limitation of the study was that we only assessed correlation and prediction, and we cannot imply causative factors, *i.e.,* which causes what, whether the psychological disorder causes sexual dysfunction or vice-versa. Due to these factors, we cannot generalise our findings in clinical practice. Besides, using an online survey and self-reported questionnaire had the disadvantage of a recall bias.

The results of this study indicated that there was an association between symptoms of anxiety, depression, trauma and insomnia with intimacy in married couples. The findings of this study are clinically important, as they improve the understanding of the challenges experienced by couples during the pandemic, as well as the vital role of good mental health in improving the intimacy of married couples. It is crucial for couples experiencing these mental health issues to seek professional help and support. Marital sessions and couples therapy can be helpful tools to address the problems of intimacy and improve communication between partners (Musa et al. 2014).

CONCLUSION

Psychological help, psychotherapy and medication can be effective treatments for anxiety, depression, trauma and insomnia. It is also important for couples to prioritise self-care, such as getting enough sleep, exercising regularly and eating a healthy diet to improve overall mental and physical health. These strategies should be incorporated into the ongoing governmental aspirations to improve overall mental health conditions among the Indonesian population, such as primary prevention (early diagnosis) and early treatment for mental health problems.

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