Mediating Role of Infidelity-Related Posttraumatic Symptoms in The Relationship Between Forgiveness and Psychological Health Concerns

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Abstract: Infidelity is one of the most common concerns in romantic relationships and is deemed morally unacceptable. Such events can be disruptive and may lead to negative consequences on the well-being of betrayed individuals. This study examined the prevalence of infidelity-related posttraumatic symptoms and psychological health concerns (i.e., depression, anxiety, stress) among young adults who experienced infidelity by their partners. It also investigated whether forgiveness reduces the likelihood of psychological health concerns through lower levels of infidelity-related posttraumatic symptoms. It utilized a cross-sectional, predictive nonexperimental quantitative research design with n= 162 young adults, ages 19 – 40, who experienced being betrayed in a romantic relationship. The results showed that most of the respondents (93.21%) exceeded the cut-off score for probable post-traumatic stress disorder (PTSD), have severe depressive symptoms, anxiety symptoms, and stress. The respondents in this study reported a moderate degree of forgiveness. While controlling demographics and relationship history, the partial least squares structural equation modeling analysis showed that high degree of forgiveness tends to decrease psychological health concerns through lower levels of infidelity-related posttraumatic symptoms. The findings of this study highlighted the role of forgiveness in mental health outcomes which may lead to psychotherapeutic approaches incorporating this construct.

Keywords: infidelity; forgiveness; mental health; post-traumatic stress disorder; pls-sem

Abstrak: Perselingkuhan adalah salah satu kekhawatiran paling umum dalam hubungan romantis dan dianggap tidak dapat diterima secara moral. Peristiwa seperti itu dapat mengganggu dan menimbulkan konsekuensi negatif terhadap kesejahteraan individu yang dikhianati. Studi ini meneliti prevalensi gejala pasca trauma terkait perselingkuhan dan masalah kesehatan psikologis (yaitu depresi, kecemasan, stres) di kalangan dewasa muda yang mengalami perselingkuhan oleh pasangannya. Penelitian ini juga menyelidiki apakah pengampunan mengurangi kemungkinan masalah kesehatan psikologis melalui penurunan tingkat gejala pasca trauma terkait perselingkuhan. Penelitian ini menggunakan desain penelitian kuantitatif non-eksperimental prediktif cross-sectional dengan n= 162 orang dewasa muda, usia 19 – 40 tahun, yang mengalami pengkhianatan dalam hubungan romantis. Hasil penelitian menunjukkan bahwa sebagian besar responden (93,21%) melebihi batas skor probable post-traumatic stress disorder (PTSD),

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memiliki gejala depresi berat, gejala kecemasan, dan stres. Responden dalam penelitian ini melaporkan tingkat pengampunan yang sedang. Selain mengendalikan demografi dan riwayat hubungan, analisis model persamaan struktural kuadrat terkecil menunjukkan bahwa tingkat pengampunan yang tinggi cenderung menurunkan masalah kesehatan psikologis melalui tingkat gejala pascatrauma terkait perselingkuhan yang lebih rendah. Temuan penelitian ini menyoroti peran sikap memaafkan terhadap hasil kesehatan mental yang mungkin mengarah pada pendekatan psikoterapi yang menggabungkan konstruksi ini.

Kata kunci: ketidaksetiaan; pengampunan; kesehatan mental; gangguan stres pasca trauma; pls-sem

Introduction

An ideal romantic relationship is one that is built on trust, mutual respect, and understanding. It is a relationship in which both partners feel loved, supported, and valued. However, even the most ideal relationships can face challenges and become problematic over time. There are many factors that can contribute to the breakdown of a relationship, including communication problems (Gottman & Levenson, 2002), differing values and goals (Lavner et al., 2014), and conflicts over finances (Archuleta, 2013). While these issues can all be difficult to navigate, infidelity is often the most common concern that may instigate breakup (Grøntvedt et al., 2020), may affect negatively the partner's overall emotional well-being (Bozoyan & Schmiedeberg, 2022), and may even be traumatic in some circumstances (Rokach & Chan, 2023).

Infidelity has been defined in a multitude of ways across literature. It involves several activities such as cheating (Thornton & Nagurney, 2011), sexual contact or activity with somebody else than partner, disloyalty, pornography use, and having emotional attachment beyond friendships (Azhar et al., 2018). In addition, several terminologies have been used synonymous to infidelity such as unfaithfulness, extra-marital or extra-relational affairs, extradyadic involvement, and extradyadic sexual involvement (Knopp et al., 2017). Despite the multiple conceptual definitions associated with infidelity, most people would agree that engaging in extra-relational affairs is unacceptable. In fact, the Spring Pew Global Attitudes Survey (2013) showed that the majority of the respondents in each country that they surveyed, including the Philippines, deemed that infidelity or having an affair is morally unacceptable. Infidelity can have devastating effects in a relationship (Moore, 2021), and research suggests that being betrayed/cheated on by a partner can be very stressful (Roos et al., 2019), as well as traumatizing (Curtis et al., 2021; Scuka, 2015; Vossler & Moller, 2014).

Infidelity has been considered as a traumatic event in recent literature (Roos et al., 2021; Roos et al., 2019). Ortman (2005) already conceptualized infidelity as a traumatic event and coined the term "post-infidelity stress disorder (PISD)" due to individuals exhibiting PTSD symptoms after being betrayed by their partners/significant others. Post-infidelity stress disorder (PISD) is still not considered as a recognized condition in the DSM-5 TR despite existing literature. It is described as the extreme stress experienced by individuals after learning that their partners had been unfaithful (Padmavathi et al., 2013). The symptoms of PISD involve fixation on the horror of infidelity, becoming preoccupied with their partner's affairs, avoidance of the reminders of the infidelity event, emotional numbing, irritability, and even heightened anxiety (Ortman, 2005; Padmavathi et al., 2013). Infidelity can be traumatic to those who were

betrayed by their partner and symptoms of PTSD were prevalent among them (Dominguez, 2015; Lonergan et al., 2021; Roos et al., 2021; Roos et al., 2019; Velasquez, 2012). In this study, infidelity-related PTSD symptoms are re-experiencing, avoidance, negative alterations, and hyper-arousal due to infidelity as measured by PTSD Checklist for DSM-5 (PCL-5).

Aside from PTSD symptoms, other psychological health concerns have also been discovered to be prevalent among people who experienced infidelity such as depression, anxiety, and stress (Cano & O'Leary, 2000; Glass & Wright, 2017; Lonergan et al., 2020; Rokach & Philibert-Lignières, 2015; Shrout & Weigel, 2020; Snyder et al., 2012). In this study, psychological health concerns were measured by Depression, Anxiety, and Stress Scale- 21 items (DASS-21)

One variable of interest in the understanding of infidelity is forgiveness. Forgiveness has been conceptualized in various ways and it has been found beneficial to physical health (Witvliet et al., 2015) and mental health (Gençoğlu et al., 2018; Griffin et al., 2015; Webb et al., 2012; Weir, 2017). Following infidelity, forgiveness has been extensively researched as a coping technique in the field of psychology, and studies have indicated that those who practice forgiveness have reduced levels of depression, anxiety, and stress (Enright & Fitzgibbons, 2000). One explanation is that forgiveness helps people to let go of unpleasant feelings like anger and resentment, which can lead to mental health issues (Enright et al., 1998; Enright & Fitzgibbons, 2000). Another reason that forgiveness may reduce depression, stress, and anxiety among individuals who have experienced betrayal is that it can facilitate improved social support and relationship quality (Toussaint et al., 2001). For instance, forgiveness may promote communication and empathy in relationships, leading to stronger social support networks and more pleasant interactions with others in addition, forgiveness can raise sentiments of self-worth and self-esteem, both of which can promote general psychological well-being (Toussaint et al., 2001). Forgiveness also involves letting go of the need to blame or punish others and instead focusing on finding meaning and purpose in life (Enright & Fitzgibbons, 2000). This shift in perspective can help individuals find meaning and purpose in their lives, which can help reduce depression and anxiety (Toussaint et al., 2001). Additionally, forgiveness may also lead to improved emotional regulation and self-esteem, which can further decrease depression (Enright, 1996). The systematic review on man-made traumatic events of Cerci et al. (2018) about the impact of forgiveness on PTSD symptomatology, found that majority of the studies (Bae et al., 2015; Nateghian et al., 2015; Weinberg et al., 2014) in their review reported that higher forgiveness levels were associated with lower PTSD-related symptoms. In the present study, forgiveness refers to the scores in the Heartland Forgiveness Scale composed of three dimensions which are forgiveness of self, forgiveness of others, and forgiveness of situations.

The review of related literature provided valuable information on how the experience of being cheated on can be detrimental to mental health. However, several gaps have been identified from the mentioned studies. First, there was insufficient literature on the prevalence of PTSD symptoms and other psychological health concerns among people who experienced infidelity in the Philippines, suggesting a geographical gap. Only the study of Velasquez (2012) dealt with the impact of infidelity, and it used a qualitative approach, thus, further studies should be conducted to objectively measure PTSD and other psychological health concerns among respondents. In addition, there were also studies linking PTSD with other psychological health concerns (Clift & Maratos, 2020; Goldstein et al., 2017; Herzog et al., 2016; Ozen et al., 2018), yet only one study had been identified linking PTSD with psychological health concerns (i.e., depression, anxiety, stress) in the context of infidelity (Roos et al., 2019), has also been established to improve mental health (Cerci & Colucci, 2018; Griffin et al., 2015; Webb et al.,

2012). However, the result of their studies has yet to be explored in the context of infidelity or being cheated on in a relationship.

Several literatures mentioned that higher levels of PTSD are associated with poorer psychological health (Clift & Maratos, 2020; Goldstein et al., 2017; Herzog et al., 2016; Ozen et al., 2018; Roos et al., 2019), higher levels of forgiveness reduce PTSD symptoms (Cerci & Colucci, 2018; Gençoğlu et al., 2018), and higher levels of forgiveness improved mental health (Griffin et al., 2015; Weir, 2017). Thus, formulating a model on how forgiveness predicts psychological health concerns (i.e., depression, anxiety, stress) among young adults who experienced infidelity was deemed suitable, with post-traumatic stress as its mediator. In the study of Roos et al. (Roos et al., 2019), higher PTSD symptoms predict higher psychological health concerns among respondents (i.e., increased depression, anxiety, and stress). Hence, reducing PTSD symptoms will likely reduce psychological health concerns (i.e., depression, anxiety, stress). Forgiveness has been found in the literature to reduce PTSD symptoms (Cerci & Colucci, 2018; Gençoğlu et al., 2018) and psychological health concerns (Cerci & Colucci, 2018; Griffin et al., 2015; Webb et al., 2012; Weir, 2017).

The present study aims to investigate whether forgiveness is associated with lower levels of psychological health concerns such as depression, anxiety, and stress among young adults who experienced infidelity (See Figure 1). This study is also aimed at investigating whether this association is mediated by PTSD symptoms. Therefore, the following hypotheses are tested in this study:

H1: Forgiveness is significantly associated with psychological health concerns (i.e., depression, anxiety, and stress).

H2: Forgiveness is significantly associated with infidelity-related post-traumatic symptoms.

H3: Infidelity-related post-traumatic symptoms are significantly associated with psychological health concerns.

H4: Infidelity-related posttraumatic symptoms significantly mediate the relationship between forgiveness and psychological health concerns.

Figure 1

The Hypothesized Mediation Model
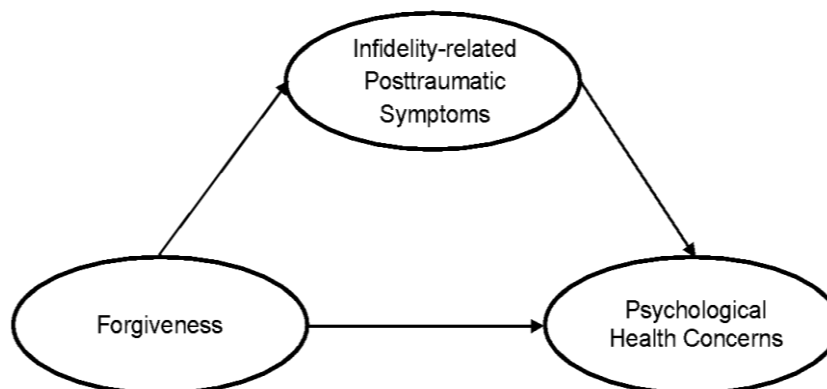
Method

Research Design

This study utilized a cross-sectional, predictive, non-experimental research design, a classification of non-experimental quantitative research suggested by Johnson (2001). In this design, the primary objective was to test relationships among variables without accounting for the cause-and-effect relationship between variables. The second classification, cross-sectional study, indicated that the data was collected from respondents at a single point in time or during a relatively brief period (Johnson, 2001).

Population and Samples

The population of this study were individuals from the Philippines who were 19 to 40 years old and who experienced infidelity or betrayal while being in a serious and committed relationship within the month or so prior to the conduct of the study. The model of Roos et al. (2019) only involved unmarried young adults ages 18 to 24. It was revealed that most studies focused only on married adults, thus, further studies should be conducted among unmarried and married adults to improve its external validity. In addition, in Erik Erikson's Psychosocial Theory, particularly in the Intimacy versus Isolation stage explained that young adulthood generally occurs between ages 19 and 30 (Feist et al., 2021), yet other literature (Mcleod, 2007) indicated that young adulthood takes place at around 18 to 40 years old. In addition, Feist et al. (2021) also stated that for some people, it may be a relatively short time, but others may experience young adulthood for several decades. The intimacy versus isolation stage of Erikson also emphasized that, in this stage, the focus on forming intimate relationships (Feist et al., 2021). People in romantic relationships who experienced insufficient intimacy can be a cause of infidelity where people will find it somewhere else (Rokach & Chan, 2023). Thus, these were regarded as the criteria for the age of the respondents. The consideration in terms of the length of experience (i.e., experienced infidelity more than one month ago) is based on the DSM-5-TR wherein the event must occur more than one month ago to meet the criteria for a probable PTSD (American Psychiatric Association, 2022).

This study included n= 162 young adults in the Philippines, which exceeded the minimum sample size (i.e., n = 160) suggested by Kock and Hadaya (2016) for Partial Least Squares Structural Equation Modeling (PLS-SEM) using the inverse square root method. In addition, post-hoc power analysis using the lowest path coefficient in the model (between 0.21 and 0.30), at 5% significance level, revealed that recommended sample size is n = 69 (Hair et al., 2022). Thus, this study was able to acquire enough respondents for the meaningful interpretation of the results. In addition, investigating infidelity as a traumatic event linked to PTSD symptoms, several factors should also be considered that may contribute to the responses to traumatic events. Roos et al. (2019) mentioned that demographics such as sex may be a confounder, thus, it was considered as a covariate in the study, as well as age and civil status. Relationship history such as length of relationship, time since the discovery of infidelity, with children or with no children, and relationship with the transgressor (i.e., still in a relationship or separated), may also confound the results (Roos et al., 2019), thus, the mentioned factors were controlled in this study. Respondents with annulment cases (i.e., granted, or on-going) were excluded in the study.The demographics and relationship history of the respondents were summarized in Table 1.

Table 1

Demographics and Relationship History of Respondents

Demographics and Relationship History		Frequency (f)	Percent	Mdn
Age	-	-	-	24.00 years
Sex	Female	132	81.48%	-
	Male	30	28.52%	-
Civil Status	Single	154	95.06%	-
	Married	8	4.94%	-
Still in the Relationship with the Offending Partner?	Yes	133	82.10%	-
	No	29	17.90%	-
Married with the Offending Partner?	Yes	9	5.56%	-
	No	153	94.44%	-
Have a child/children with the Offending Partner?	Yes	17	10.49%	-
	No	145	89.51%	-
Time Since the Discovery of Infidelity	-	-	-	11 months
Length of Relationship	-	-	-	24.00 months

Note: Mdn = Median

Research Instrument

This study utilized several questionnaires to achieve its general and specific objectives. Questionnaires were transformed into online forms due to the risk of COVID-19 virus and to ensure the safety of respondents and researchers. The following are the questionnaires that were used to gather responses:

PTSD Checklist for DSM-5 (PCL-5)

The PTSD Checklist for DSM-5 (PCL-5), by Weathers et al. (2013), is a 20-item self-report measure for evaluating PTSD symptoms, using a 5-point Likert scale. It has four subscales: re-experiencing, avoidance, negative alterations, and hyper-arousal. The total score ranges from 0 to 80, with scores between 31 to 33 indicating probable PTSD. The Filipino-translated PCL-5 demonstrated good convergent and discriminant validity, internal consistency, and reliability, with Cronbach's Alpha and Composite Reliability ranging from 0.73 to 0.908.

Depression, Anxiety, and Stress Scale – 21 items (DASS-21)

The Depression, Anxiety and Stress Scale – 21 Items (DASS-21), by Lovibond and Lovibond (1995), is a self-report tool to assess depression, anxiety, and stress levels. It uses a four-point Likert scale and has three subscales: depression, anxiety, and stress. Higher scores indicate higher levels of these conditions. The Filipino-translated DASS-21 demonstrated good convergent and discriminant validity, and the subscales showed good to excellent internal consistency (Cronbach's Alpha and Composite Reliability values between 0.842 and 0.939).

Heartland Forgiveness Scale (HFS)

The Heartland Forgiveness Scale (HFS) is an 18-item self-report questionnaire developed by Thompson and Snyder in 1998 and published in the Positive Psychological

Assessment: A Handbook of Models and Measures in 2003. It measures dispositional forgiveness, consisting of three subscales: forgiveness of self, forgiveness of others, and forgiveness of situations. Respondents use a 7-point Likert scale (1 = "Almost Always False of Me" to 7 = "Almost Always True of Me"). Total HFS scores range from 18 to 126, with higher scores indicating higher forgiveness levels. The Filipino-translated HFS in this study showed good convergent and discriminant validity, excellent internal consistency (Cronbach's Alpha = 0.831, Composite Reliability = 0.900), and acceptable to good internal consistency for its subscales (0.764 to 0.881).

Procedure

This study was granted permission by the Institutional Ethics Review Committee with protocol number DERC-2022-23_1-0030T2, indicating that the study strictly adhered to the ethical standards in conducting psychological research. The research instruments of this study were subjected to Filipino translation and were pilot tested to n = 30 respondents determine if the respondents could clearly comprehend and understand the items of the questionnaires. Research questionnaires were converted into online forms (i.e., Google Forms) and were disseminated via social media platforms (i.e., Facebook, Twitter). Furthermore, the data gathered from pilot testing were used to establish the validity and reliability of the questionnaires/research instruments. Once the psychometric soundness was established, the actual gathering of data then commenced. Informed consents were acquired from respondents before answering the questionnaires and they were not forced by the researcher to answer the online forms. In addition, the online forms also consisted of a narrative indicating the name of the researcher, title of the study, goals and objectives of the study, and significance of the study.

The researchers prepared the online forms to be readily given to the respondents. A link was shared via social media platforms (e.g., Facebook, Twitter) where respondents who were willing to answer the form can readily access it if they meet the criteria indicated in the advertisement. Respondents were recruited through convenience sampling and a sample size of n = 160 was suggested to be able to analyze the data using the Partial Least Squares Structural Equation Modeling (PLS-SEM). When the minimum sample size was reached, the provided spreadsheet in the online form was downloaded and underwent data cleaning (i.e., checking for typographical errors, duplicate responses, and missing data. Once cleaned, the data were imported to Jeffrey's Amazing Statistics Program (JASP) software to compute for descriptive statistics (i.e., central tendency, variability, skewness, kurtosis, correlation). To determine the relationships among latent constructs, a Partial Least Squares Structural Equation Modeling (PLS-SEM) using the SmartPLS 4 (Ringle et al., 2022) software was employed, and undergoes a two-step approach where measurement model and structural model were evaluated. Bootstrapping with 10,000 samples (as suggested by Hair et al., 2022) was performed using the SmartPLS 4 to obtain the standardized path coefficients, standard error, and t values, to evaluate the significance of each hypothesized relationship. In addition, the SmartPLS 4's PROCESS module (Hayes, 2018) was used to evaluate the mediation model while accounting for the possible influence of the covariates included in the study.

Result

Results of this study showed that 151 out of 162 respondents (93.21%) met or exceeded the cut-off score for probable PTSD of 33. Symptoms such as re-experiencing (M = 11.97, SD = 4.63), avoidance (M = 5.06, SD = 2.12), negative alterations (M = 16.10, SD = 6.48), and hyper-arousal (M = 13.48, SD = 5.67) were found to be common among the selected young adults who experienced infidelity. Psychological health concerns such as depression, anxiety, and stress

were also revealed to be prevalent among the respondents such as having severe depression (*M* = 21.44, *SD* = 10.60) and stress (*M* = 25.75, *SD* = 11.50), and extremely severe anxiety (*M* = 21.00, *SD* = 10.82). Additionally, most of the young adults in this study who have experienced infidelity (67.28%) were uncertain of forgiving oneself, (*M* = 27.30, *SD* = 5.86), others (*M* = 26.70, *SD* = 6.99), and uncontrollable conditions (*M* = 26.29, *SD* = 6.79).

Assessment of Measurement Model

To assess the reliability and validity of the reflective-reflective higher order-component of the measurement model, we calculated the outer loadings, internal consistency/reliability (i.e., Cronbach's Alpha and Composite Reliability; see Table 2), convergent validity (i.e., Average Variance Extracted (AVE), see Table 2) and discriminant validity (i.e., Fornell-Larcker Criterion; see Table 3, Heterotrait-Monotrait (HTMT) Ratio; see Table 4) for the measurement scales. Outer loadings were found to be exceeding the minimum acceptable value of 0.708, internal consistency such as Cronbach's Alpha and Composite Reliability were greater than the recommended value of 0.700, and AVEs were higher than the recommended value of 0.50 (Hair et al., 2022). On the other hand, discriminant validity as evaluated by Fornell-Larcker Criterion (Fornell & Larcker, 1981; as mentioned by Hair et al., 2022) showed that all the square root of AVEs for the construct were higher than their correlation with all other constructs (see Table 3). In addition, HTMT ratio were less than the threshold of 0.90 (Hair et al., 2022) good discriminant validity (see Table 4)

Table 2
Higher Order Constructs' Reliability and Convergent Validity

HOC	LOC	Outer Loadings	Cronbach's Alpha	CR	AVE
Forgiveness	Self	0.875			
	Others	0.652	0.743	0.807	0.659
	Situation	0.887			
Infidelity-related Posttraumatic Symptoms	Re-experiencing	0.868			
	Avoidance	0.751	0.875	0.895	0.728
	Negative Alterations	0.908			
	Hyper-arousal	0.878			
Psychological Health Concerns	Depression	0.875			
	Anxiety	0.880	0.879	0.886	0.805
	Stress	0.935			

Note: HOC – Higher-order Construct; LOC – Lower-order Construct; CR – Composite Reliability; AVE – Average Variance Extracted

Table 3

Discriminant Validity - Fornell-Larcker Criterion for HOCs

Construct	Forgiveness	Infidelity-related Posttraumatic Symptoms	Psychological Health Concerns
Forgiveness	**0.812**		
Infidelity-related Posttraumatic Symptoms	-0.640	**0.853**	
Psychological Health Concerns	-0.628	0.782	**0.897**

Note:The square roots of AVE values are shown on the diagonals and printed in boldface. Non-diagonal elements are the latent variable correlation.

Table 4

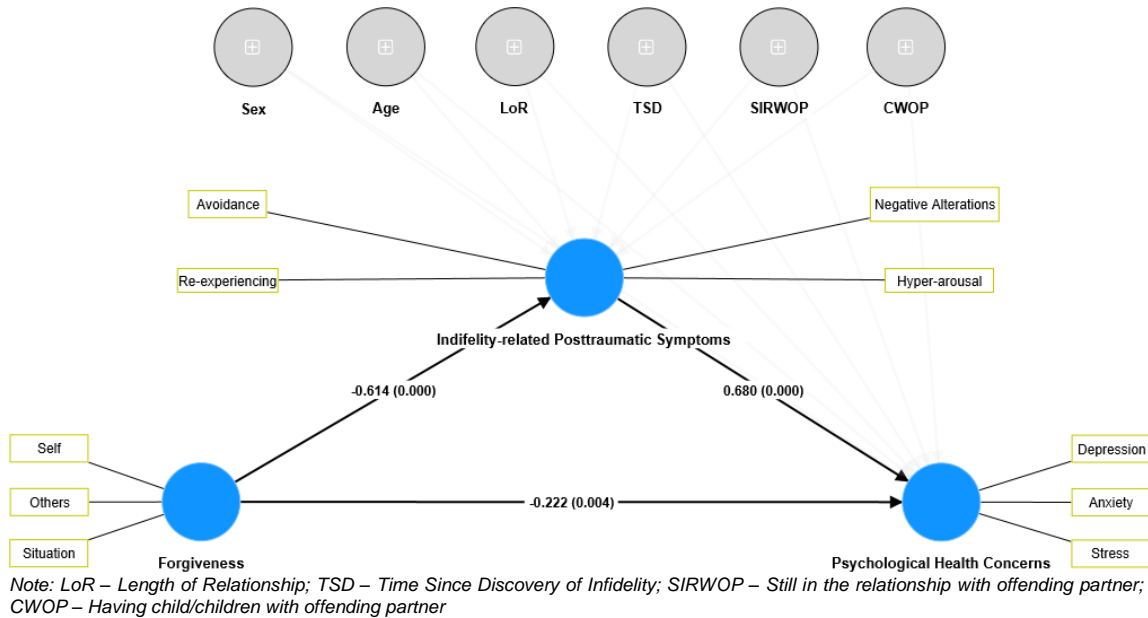*Discriminant Validity - HTMT Ratio of Correlation for HOCs*

Construct	Forgiveness	Infidelity-related Posttraumatic Symptoms	Psychological Health Concerns
Forgiveness	-		
Infidelity-related Posttraumatic Symptoms	0.763	-	
Psychological Health Concerns	0.743	0.873	-

Note: HTMT ratio of < 0.90 suggest good discriminant validity; < 0.85 suggest best discriminant validity

Assessment of Structural Model

As shown in Figure 1, forgiveness has a significant inverse relationship with psychological health concerns (β = -0.216, t = 3.144, p = .002) indicating that an increase in forgiveness tends to decrease psychological health concerns (i.e., depression, anxiety, and stress), hence H1 was accepted. The result of the present study also failed to reject H2, forgiveness also showed a significant negative relationship with infidelity-related posttraumatic symptoms (β = -0.640, t = 14.307, p< .001), which suggests that an increase in forgiveness tend to decrease infidelity-related posttraumatic symptoms. H3 was also accepted as infidelity-related posttraumatic symptoms showed a significant positive relationship with psychological health concerns (β = 0.644, t = 10.756, p< .001), indicating that an increase in infidelity-related posttraumatic symptoms tends to increase psychological health concerns among the respondents. Forgiveness was also revealed to have a significant indirect effect on psychological health concerns through lower levels of infidelity-related posttraumatic symptoms (β = -0.412, t = 8.729, p< .001), accepting H4. Specifically, forgiveness tends to decrease infidelity-related posttraumatic symptoms, thus decreasing the possible occurrence of psychological health concerns among the respondents. Infidelity-related posttraumatic symptoms, in this study, partially mediates the relationship between forgiveness and psychological health concerns, while controlling for demographic variables and relationship history variables (see Figure 2).

Figure 2
The Tested Mediation Model of The Study

Note: LoR – Length of Relationship; TSD – Time Since Discovery of Infidelity; SIRWOP – Still in the relationship with offending partner; CWOP – Having child/children with offending partner

Explanatory Power of the Mediation Model

Table 5
Explanatory Power of the Mediation Model with Covariates

Predictor	Outcome	*R* Square	*f* Square
Forgiveness	Infidelity-related Posttraumatic Symptoms	0.505	1.021
Forgiveness	Psychological Health Concerns	0.627	0.110
Infidelity-related Posttraumatic Symptoms			0.713

Note: R^2 = 0.02 (small); R^2 = 0.13 (moderate); R^2 = 0.26 (substantial)
  f^2= 0.02 (small); f^2= 0.15 (moderate); f^2= 0.35 (large)

The coefficient of determination (R^2) was also evaluated for infidelity-related posttraumatic symptoms and psychological health concerns when the demographic characteristics and relationship history variables were controlled in the model (see Table 5). The covariates entered in the model were sex, age, length of relationship, time since discovery of infidelity, whether the respondent is still in the relationship with the offending partner, and whether the respondent has a child/ children with the offending partner. Infidelity-related posttraumatic symptoms showed an R^2 = 0.505 indicating that 50.5% of its variance can be explained by the latent construct, forgiveness. On the other hand, psychological health concerns construct showed an R^2 = 0.627 indicating that 62.7% of its variance can be explained

by forgiveness and infidelity-related posttraumatic symptoms latent constructs. The values of R^2 in the mediation model with covariates is above 0.26 indicating that the model's explanatory power is substantial.

Discussion

Infidelity is a common issue in many romantic relationships. It can have a devastating impact on those who experience it and can lead to various negative outcomes. The purpose of this study was to gain a better understanding on the impact of forgiveness on infidelity-related posttraumatic symptoms and psychological health concerns such as depression, anxiety, and stress of young adults. It also aimed to identify whether infidelity-related post-traumatic symptoms mediate the relationship between forgiveness and psychological health concerns.

Results of the present study showed a high prevalence rate (93.61%) of probable PTSD among young adults who experienced infidelity. In addition, symptoms such as avoidance, hyper-arousal, re-experiencing, and negative alterations in mood and cognition were prominent among the respondents. Examples of these symptoms include having repeated, disturbing, and unwanted memories of the betrayal experience, feeling upset when something reminded them of the betrayal experience, avoiding external reminders of the betrayal experience, irritable behavior, feeling jumpy or easily startled, and being super alert or watchful. These results were consistent with the previous research that infidelity may lead to various PTSD symptoms. For instance, re-experiencing can be in the form of flashbacks and/or intrusive images of infidelity (Warach et al., 2018), persistent intrusive thoughts and memories about the betrayal event (Lonergan et al., 2020), and persistent rumination about the infidelity (Dean & Bergner, 2018). Avoidance was also revealed among the respondents which is consistent with previous literature where avoidance of the reminders of the betrayal of events (Lonergan et al., 2020; Padmavathi et al., 2013) was discovered to be common among individuals who experience infidelity. Hyper-arousal and negative alterations were also identified parallel with the previous literature where individuals who experienced infidelity became hypervigilant resulting from fear that the betrayal would occur again (Lonergan et al., 2020), having elevated anxiety (Warach et al., 2018), and having intense emotional instability (Dean & Bergner, 2018).

As revealed in this present study, infidelity is highlighted as a highly traumatic experience and can be a risk factor for PTSD. It can have profound and long-lasting effects on an individual's mental health and could affect them in the long run. In addition, the presence of various symptoms parallel to PTSD such as avoidance, hyper-arousal, re-experiencing, and negative alterations may interfere with an individual's ability to function effectively in their daily life, including their ability to form and maintain healthy romantic relationships. Infidelity can be a major source of relationship distress that may erode relationship satisfaction in both partners (Russell et al., 2013). The existence of PTSD symptoms in one or both partners can worsen these challenges that may lead to impairment in relationship functioning (Campbell & Renshaw, 2018). In a clinical perspective, these findings denote that mental health professionals may have to be aware of the possibility of infidelity- causing trauma and PTSD symptoms in their clients. Clinicians working with persons who were victim/s of infidelity may need to be extra cautious in assessing for PTSD symptoms and providing appropriate support and intervention.

The results of this study also showed the prevalence of other psychological health concerns such as depression, anxiety, and stress among young adults following the event of infidelity. This result is consistent with what has been found in previous studies (Glass & Wright, 2017; Lonergan et al., 2020; Rokach & Philibert-Lignières, 2015). In line with this, findings of

the current study highlight the impact of infidelity or betrayal on mental health which should not be ignored. It should be considered that the impact of infidelity on mental health may lead to a range of negative outcomes. For example, if a person is unaware that their depression or anxiety symptoms are caused by their experience of infidelity, they may struggle to identify the source of their distress and receive appropriate intervention. This may lead to long-term emotional suffering and even affect their mental health. Ignoring the impact of betrayal on mental health may also contribute to the development of more significant mental health issues in some situations. Symptoms of depression and anxiety, if left untreated, might lead to more severe conditions, such as major depressive disorder or generalized anxiety disorder.

In a clinical standpoint, the results highlight the relevance of conducting assessment and providing appropriate interventions for individuals who have experienced infidelity. Mental health professionals who work with these populations may have to be mindful of the potential for depression, anxiety, and stress, following the event of infidelity, and may consider evaluating and addressing these issues as part of their treatment plans. Furthermore, the findings also suggest that interventions intended at reducing symptoms of depression, anxiety, and stress may be effective in improving the mental health outcomes of individuals who have experienced infidelity.

In terms of forgiveness, results of this study showed that the majority of the respondents (67.28%) who experienced infidelity are uncertain whether to forgive or not to forgive oneself, others, and uncontrollable situations. For instance, respondents reported that they tend to be uncertain regarding whether to continue to think badly of other people that mistreated them or to let go of negative sentiments. In addition, respondents also indicated that they oftentimes have a hard time accepting oneself after a stressful experience, yet some respondents also reported that they learned from the negative experience and helped them to get over it. The results of this study represent the idea of Fife et al. (2013) that forgiveness is oftentimes considered to be a long and difficult process. Additionally, Squires' (2014) study also reported that victims can let go of the negative motivations that resulted from being betrayed while at the same time deciding not to maintain the relationship. Similarly, Tucker et al. (2015) also stated that despite the presence of forgiveness, one is not necessarily obliged to restore the relationship or to reconcile with the offending partner. Furthermore, Fife et al. (2013) noted that events in daily life may also trigger memories of the betrayal event which may lead to recurring feelings of anger, sadness, resentment, and insecurity. These lingering feelings may act as a hindrance towards forgiveness.

While forgiveness is present, people who had been betrayed in their relationships may still harbor negative thoughts about themselves, others, and uncontrollable situations, according to the findings of this study.

This study also obtained evidence that forgiveness has a significant role in predicting infidelity-related posttraumatic symptoms and other psychological health concerns (i.e., depression, anxiety, stress) among young adults. First, it was revealed that forgiveness tends to decrease other psychological health concerns such as depression, anxiety, and stress. This pattern of results is consistent with previous findings that forgiveness reduces levels of depression, stress, anxiety (Enright & Fitzgibbons, 2000; Gençoğlu et al., 2018; Weir, 2017) because forgiveness helps people to let go of unpleasant feelings (i.e., anger, resentment) that may lead to mental health issues (Enright et al., 1998; Enright & Fitzgibbons, 2000). Additionally, the results of this study were also consistent with previous studies (Bae et al., 2015; Nateghian et al., 2015; Weinberg et al., 2014) that forgiveness has a significant role on PTSD symptoms, that is, higher levels of forgiveness is associated with lower PTSD-related symptoms. Fostering forgiveness, according to Rasmussen et al. (2019), may help reduce PTSD

symptoms due the reduction of negative thoughts, feelings, and behaviors toward the offending partner, as well as the enhancement of positive ones which include compassion, generosity, love, abandoning resentments, and negative judgments.

The findings of this study also showed that higher PTSD symptoms following infidelity were associated with higher levels of other psychological health concerns such as depression, stress, and anxiety. These results were parallel to Roos et al. (2019) study that higher levels of PTSD symptoms were associated with higher depressive symptoms, anxiety, and stress among individuals who experienced infidelity. Several studies explained the connection of PTSD with other psychological health concerns such as the persistent reminders of the event (i.e., seeing the unfaithful person or thinking about betrayal) might elicit painful memories that may lead to heightened sadness and despair. In addition, the study of Padmavathi et al. (2013) also showed how PTSD symptoms may lead to anxiety and stress wherein individuals tend to have preoccupation of the horror of infidelity (i.e., rumination) which was considered a risk factor for the development of stress and anxiety disorders (Nolen-Hoeksema & Morrow, 1991).

Finally, the association between forgiveness and other psychological health concerns was partially mediated by infidelity-related posttraumatic symptoms while controlling for demographic variables and relationship history variables. That is, forgiveness tends to decrease other psychological health concerns (i.e., depression, anxiety, stress) through lower levels of infidelity-related posttraumatic symptoms, regardless of age, sex, length of relationship, time since discovery, having offspring with the offending partner or not, and if the victim was still in a relationship with offending partner or not.

The study's findings underscore the critical role of addressing infidelity-related posttraumatic symptoms through promoting forgiveness to prevent further psychological health concerns. Many participants in the study expressed uncertainty about whether to forgive or not to forgive their offending partners. This uncertainty may explain the high prevalence of infidelity-related PTSD symptoms, depression, anxiety, and stress observed in the study. As the results reveal, a higher degree of forgiveness correlates with a reduction in these psychological concerns. Conversely, holding onto unforgiving attitudes appears to amplify the severity of PTSD symptoms, depression, anxiety, and stress.

The study also found a small effect size in the direct relationship between forgiveness and psychological health concerns, suggesting that forgiveness indirectly mitigates these issues by reducing infidelity-related posttraumatic symptoms. These findings indicate that forgiveness interventions may be a valuable tool for clinicians working with individuals who have experienced infidelity. By addressing PTSD symptoms, clinicians can potentially decrease the risk of other mental health problems such as depression, anxiety, and stress. This underscores the importance of managing PTSD symptoms as a fundamental component of comprehensive treatment plans for this group of clients. By doing so, clinicians may effectively reduce the likelihood of developing additional mental health issues.

While this study may provide insights regarding the interconnectedness among variables (or latent constructs), it is also important to note that it has several strengths and limitations. For instance, this study utilized a relatively large sample size of n = 162 young adults, providing sufficient statistical power to detect small to large effect sizes. Yet, it may have low external validity (i.e., generalizability) due to the utilization of nonprobability sampling techniques (i.e., convenience sampling). In addition, the study only focused on young adults ages 19-40, thus, the results may not be generalizable to other populations or experiences. Future studies may also potentially broaden the age range to improve generalizability. This can provide a more

thorough understanding of the interconnectedness among variables across diverse populations.

This study utilized a second-generation statistical technique which allowed for the exploration of complex models, as well as considering the measurement error in estimating the relationships among constructs. By accounting for measurement errors, PLS-SEM provides accurate estimates of the relationships among constructs and reduces the impact of measurement errors on the estimates of the model's parameters. However, this study employed a nonexperimental approach (i.e., cross-sectional, predictive nonexperimental quantitative design), thus, it confines the study's ability to establish cause-and-effect relationship among variables. Although covariates were included in the study, there may still be other factors not accounted for that could influence the relationships observed among variables.

Future studies may also focus on identifying effective interventions or psychotherapy approaches that encourage forgiveness and attenuate the harmful mental health effects of infidelity-related posttraumatic symptoms in young adults. Researchers may examine other underlying variables that might explain or affect the relationship between forgiveness and psychological health concerns such as social support and resilience, to develop evidence-based interventions that target specific components of forgiveness (e.g., self, others, uncontrollable situations). In addition, identifying the specific aspect of forgiveness that can alleviate infidelity-related posttraumatic symptoms and other psychological health concerns following romantic betrayal may also be explored for future studies.

Lastly, it may be beneficial for future studies to incorporate qualitative data, such as interviews or focus groups, to provide a more in-depth understanding of the experiences and perspectives of the participants who experienced infidelity. This can provide additional context to the quantitative findings and enhance the study's overall validity.

Conclusions

In conclusion, the present study highlights the role of forgiveness in reducing infidelity-related posttraumatic symptoms and other psychological health concerns such as depression, anxiety, and stress among young adults. The present study also points out the mediating role of posttraumatic symptoms in the relationship between forgiveness and psychological health concerns (depression, anxiety, and stress). Implications for counseling, assessment, and forgiveness-based intervention and psychotherapeutic approach were also suggested. Suggestions for future research were also offered.

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