









# Mediation Effects of Premarital Sexual Permissiveness on the Relationship Between Expectations for Marriage and Marital Intention of Vietnamese Undergraduate Students

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**Purpose:** The purpose of this study was to investigate the direct and indirect effects of expectations for marital relationships and premarital sexual permissiveness on intent to marry of Vietnamese emerging adults.

**Patients and Methods:** Our cross-sectional study was focused on emerging adults including 344 participants, undergraduate students from universities in Viet Nam. This study was assessed by using the PLS-SEM approach.

**Results:** The main findings demonstrated that (i) sexual orientation have a significant effect on marital intention; (ii) individuals' expectations for marital relationship have a direct effect on marital intention; and (iii) premarital sexuality permissiveness mediates the relationship between expectations for marital relationship and marital intention.

**Conclusion:** Our results contribute important documents and clearer understanding of emerging adults' expectations and requirements in a relationship for the marriage decision-making process.

**Keywords:** premarital sexual permissiveness, expectations for marriage, marital intention, marriage, sexual orientations

## Introduction

Marriage is a partnership through which men and women build a family and live in a bonded relationship.<sup>1</sup> Civilizational variations in socioeconomic factors such as education, occupation, and urban origins have led to a shift in attitudes regarding marriage in the majority of cultures.<sup>2</sup> Prior to the 20th century, marriage was an important milestone in the traditional Vietnamese family due to how it impacted the extended family and the kin network in addition to how crucial it was to the couple's long-term happiness.<sup>3</sup> However, with the continuous development and change of society, culture and economy, marriage also changes to suit that development. According to the Marriage and Family Law of 1986, a woman must be 18 years old to get married, while a man must be 20. At the present, the mean age of people to get marry was 28.30 for men and 24.05 for women, this result was calculated by General Statistics Office in 2021. This achieved data indicated that the average age of marriage for Vietnamese people is increasing. Significant shifts in the process of forming family, the postponement of marriage, and the precipitous drop in the marriage rate have prompted scientific investigation and public discourse around factors and phenomena associated with marriage. Based on those reasons, marriage is no longer frequently seen as a prerequisite for maturity.<sup>4</sup> There have been dramatic drops in marriage rates and delayed marriage in many Asian and Western nations during the past several decades.<sup>5-7</sup> However, the majority of studies have concentrated on Western nations with less emphasis on the increasing adult population in Asian nations. Marriage traditions in Korea, China, and Vietnam have deep Confucian roots.<sup>8</sup> Confucianism prioritizes the continuation of the family lineage over individual happiness and love sentiments. In countries with a Confucian culture, arranged marriage

was the social norm, and parents frequently made marriage selections for their offspring. The three Asian nations retain traditional Confucian marriage traditions, although their levels of industrialization and economic growth vary considerably.<sup>5</sup> In the industrial economy, the process of becoming an adult has changed a lot, as has the meaning and timing of marriage, and Arnett<sup>9</sup> and Shanahan<sup>10</sup> implied that marriage planners are delaying their entry into marriage as a result of the protracted and less predictable transition to maturity. In addition to young people who tend to delay adulthood through delaying marriage, people with Peter Pan syndrome also have some similar symptoms. Nonetheless, not only did they delay their marriage, but they were also unable to have long-term romantic relationships that led to intention to get married. Quadrio<sup>11</sup> reported that similar to their romantic relationships, men with Peter Pan Syndrome frequently struggle with professional anxiety and other career-related problems. Moreover, people who have Peter Pan Syndrome suffer developing intimate relationships. These individuals are unsatisfied with both themselves and the marriages of their parents, particularly, in the lack of sharing and emotional warmth among family members.<sup>12</sup> This not only effect on young people with Peter Pan Syndrome, but also impact on a numerous other emerging adult. Especially, the decision to get married depends a lot on family context<sup>13</sup> and the parents' marital status.<sup>14</sup> Students from divorced families had more negative attitudes towards marriage than students from intact families.<sup>15</sup> Kithuka<sup>14</sup> also proposed that young people's experiences with parental separation and divorce may make them more hesitant or unwilling to commit to long-term romantic relationships. Moreover, marital conflicts between parents had a significant effect on young adults. This indicates that those who reported witnessing high or moderate parental conflict were less likely to maintain positive attitudes toward marriage.<sup>16</sup> Additionally, religiosity has been demonstrated to influence attitudes about marriage. Kithuka<sup>14</sup> stated that young adults' intentions to marry are also affected by their religious affiliation and how they perceive the influence of religion on their decisions. Sigalow, Shain, Bergey<sup>17</sup> also discovered that those who responded that religion/faith was extremely important to them said that their religious beliefs had a 64.7% impact on their decision about whether to marry and who to marry. Since making and changing meaning starts long before marriage, it makes sense to study factors that affect the intention to get married during young adulthood, when marriage (as a near or somewhat distant goal) is especially important to most young adults.

## Expectations for Marriage and Marital Intention

Expectations are vital in the establishment of a relationship as they can be used as a guide to manage the interaction between partners.<sup>18</sup> Moreover, individuals can utilize expectations to enlighten and assist them in interpreting interpersonal information and determining future interactions.<sup>19</sup> Physical and mental health and the formation of intimate relationships are significantly influenced by marital expectations. Expectations consist of the roles that couples deem proper for marriage and the effectiveness or success of their views about marriage.<sup>20</sup> Age, ethnicity, gender, religion, marital status, and relationship experiences can all have a significant impact in the expectations of marriage, according to Park, Rosén.<sup>21</sup>

The other issue that receives considerable research is the intention to marry. Intentions are defined by a behavioral component; moreover, intentions may be considered as a specific expression of beliefs in which the individual is typically the object and behavior is the feature.<sup>22</sup> Ajzen<sup>23</sup> asserted that our behavior may be predicted by the combination of our attitudes and expectations, since they construct our intentions.<sup>14</sup> Marital expectations are perspectives of marriage, family responsibilities, and relationships that affect one's own and others' behavior.<sup>24</sup> Common marital expectations may involve trust, value systems, satisfaction, sexual intimacy, psychological support, respect, money, romance, commitment, faithfulness, communication, and procreation.<sup>21,25</sup>

The financial side of marriage may have an impact on our decision to get married. Korean men over 25 who were not financially stable were more likely to stay single and have negative intention to marry.<sup>25</sup> For Korean women between the ages of 25 and 29, a household income of at least 6 million won enhanced the probability that they had positive instead of neutral marital intentions.<sup>25</sup> Communication is another potentially influential aspect of marriage. Communication aids couples in establishing positive interactions with others, fostering a comforting environment, and preventing improper behaviors.<sup>26</sup> According to several studies, trust and commitment are also play a vital role in marriage decision. Lack of commitment and trust might explain the lower proportion of marriages among online daters compared to romantic partnerships.<sup>27</sup> Life satisfaction also contributes to people's intention to marry. In terms of marriage intentions, those who rated their lives as less satisfying and less healthy were more likely to belong to the neutral or negative groups than the positive group.<sup>25</sup> People can have healthy,

reasonable expectations about marriage, which can lead to a happy marriage, or unhealthy, misleading, unrealistic expectations, which can lead to a bad marital experience.<sup>14</sup>

## Premarital Sexual Permissiveness and Marital Intention

Sexual permissiveness is thought to be associated with marital intentions.<sup>28</sup> Carroll, Willoughby, Badger, Nelson, McNamara Barry, Madsen<sup>28</sup> also indicated that emerging adult male participants who thought that career and educational pursuits before marriage were of greater importance were substantially related to greater sexual permissiveness, whereas those who aspired to be currently married had considerably lower sexual permissiveness. There may be a relationship between premarital sexual activity and changes in marriage views.<sup>28</sup> Young people who participate in sexual activity are more motivated to search marriage and put a greater value on it.<sup>29,30</sup> In addition, emerging adults with higher rates of sexual encounter were more likely to consider that experience of sex and cohabitation are key indicators of eligibility for marriage.<sup>31</sup> It is plausible that young adults who participate in premarital sex maintain varied attitudes and expectations regarding the prerequisites for marriage readiness. In light with that, people who have indulged in premarital sex may use alternative criteria for assessing possible marriage partners and have different expectations surrounding their relationships with significant others. Traditional Confucian ideals, which are deeply ingrained in the cultures of China, Vietnam, and Korea, prohibit premarital sexual activity; nonetheless, young people's sexual attitudes and behaviors in these countries are rapidly evolving.<sup>32</sup> In 2009, a nationally representative research undertaken in China revealed that 22.4% of 15–24-year-olds had engaged in sexual activity. According to two Taiwan Youth Surveys undertaken in 2004 and 2007, 22% of never-married 20-year-olds had engaged in sexual activity.<sup>33</sup> Comparing Vietnam to surrounding nations and areas, a number of research have revealed that the prevalence of premarital sexual activity among adolescents in Vietnam is lower yet more dangerous than in nearby countries and regions. Depending on their sexual behavior, cohabitation, and life experience, they may also pursue different paths toward marriage.<sup>31</sup> Likewise, sexual fulfillment correlates strongly with relationship quality.<sup>34</sup> People assess their relationships by comparing the perceived relationship fruits against the perceived relationship expenses, with sexual fulfillment being one of the perceived relationship fruits.<sup>35</sup> In contrast, there was a negative correlation between singles' sexual satisfaction and their ambition to settle down, indicating that singles with more sexual satisfaction were more likely to have less yearning to get married.<sup>27</sup> Besides, the prevalence of sexual behaviors was not associated to marital desire.<sup>27</sup> Experiencing coital during the period of romantic love with the intention of getting married is one of the crucial criteria. Nevertheless, not only is sex essential in the process of falling in love, but sexual experiences throughout marriage are also crucial in preserving and fostering a long-lasting marriage. In particular, Laumann, Gagnon, Michael, Michaels<sup>36</sup> discovered that 88% of the sample's married respondents were either extremely or very physically satisfied with their relationship. Christopher, Sprecher<sup>37</sup> also claimed that sexually unsatisfied couples may be more prone to divorce in the early stages of their marriage than sexually satisfied couples. Although the preceding research suggested that premarital sexual factors may play a vital role in marriage and marriage intention, no study has explicitly examined this relationship to our knowledge. Therefore, formal investigation of the influence of premarital sexual permissiveness on the relationship between expectation for marriage and marital intention is needed.

Considering all past data, some questions were provided in this study as follows:

What are the relationships between Expectations for Marriage and Marital Intention?

What factors influence Marital Intention in Vietnamese emerging adults?

Does Premarital Sexual Permissiveness mediate the relationship between Expectations for Marriage and Marital Intention?

## Materials and Methods

### Research Hypothesis

This study used a cross-sectional study to investigate predictors of Marital Intention among emerging adults in Vietnam.

Hypothesis 1: Heterosexuality would be more likely to have higher Marital Intention than other sexual orientation.

Hypothesis 2: Expectations for Marriage and Premarital Sexual Permissiveness would be predictors of Marital Intention.

Hypothesis 3: Premarital Sexual Permissiveness would mediate the relationship between Expectations for Marriage and Marital Intention.

## Procedure

Our cross-sectional study was focused on emerging adults who are undergraduate students from universities in Viet Nam. Hence, we chose convenience snowball sampling via online survey to be our sampling technique due to its advantages. The data collection occurred in three weeks, from April 2022 to May 2022. Informed consent was provided, and anonymity confidentiality terms were explained before participants; participants' obligations and right to withdraw from the study was detailed in the information sheet. For the questionnaires, the participants were asked to provide socio-demographic information, including gender, age, religious, relationship status; family-related information involving family type, marital status of caregiver, and sexual orientation.

The item from questionnaire were generated from 3 scales, which are Intent to Marry Scale (ITM), Aspect of Marriage Scale (AOM) and Premarital Sexual Permissiveness Scale (PSS). Cross-cultural adaptation was performed of items from three scales into Vietnamese following the classic methodology proposed by Epstein, Santo, Guillemin;<sup>38</sup> translation into Vietnamese by four translators, expert panel for the selection of the best of the four translations for each item and Likert scale response descriptors, back translation of the preliminary version into English, and aspect validity study by a new bilingual expert.

## Participants

The study sample size was determined based on the suggestion that using 100 to 200 samples is a good starting point for studies related to path estimation analysis, especially for structural equation model.<sup>39,40</sup> Therefore, our study distributed a total of 403 questionnaires. The data is next screened and cleaned in accordance with Osborne<sup>41</sup> to reduce common method, in which eliminated criteria are outlier, suspicious response patterns. The suspicious response patterns would be determined by whether the answers fall into the following categories: alignment marks, order markings, and inconsistent responses compared to the reverse item. A total sample of 344 were valid. The samples were considered to be homogenous.

## Ethical Aspects

The present study adhered to the Declaration of Helsinki regarding research on human participants. The study was approved by the Ethic Committee of the Department of Science and Technology - Ho Chi Minh City University of Education (under the Vietnamese MoET) with number CS.2018.19.47.

## Measurement

### The Intent to Marry Scale

The Intent to Marry Scale<sup>21</sup> is a unidimensional scale used to reflect a positive attitude toward intent to marriage. This scale contained 3 self-reported items and the third item was reverse scoring (Eg: "I intend to get married someday"). All items are rated on Likert - 7, from 1 (strongly disagree) to 7 (strongly agree). The scale was well developed with acceptable fit indices (CFI = 1.00, RMSEA = 0.00, TLI = 1.00), excellent factor loadings (0.91 to 0.81) and good reliability ( $\alpha = 0.91$ ).<sup>21</sup>

### The Aspects of Marriage Scale

The Aspects of Marriage Scale<sup>21</sup> used to measure expectation to six different aspects of marriage including romance, respect, trust, finances, meaning and physical intimacy. These factors assess the belief that romance, fidelity and communication, trust and commitment, financial stability, and holding shared values are important aspects of a successful marriage. This scale contained 23 self-reported items (Eg: "Having a sense of personal fulfillment is important for a good marriage."). All items are rated on Likert - 7, from 1 (strongly disagree) to 7 (strongly agree). The scale was well developed with good fit indices (CFI = 0.93, TLI = 0.92, RMSEA = 0.07, SRMR = 0.05,  $\chi^2(215) = 723.34$ ,  $p < 0.001$ ), acceptable standardized loadings (0.65 to 0.92) and good reliability for all factors ( $\alpha = 0.80$  to  $\alpha = 0.92$ ).

## The Premarital Sexual Permissiveness Scale

The Premarital Sexual Permissiveness Scale<sup>42</sup> measured the degree of sexual permissiveness basing on different premarital sexual standards of respondents. Originally, the scale contained 12 items and had two standards, one for male and one for female. The Premarital Sexual Permissiveness Scale based on three sexual behaviors: kissing, petting, full sexual and four levels of relationship: no affection, strong affection, in love, and engaged. Our study used the short form developed by Schwartz, Reiss.<sup>43</sup> This version has been proved to have many advantages to the former and to qualify Guttman scalability criteria with Guttman scalability criteria: CR was 0.99, CS was 0.93, and MMR was 0.79<sup>43</sup>. All items were rated on Guttman scale, from 1 (Strongly disagree) to 6 (Strongly agree). The following is an example item: "I believe that premarital sexual intercourse is acceptable if one is in a love relationship".

## Research Analysis

The data cleansing and coding process were done in Excel. The descriptive analysis of univariate and bivariate data was conducted to describe participants' characteristics and distribution of variables among groups. To evaluate the differences of ITM among groups with independent characteristics, parametric and non-parametric statistical tools were applied based on the nature of the data. Independent sample "t" test and One-way ANOVA were the parametric statistical tools and Mann-Whitney, and Kruskal-Wallis were the non-parametric tools used to explain the variances. The Social Sciences Statistics Program (SPSS) version 26.0 was used for this step.

The model proposed in the framework for this study is a reflective - reflective hierarchical component model (HCM) as reflective measurement models of all constructs in the HCM and path relationships from the higher order components (HOCs) to the lower order components (LOCs) (ie, the LOCs reflect the HOC).<sup>44</sup> We conducted a mediated path model with ITM as output variable, AOM as input variable and PSS as the mediating variable. Furthermore, after examining the difference in ITM across demographic variables, variables that affect ITM will be considered for inclusion in the model as a dummy-coded indicator. Demographic characteristics are understood as having a controlling rather than a predicting effect.<sup>45</sup>

Several methods have been proposed to estimate and validate HCM including the repeated indicator approach,<sup>46</sup> the disjoint two-stages approach, and the hybrid approach.<sup>47</sup> The two-stage would be of much benefit to the case that the second-order construct is endogenous and has an unequal number of indicators for the first order.<sup>48</sup> Thus, the disjoint two-stages approach<sup>49</sup> would be applied in our study to examine the measurement model and structural model. First, the evaluation of the measurement model was done by performing the reliability and validity analyses on each of the LOCs without considering the HOC. In this stage, required criterion for reflective LOCs were indicator reliability (outer loading), construct reliability (Cronbach's alpha - CA, composite reliability - CR), convergent validity (average variance extracted - AVE), and discriminant validity (HTMT criterion).<sup>50</sup> In the second stage, the second-order construct, which uses the scores obtained from the first-order constructs as indicators, were examined for reliability and validity.<sup>49</sup> At the same time, the path coefficients between other constructs were estimated using the bootstrapping procedure. Structural equation model was evaluated via multicollinearity (variance inflation factor - VIF), determination of coefficient ( $R^2$ ), the predictive relevance ( $Q^2$ ), the effect Sizes  $f^2$  and the significance and relevance of path coefficients. Complete PLS-SEM analysis established on 1000 bootstrap samples was used to compute path coefficients with P values and specific indirect, specific direct and total effects.

Subsequently, data in this study was analyzed by using smart partial least squares (Smart PLS-SEM) analysis, a variance-based structural equation modeling<sup>51</sup> in the latest release of SmartPls 3 (3.2.6). Because of reflective measurement models, mediating hypothesis relationships and non-normal data, PLS - SEM is selected to analyze the data.<sup>49</sup>

## Results

### Descriptive Study

Because of the sampling method, the final data set consisted of no missing data. Table 1 shows description of sample's characteristics. About socio-demographic characteristics, the data set involved 131 males (38.1%) and 213 females (61.9%). Of the total sample, 52% living in rural areas, 48% living in urban areas. 73.5% participants are godless, whereas 15.4% are Buddhist and 10.2% are Christian, 3 participants have other religious beliefs. Regarding family-

**Table 1** Sample Descriptive Characteristics

	Total (n = 344)	ITM	AOM	PSS
	Frequency	Mean $\pm$ SD	Mean $\pm$ SD	Mean $\pm$ SD
Age, year				
18–22	182 (52.9)	5.09 $\pm$ 1.38	5.58 $\pm$ 0.99	3.41 $\pm$ 1.05
22–25	162 (47.1)	4.86 $\pm$ 1.37	5.49 $\pm$ 0.95	3.70 $\pm$ 1.06
Gender				
Male	131 (38.1)	5.33 $\pm$ 1.42	5.47 $\pm$ 0.97	3.82 $\pm$ 0.99
Female	213 (61.9)	4.77 $\pm$ 1.32	5.58 $\pm$ 0.97	3.38 $\pm$ 1.07
Area				
Rural	179 (52.0)	4.91 $\pm$ 1.47	5.41 $\pm$ 0.98	3.35 $\pm$ 1.04
Urban	165 (48.0)	5.07 $\pm$ 1.29	5.68 $\pm$ 0.93	3.75 $\pm$ 1.05
Parent relationship				
Living together	316 (91.9)	5.00 $\pm$ 1.40	5.54 $\pm$ 0.98	3.53 $\pm$ 1.06
Separated	13 (3.8)	4.72 $\pm$ 1.49	5.55 $\pm$ 0.96	3.67 $\pm$ 1.06
Divorced	15 (4.4)	4.82 $\pm$ 1.06	5.52 $\pm$ 0.87	3.77 $\pm$ 1.11
Sexual orientation				
Homosexuality	16 (4.7)	4.40 $\pm$ 1.36	5.64 $\pm$ 0.96	3.64 $\pm$ 1.08
Heterosexuality	256 (74.4)	5.18 $\pm$ 1.37	5.55 $\pm$ 0.98	3.62 $\pm$ 1.03
Bisexuality	68 (19.8)	4.42 $\pm$ 1.29	5.53 $\pm$ 0.85	3.28 $\pm$ 1.14
Asexuality	4 (1.2)	4.67 $\pm$ 0.86	4.48 $\pm$ 1.80	3.00 $\pm$ 1.04
Religious				
Godless	253 (73.5)	5.01 $\pm$ 1.41	5.56 $\pm$ 0.97	3.57 $\pm$ 1.02
Buddhist	53 (15.4)	4.99 $\pm$ 1.27	5.44 $\pm$ 0.98	3.84 $\pm$ 1.13
Christian	35 (10.2)	4.71 $\pm$ 1.37	5.58 $\pm$ 0.96	2.94 $\pm$ 1.07
Other religious belief	3 (0.9)	5.89 $\pm$ 1.17	5.13 $\pm$ 0.83	3.42 $\pm$ 0.88
Total		4.99 $\pm$ 1.39	5.54 $\pm$ 0.97	3.55 $\pm$ 1.06

**Abbreviations:** ITM, intent to marry; AOM, aspect of marriage; PSS, premarital sexual permissiveness.

related information, 91.9% have their parents still living together, 3.8% separated and 4.4% divorced. To sexual-related extent, 4.7% claiming they are homosexuality, 74.4% are heterosexuality, 19.8% are bisexuality and 1.2% are asexuality.

Our study firstly addressed the distribution to understand the nature of collected data. Since our sample size was larger than 50 observations, we used Kolmogorov–Smirnov to test the normality of the collected data.<sup>52</sup> Results in Table 2 indicated that all ITM ( $M = 4.99$ ;  $SD = 1.386$ ), AOM ( $M = 5.54$ ;  $SD = 0.968$ ) and PSS ( $M = 3.55$ ;  $SD = 1.063$ ) were non-normally distributed as the p-value is less than 0.001. Our study then focused on the analysis of differences between demographic characteristics in ITM. Based on the nature of the data, our study used Kruskal - Wallis's test for univariate variables. The procedure of sampling and screening ensured that the final data contained no outliers and that the observations were independent and random. Kruskal–Wallis's test assumes the observations in each group come from populations with the same shape of distribution or the variances (of ranks) are homogenous.<sup>53</sup> After ranking the observations of the ITM variable, Levene's Test



**Table 2** Test of Normality

Variables	Kolmogorov–Smirnov <sup>a</sup>		Shapiro–Wilk	
	Statistic	Sig.	Statistic	Sig.
ITM	0.111	0.000	0.956	0.000
AOM	0.105	0.000	0.932	0.000
PSS	0.076	0.000	0.985	0.001

**Note:** <sup>a</sup>Lilliefors Significance Correction.

**Abbreviations:** ITM, intent to marry; AOM, aspect of marriage; PSS, premarital sexual permissiveness.

for homogeneity of Variances was performed on this rating variable. The result showed that no significant differences were found in the distribution characteristics of ITM for the variables religion ( $\chi^2(3) = 3.271$ ,  $p > 0.05$ ) and parents' marital status ( $\chi^2(2) = 1.054$ ,  $p > 0.05$ ). On the other hand, there are significant differences in the median score of ITM between different sexual orientation ( $\chi^2(3) = 22.469$ ,  $p < 0.001$ ). Post-hoc pairwise comparisons using Dunn test indicated that ITM are statistically significant higher in heterosexuality than bisexuality ( $p < 0.001$ ,  $Z = 4.256$ ,  $r = 0.23$ ). However, there was no statistically significant difference between heterosexuality and homosexuality ( $p = 0.087$ ,  $Z = -2.443$ ,  $r = -0.13$ ) and asexuality ( $p = 1.0$ ,  $Z = 0.346$ ,  $r = 0.019$ ). There was also no statistically significant difference between homosexuality and bisexuality ( $p = 1.0$ ;  $Z = -0.176$ ,  $r = -0.01$ ) and asexuality ( $p = 1$ ,  $Z = -0.276$ ,  $r = -0.015$ ). Bisexuality and asexuality ( $p = 1$ ,  $Z = -0.205$ ,  $r = -0.011$ ) also have the same distribution characteristics.

## Model Specification

Figure 1 showed the final PLS model. The proposed research model for this study includes three different latent vectors: AOM (comprising items from Aspect of Marriage scale), PSS (comprising items from Premarital Sexual Permissiveness scale) and ITM (comprising items from Intention to marry scale). AOM was a higher order construct that had 6 dimensions, which were finances (AOM\_F), romance (AOM\_RO), respect (AOM\_RE), trust (AOM\_T), meaning (AOM\_M) and physical intimacy (AOM\_P). The variance analysis in the previous step had indicated that there was a significant effect of sexual orientations on ITM. Hence, sexual orientations were dummy coded into 3 variables namely, heterosexuality, homosexuality, and bisexuality. Our study only controlled for heterosexuality since this is the only sexual orientation having impact on ITM.

## Result of Structural Equation Model Analysis

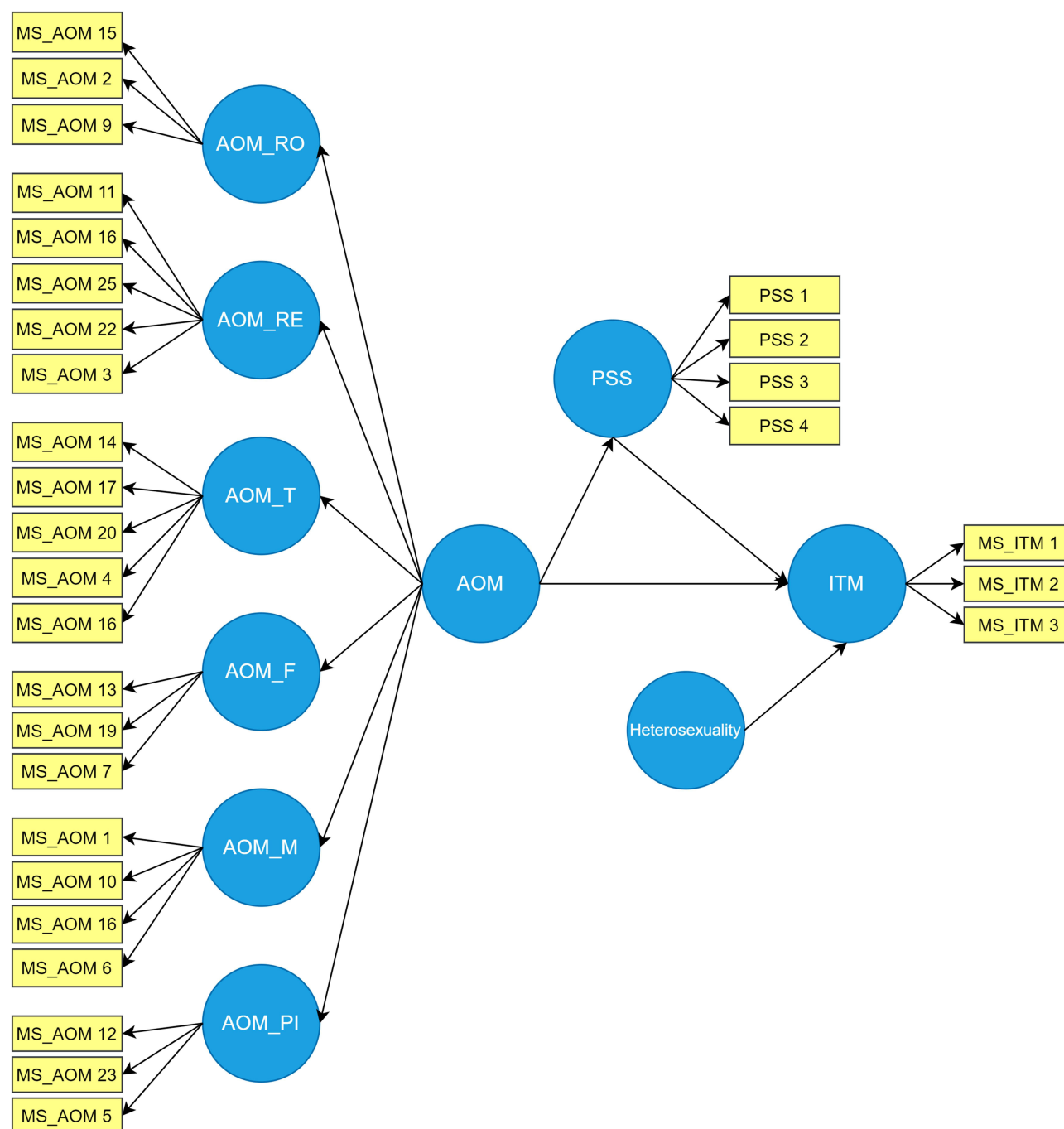
### Assessment of Measurement Model

#### Indicator Reliability

Hair, Hult, Ringle, Sarstedt, Danks, Ray<sup>45</sup> highly recommend that indicator loadings greater than 0.708 represent acceptable indicator reliability, however, indicators with outer loadings ranging from 0.4 to 0.7 are still approved with some conditions involving the preservation or reduction of AVE and CR values if the items are deleted.<sup>45</sup> Indicators that have outer loading below 0.3 should be eliminated without further consideration.<sup>50</sup> In Table 3, the entire indicators were accepted as their outer loadings exceed the recommended level of 0.7 except for MS\_AOM13, MS\_AOM15, MS\_AOM17, MS\_AOM23 and PSS4. Because the elimination of indicators PSS4 did not lead to the improvement of CR and AVE, they are conditionally accepted for the constructs that are the hosts of the indicators. All other items that have outer loading below 0.3 were removed. After the removal of selected items, the model was reanalyzed (Table 4).

#### Construct Reliability

The construct's true reliability is typically examined through composite reliability (CR) and Cronbach's Alpha (CA).<sup>45</sup> Both CA and CR have the same threshold: reliability values between 0.60 and 0.70 are considered "acceptable in exploratory research", whereas values between 0.70 and 0.90 range from "satisfactory to good" values above 0.90 (and definitely above 0.95) are problematic, since they indicate that the indicators are redundant, thereby reducing construct validity.



**Figure 1** Hypothetical model. Following code abbreviations are financial aspect of marriage (AOM\_F), romantic aspect of marriage (AOM\_RO), respect in marriage (AOM\_RE), trust in marriage (AOM\_T), meanings in marriage (AOM\_M), physical intimacy in marriage (AOM\_P), aspect of marriage (AOM), premarital sexual permissiveness (PSS), intent to marry (ITM).

The results of CA and CR of our measurement model are presented in Table 4.

### Convergent Validity

AVE is used to evaluate convergent validity of measurements. The minimum acceptable AVE is 0.50 – an AVE of 0.50 or higher indicates the construct explains 50% or more of the indicators' variance that make up the construct.<sup>45</sup> In Table 4, all of the measured constructs have AVE values that surpass the minimum threshold.



**Table 3** Summary of Outer Loading, Composite Reliability and Average Variance Extracted of Constructs and Indicators Before Adjustment

Construct and Items	Loadings	$\alpha$	CR	AVE
Aspect Of Marriage - Finance (AOM_F)		0.563	0.754	0.599
MS_AOM19	0.952			
MS_AOM7	0.944			
MS_AOM13	0.022			
Aspect Of Marriage – Meaning (AOM_M)		0.887	0.921	0.746
MS_AOM8	0.918			
MS_AOM16	0.863			
MS_AOM1	0.859			
MS_AOM10	0.810			
Aspect Of Marriage – Physical Intimacy (AOM_PI)		0.614	0.799	0.614
MS_AOM5	0.945			
MS_AOM12	0.938			
MS_AOM23	0.264			
Aspect Of Marriage – Respect (AOM_RE)		0.941	0.955	0.811
MS_AOM21	0.934			
MS_AOM22	0.925			
MS_AOM11	0.896			
MS_AOM18	0.878			
MS_AOM3	0.866			
Aspect Of Marriage – Romance (AOM_RO)		0.580	0.788	0.591
MS_AOM9	0.922			
MS_AOM2	0.913			
MS_AOM15	0.300			
Aspect Of Marriage – Trust (AOM_T)		0.838	0.899	0.665
MS_AOM14	0.92			
MS_AOM4	0.912			
MS_AOM20	0.904			
MS_AOM6	0.881			
MS_AOM17	0.234			
Intent To Marry		0.886	0.928	0.811
MS_ITM2	0.928			
MS_ITM1	0.919			
MS_ITM3	0.853			

(Continued)

**Table 3** (Continued).

Construct and Items	Loadings	$\alpha$	CR	AVE
Premarital Sexual Permissiveness		0.822	0.858	0.622
PSS1	0.918			
PSS2	0.914			
PSS3	0.821			
PSS4	0.368			

**Abbreviations:** MS, marital scale; AOM\_F, aspect of marriage – finance; AOM\_M, aspect of marriage – meaning; AOM\_PI, aspect of marriage – physical intimacy; AOM\_RE, aspect of marriage – respect; AOM\_RO, aspect of marriage – romance; AOM\_T, aspect of marriage – trust; ITM, intent to marry; PSS, premarital sexual permissiveness.

**Table 4** Summary of Outer Loading, Composite Reliability and Average Variance Extracted of Constructs and Indicators After Adjustment

Construct and Items	Loadings	$\alpha$	CR	AVE
Higher order components				
Aspect Of Marriage (AOM)		0.963	0.97	0.845
Lower order components				
Aspect Of marriage - Finance (AOM_F)		0.888	0.947	0.899
MS_AOM19	0.952			
MS_AOM7	0.944			
MS_AOM13				
Aspect Of Marriage – Meaning (AOM_M)		0.887	0.921	0.746
MS_AOM8	0.918			
MS_AOM16	0.863			
MS_AOM1	0.859			
MS_AOM10	0.810			
Aspect Of Marriage – Physical Intimacy (AOM_PI)		0.897	0.951	0.906
MS_AOM5	0.945			
MS_AOM12	0.938			
MS_AOM23				
Aspect Of Marriage – Respect (AOM_RE)		0.941	0.955	0.811
MS_AOM21	0.934			
MS_AOM22	0.925			
MS_AOM11	0.896			
MS_AOM18	0.878			
MS_AOM3	0.866			
Aspect Of Marriage – Romance (AOM_RO)		0.861	0.935	0.877
MS_AOM9	0.922			

(Continued)

**Table 4** (Continued).

Construct and Items	Loadings	$\alpha$	CR	AVE
MS_AOM2	0.913			
MS_AOM15				
Aspect Of Marriage – Trust (AOM_T)		0.930	0.950	0.827
MS_AOM14	0.92			
MS_AOM4	0.912			
MS_AOM20	0.904			
MS_AOM6	0.881			
MS_AOM17				
Intent To Marry		0.886	0.928	0.811
MS_ITM2	0.928			
MS_ITM1	0.919			
MS_ITM3	0.853			
Premarital Sexual Permissiveness		0.822	0.858	0.622
PSS1	0.918			
PSS2	0.914			
PSS3	0.821			
PSS4	0.368			

**Abbreviations:** MS, marital scale; AOM\_F, aspect of marriage – finance; AOM\_M, aspect of marriage – meaning; AOM\_PI, aspect of marriage – physical intimacy; AOM\_RE, aspect of marriage – respect; AOM\_RO, aspect of marriage – romance; AOM\_T, aspect of marriage – trust; ITM, intent to marry; PSS, premarital sexual permissiveness.

### Discriminant Validity

Besides two commonly used methods to evaluate the discriminant value of the scale which are Fornell and Lacker criterion and Cross factor loading, HTMT criterion is an advanced method recently proposed by Dijkstra, Henseler<sup>54</sup> and widely used. Proposed that if the HTMT value of each pairwise construct does not exceed 0.9 threshold then discriminability of the reflective model is validated. The HTMT values are depicted in [Table 5](#).

**Table 5** Heterotrait-Monotrait (HTMT) Criterion of Lower Order Constructs

Constructs	AOM_F	AOM_F	AOM_F	AOM_F	AOM_F	AOM_F	ITM	PSS
AOM_F								
AOM_M	0.979							
AOM_PI	0.813	0.852						
AOM_RE	0.987	0.994	0.803					
AOM_RO	0.813	0.906	0.822	0.852				
AOM_T	0.993	0.997	0.835	0.1012	0.849			
ITM	0.284	0.287	0.305	0.303	0.294	0.294		
PSS	0.248	0.273	0.343	0.217	0.302	0.242	0.217	

**Abbreviations:** AOM\_F, aspect of marriage – finance; AOM\_M, aspect of marriage – meaning; AOM\_PI, aspect of marriage – physical intimacy; AOM\_RE, aspect of marriage – respect; AOM\_RO, aspect of marriage – romance; AOM\_T, aspect of marriage – trust; ITM, intent to marry; PSS, premarital sexual permissiveness.

## Validating Higher Order Construct

After the first step of the two-stages approach, AOM were treated as a reflective latent variable having 6 indicators AOM\_F, AOM\_RO, AOM\_RE, AOM\_T, AOM\_M and AOM\_P. Hence, criteria used to assess reliability and validity were construct reliability, convergent validity, and discriminant validity. The reliability and convergent validity for AOM was established as the value for CR and CA is  $> 0.70$  and the AVE is greater than 0.50 (Table 4). Discriminant validity of AOM with other constructs was established since HTMT of each construct were lower than 0.90 (Table 6).

## Assessment of Structural Model

### Collinearity Issue

Variance inflation factor (VIF) values of variables are measured to quantify the severity of collinearity issue of the structural model. Collinearity arises when two indicators are highly correlated. VIF less than 5.0 then multicollinearity is not a critical issue in the structural model.<sup>50</sup> We assess the following sets of (predictor) constructs for collinearity: (1) AOM as predictors of ITM (and PSS); (2) PSS as predictors of ITM. Table 7 reported that all VIF values are less than 5.0.

### Hypothesis Testing

Firstly, the significance of the hypothesized path coefficient is evaluated through bootstrapping procedure. Results based on 1000 bootstrapped samples depicted a presentation of direct effects from AOM, PSS, and sexual orientations along with indirect effects from AOM. The result from Table 8 supported Hypothesis 1 as it revealed a positive effect of AOM ( $\beta = 0.234$ ,  $p < 0.001$ , 95% CI = [0.137; 0.339]) and PSS ( $\beta = 0.153$ ,  $p < 0.01$ , 95% CI = [0.038; 0.262]) on ITM. Furthermore, Hypothesis 2 was confirmed as Heterosexuality also had a positive impact on ITM ( $\beta = 0.203$ ,  $p < 0.001$ , 95% CI = [0.103; 0.303]). The results also revealed the presentation of indirect effects from AOM ( $\beta = 0.051$ ,  $p < 0.01$ , 95% CI = [0.013; 0.092]) to ITM through PSS. Moreover, a positive impact of AOM on PSS ( $\beta = 0.334$ ,  $p < 0.001$ , 95% CI = [0.255; 0.421]) was reported which confirmed the complementary partial meditation role of PSS, thus, hypothesis 3 was accepted.<sup>55</sup> All effects were statistically significant at the 2.5% level and the value of 0 was not included in the 95% confidence intervals.

### Determination of Coefficient ( $R^2$ )

$R^2$  is a measure of the model's predictive accuracy. Evaluation of the coefficients of determination represents the portion of variances in the endogenous constructs explained by the structural model. The value of  $R^2$  should be higher than 0.1

**Table 6** Heterotrait-Monotrait (HTMT)  
Criterion of Higher Order Constructs

Constructs	AOM	ITM	PSS
AOM			
ITM	0.312		
PSS	0.286	0.217	

**Abbreviations:** ITM, intent to marry; AOM, aspect of marriage; PSS, premarital sexual permissiveness.

**Table 7** Collinearity Statistics

Constructs	AOM	ITM	PSS
AOM		1.126	1.000
ITM			
PSS		1.139	

**Abbreviations:** ITM, intent to marry; AOM, aspect of marriage; PSS, premarital sexual permissiveness.

**Table 8** Results of Structural Model: Direct Effects and Indirect Effects

Path	$\beta$ Coefficient	t	p	95% Confidence Intervals	95% BC Confidence Intervals
<i>Direct effect</i>					
AOM → ITM	0.234	4.645	<0.001	[0.133; 0.331]	[0.137; 0.339]
AOM → PSS	0.334	7.835	<0.001	[0.239; 0.409]	[0.255; 0.421]
Heterosexuality → ITM	0.203	4.017	<0.001	[0.102; 302]	[0.103; 0.303]
PSS → ITM	0.153	2.696	0.007	[0.030; 255]	[0.038; 0.262]
<i>Indirect effect</i>					
AOM → PSS → ITM	0.051	2.624	0.009	[0.013; 0.092]	[0.010; 0.088]

**Abbreviations:** ITM, intent to marry; AOM, aspect of marriage; PSS, premarital sexual permissiveness; BC, bias corrected.

(Chin, 1998) which is considerable. This study found that 14.9% variance occurred in ITM explained by exogenous constructs.

### The Predictive Relevance ( $Q^2$ )

The  $Q^2$  values estimated by the blindfolding, an iterative procedure, demonstrate a measure of how well the path model predicts the originally observed values. The value of  $Q^2$  should be higher than zero<sup>50</sup> to ensure that the model has predictive relevance for a certain endogenous construct. The  $Q^2$  values for ITM and PSS are 0.12 and 0.034 respectively which are within the suggested level and show the predictive relevance of the study model.

### The Effect Sizes ( $f^2$ )

Assessment of effect size allows the researcher to observe the effect of each exogenous construct on the endogenous construct. The values of  $f^2$  in this study are within the suggested level by Cohen.<sup>56</sup> AOM to ITM, AOM to PSS and PSS to ITM have small effects which are 0.058, 0.126 and 0.024 respectively. Next, effect size  $q^2$  also needs to be assessed. As a relative measure of predictive relevance, values of 0.02, 0.15, and 0.35 indicate that an exogenous construct has a small, medium, or large predictive relevance, respectively, for a certain endogenous construct.  $q^2(\text{AOM} \rightarrow \text{ITM})$  was 0.045,  $q^2(\text{AOM} \rightarrow \text{PSS})$  was 0.035 and  $q^2(\text{PSS} \rightarrow \text{ITM})$  was 0.015.

## Discussion

The main aim of our study was to investigate the direct and indirect effects of expectations for marital relationships and premarital sexual permissiveness on intent to marry of emerging adults. In addition, this study also examined the differences in marital intention between participant groups. This is a valuable contribution in understanding important factors related to married life that young adults are concerned about and improving the quality of marriage which is a long relationship and has strong influences on an individual's happiness, life satisfaction and psychological well-being.<sup>57</sup> Several implications, as well as theoretical and practical advances, are worth considering.

The result of the current study showed that individuals' expectations for marital relationship was a predictor of marital intention. Specifically, emerging adults who placed a greater importance on factors related to married life including mutual respect between partners, romance, physical intimacy, meaning, financial stability and trust would have greater intention to marry. This finding is in accordance with the previous study of<sup>16</sup> who demonstrated that the expectation for marital relationship of young adults was positively correlated with their intention to marry. Marriage intention is defined as people's possibility of really getting married based on their desires and requirements.<sup>25</sup> When considering each factor in individuals' expectations for marital relationship, this relationship is backed up by numerous researchers. Financial stability is an important requirement of couples/cohabitators for the marriage decision-making process.<sup>58</sup> People usually consider whether their financial situation can afford a married life with numerous issues and whether they have accomplished financial goals for financial stability when getting married. Individuals with better

economic possibilities for life would have a tendency to get married, to stay married, and to have children within marriage.<sup>59,60</sup> In general, individuals with higher wages and better employment opportunities would have higher probability of transitioning to marriage.<sup>25</sup> Besides, trust, effective communication and interpersonal respect are also considered as potentially factors affecting marriage decision-making process and the quality of marriage.<sup>61,62</sup> With indicators related to a successful and last-long marriage mentioned above, it is suggested that emerging adults who hold realistic idealized marital expectations would have more desires to getting married due to the belief that happy marriage could improve and nurture day-to-day happiness, overall life satisfaction, good physical and mental health, foster resilience against challenges and promote personal development.<sup>63–66</sup> This obtained result documents valuable contributions made to the literature on emerging adults' perspectives of a successful marriage by further clarifying and underscoring their expectations for a happy marriage and the marriage decision-making process. However, when comparing our finding to previous studies of Kithuka<sup>14</sup> and Christensen,<sup>16</sup> it must be pointed out the disparity in the results. They reported a negligible positive relationship between expectations for marriage and marital intention. This difference in results could be explained by the possibility of differentiating between personal expectations, attitudes and intentions toward marriage, and the challenges from how certain constructs including expectations and intentions are operationalized and applied in scientific research.<sup>15,16,67</sup>

The present study confirmed the finding about the role of premarital sexuality permissiveness as a mediator between the relationship of the expectations for marriage and marital intention. The effects of expectations for marriage on marital intention was partially mediated by emerging adults' premarital sexuality permissiveness. While previous research has not examined the mediating effect of premarital sexuality permissiveness on marital intention, several studies found that young adults considered premarital sex, with their future spouse, as acceptable<sup>68–70</sup> and lots of married women had premarital sex.<sup>71</sup> Therefore, the reason that may account for our finding is that individuals' expectations of marriage, beliefs of their partners, relationship and their future marriage. Specifically, Vietnamese young adults often decided to cohabit and have sex with the one they have feelings of passionate love with and long-term companion, they want and intend to marry in the future. Another study in Vietnam reported that a substantial proportion of women and men in the North had sex only in a committed and stable relationship with a future spouse before marriage.<sup>72</sup> The other reason that premarital sexuality permissiveness has a mediating role in the relationship between expectations for marriage and marital intention could be because people believed that premarital sex can serve as an act of relationship maintenance, a broad array of behaviours that can preserve their romantic partnerships, contribute to relationship continuation and lead to marriage.<sup>73,74</sup> The fact is that experience of sexual intercourse could let individuals determine their sexual satisfaction with partners which is positively associated with happiness, emotional intimacy and relationship satisfaction for both men and women<sup>75–77</sup> in dating, committed and married couples. In addition, a longitudinal study revealed that the decline in sexual satisfaction could increase the risk of divorce in married couples.<sup>78</sup>

This study indicated that heterosexuality had higher intentions to marry than bisexuality and homosexuality. This could be explained by the cultural Vietnamese context, Governments and social prejudices still do not legally accept same-sex and bisexual relationships. Therefore, people in same-sex and bisexual relationships only expect to maintain in a long-term romantic relationship and have no intention of getting married. Besides, heterosexual marriage is the only legalized form of marriage in Vietnam. Consequently, young adult having a romantic relationship for a long time will have sexual relations. This leads to making it easier for young adults to have the intention of getting married to a committed long-term relationship. Due to this shift in intimacy power, Ghuman, Loi, Huy, Knodel<sup>72</sup> conducted a research on premarital sex in Vietnam, it was found that men and women only had premarital sex with those who their spouse in the future. Therefore, people with heterosexual orientation will have a higher intention to marry than other sexual orientations in Vietnamese subjects.

The present research found that there were no differences among religion in intention to marry. Comparing our results to those of previous research, the findings reveal that they run counter to the way in which religious difference has been contested in the domains of psychology. An abundance of empirical study proves that religion has a significant impact in marital relationships and the choice of a spouse.<sup>79,80</sup> Moreover, Lehrer<sup>81</sup> and Sherkat<sup>80</sup> reported that people with a strong devotion to their religious traditions and/or those who originate from more conservative religious traditions are more likely to associate religious qualities to their marital preferences and seek same-faith partnerships. Besides that, in the study of du Toit,<sup>82</sup> the author claimed that being religious positively impacted young people's perception on marriage as



they believed that getting married would make them happy. Nonetheless, in the cultural Vietnamese context, according to the Government Committee for Religious Affairs in 2018, only 24.6% of the Vietnamese population is religious, the rest 75.4% of the population is non-religious. Owing to this, it can be seen that it is reasonable that there is no religious difference in the intentions to get married to young adults in Vietnam because the majority of Vietnamese people are not religious. Therefore, the intention to marry will be more influenced and affected by other factors than religion.

This study also shows that young people with parents' marital status including living together, separated or divorced were not related to intention to marry. Our findings consistent with the study of Christensen,<sup>16</sup> who conducted a study and found the analogous result that there is no correlation between having divorced parents and intention to marry as a young adult. However, this result of our study contradicts previous research and can be interpreted in a variety of ways. Boyer-Pennington, Pennington, Spink<sup>83</sup> discovered that students from intact families were more optimistic about their future marriages than those from homes where their parents had divorced once or several times. Supporting this, Wright<sup>84</sup> also found that children from intact families had more positive attitudes than children from divorced families and discontinued parental cohabiting unions. This could be attributable to the fact that their experiences with parental separation and divorce may have made them more hesitant or unwilling to commit to long-term romantic relationships. Because the feelings of loss, anger, bewilderment, worry, and several other emotions may result from this change. People might feel stressed and emotionally vulnerable after a divorce,<sup>85</sup> this might be obsessed with them when they grow up and make a decision to get married.

## Limitations

Limitations of the current study should be acknowledged when evaluating the findings. This is a cross-sectional study which would not illustrate the longitudinal effects of expectations for marriage and premarital sexuality permissiveness on marital intention of emerging adults. Future study should design an experimental or longitudinal study to clarify the influences of those factors on the marriage decision-making process and may lead to other interesting findings. The achieved data was self-reported which could bias reporting. Future researchers should conduct in-depth interviews to garner more insight into individuals' opinions about the effects and role of sexual intercourse before marriage to better understand their expectations and specific indicators that could shape their thoughts about premarital sex and marital intention. Given the consistent focus of the current study and previous research on the relationship between expectations for marriage and marital intention, future research on how emerging adults form opinions about criteria and requirements for marriage is also needed.

## Implications

The obtained results document several key theoretical and practical implications. Although the estimated influence of expectations for marriage on marital intention and mediating role of premarital sexuality permissiveness was not high, these findings contributed valuable evidence of associations between these variables. This is the first study, to our knowledge, to empirically examine the marital intention as an outcome measure under the effects of the expectations for marriage and premarital sexuality permissiveness. Likewise, it has not been investigated whether premarital sexuality permissiveness can be a mediator in the relationship between the expectations for marriage and marital intention. Our results contribute important documents and clearer understanding of emerging adults' expectations and requirements in a relationship for the marriage decision-making process. Adults' observations of their own social world and their parents' experiences could make them quite realistic about what it takes to get married.<sup>86</sup> Despite increases in divorce, delays in the timing of marriage, and the potential deinstitutionalization of marriage,<sup>87</sup> emerging adults have not avoided becoming the legally accepted husband or wife of someone as evidenced by their expectations and intention to marry.<sup>86,88</sup> These results also support the need for counselors and therapists who specialize in marriage to spend adequate time thoroughly understanding requirements and expectations of clients and their effects on clients' intention and attitudes toward marriage. Efforts aimed at promoting a long-lasting healthy relationship, marriage and the quality of marriage could consider tracing back to the origins of expectations for a stable relationship and marriage and deal with problems that cause unhealthy patterns of relating. It is suggested that emerging adults who have stronger expectations for marriage would have premarital sexual intercourse and then is that marital intention. Understanding the role of premarital sex and sexual satisfaction could facilitate the development of interventions to enhance the emotional connection between couples and assist clients in the marriage decision-making

process. Moreover, practitioners should help emerging adults equipping and entering a great marriage with essential ingredients to increase their probability of experiencing a durable and healthy relationship.

## Conclusion

Numerous nations are facing a decline in the marriage rate and a postponement of marriage due to socioeconomic factors such as education and employment. To improve an individual's happiness, life satisfaction, and psychological well-being, it is indispensable to comprehend the marital concerns of young people and to improve factors that affect the quality of marriage. In light of this tendency, we struck to investigate the influence of expectations for marriage and premarital sexual permissiveness on emerging adults' marital intention. The main finding of our research indicates that one's marriage-related expectation can predict his/her marital intention. Premarital sexuality permissiveness mediates the relationship between expectations for marriage and marital intention. Thus, all of three hypotheses in this research were accepted. Our results contribute important documents and clearer understanding of emerging adults' expectations and requirements in a relationship for the marriage decision-making process. Additional research is needed to more carefully examine how emerging adults form opinions about criteria and requirements for marriage and garner more insight into individuals' opinions about the effects and role of sexual intercourse before marriage to better understand their expectations.

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## Disclosure

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