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【研究論文】

# **Effects of Impersonal-promiscuous Sex, Hostility toward Women, Acceptance of Violence, and Affective Empathy on Sexual Aggression**

Jiun-Yih Huang<sup>1</sup>、Yaw-Sheng Lin<sup>2</sup>、Ka-Fong Lei<sup>3</sup>

## **Abstract**

This study examined the effect of impersonal-promiscuous sex, hostility toward women, acceptance of violence, and affective empathy on occurrence and frequency of sexual assault. Anonymous self-report questionnaire was used to collect data online. A total of 998 adult men participated in the study. The results suggested that the participants who self-reported as having committed sexual assault within the previous year accounted for 13% of the sample. Impersonal-promiscuous sex, hostility toward women, and affective empathy were all predictors of sexual assault occurrence, but acceptance of violence was not. Further analysis of the main components of acceptance of violence revealed that interpersonal violence and sexual assault behavior were positively correlated, whereas legitimate violence was negatively correlated with sexual assault. Because of the combination of positive and negative influences, acceptance of violence was not a predictor of sexual assault. Binary logistic regression analysis indicated that impersonal-promiscuous sex, hostility toward women, interpersonal violence, legitimate violence, and affective empathy were all predictors of sexual assault. Structural equation modeling revealed that impersonal-promiscuous sex, interpersonal violence, and legitimate violence were all predictors of sexual assault frequency. The theoretical implications, practical applications, and research limitations of this study, in addition to future research directions, are discussed.

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<sup>1</sup> Professor, Department of Applied Psychology, Hsuan Chuang University

<sup>2</sup> Professor, Department of Psychology, National Taiwan University, Taipei, Taiwan

<sup>3</sup> Master graduate student, Department of Educational Psychology and Counseling, National Tsing Hua University, Hsinchu, Taiwan

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## **Introduction**

Sexual aggression is a natural phenomenon from the viewpoint of evolution and has reproductive and adaptive functions (Thornhill & Palmer, 2000). The definition of sexual aggression has changed frequently (Huang, 2000; Lyon, 2004), but the most accepted definition in academia is occurrence of sexual contact or sexual conduct without mutual consent (Koss et al., 2007; Wang, 2013). In the criminal code of Taiwan, sexual contact is considered similar to obscenity by compulsion, and sexual conduct (including sexual intercourse, oral intercourse, anal intercourse, and foreign object insertion) is considered similar to forced sexual intercourse. The subjects and objects of sexual assault can be men and women, but sexual assault by a man on a woman is the most common form that is prosecuted (Ministry of Interior, 2017); thus, the present study focused on this type of sexual assault.

An investigation conducted on a representative sample of college students in Taiwan revealed that 19.80% of male college students had experience of sexually assaulting a woman (Huang, 2014). Similarly, another study targeting a representative college student sample discovered that 53.7% of women had experience of being sexually assaulted, whereas 25.1% of men self-reported engagement in sexual assault (Koss, Gidycz, & Wisniewski, 1987). Studies conducted in recent years have reported that women's lifetime prevalence of being sexually assaulted was between 20% and 26% (Carey, Durney, Shepardson, & Carey, 2015; Walsh, Koenen, Aiello, Uddin, & Galea, 2014). Victims of sexual assault are detrimentally affected in terms of their physiology, psychology, and sexual conduct (Jones et al., 2015; McCauley & Casler, 2015) and are also at higher risk of being infected with sexually transmitted diseases (Nasrullah, Oraka, Chavez, Valverde, & Dinunno, 2015).

The amount of sexual assault research conducted in Taiwan has been increasing, but few studies have investigated sexual assault from the perspectives of impersonal-promiscuous sex, hostility toward women, acceptance of violence, and empathy, and most studies have targeted prisoners (Huang & Chien, 2012). Therefore, this study employed a community population to investigate the effect of impersonal-promiscuous

sex, hostility toward women, acceptance of violence, and empathy on the occurrence and frequency of sexual assault.

### *Reasons for Selecting These Variables*

Sexual assault has numerous causes (Hall & Hirschman, 1991; Russell, 1984; Ward & Beech, 2006), and this study conducted an investigation using the variables: impersonal-promiscuous sex, hostility toward women, acceptance of violence, and affective empathy. Specifically, our investigation was mainly based on the following sexual crimes: sexual aggression, sexual violence, and sexual assault. Semantically, the wording of these terms indicates that these crimes are both sexual and violent. Sex is the feature and motive for this type of crime (Ellis, 1991; Seto, 2019), whereas violence reflects the force necessary to overcome the resistance of a victim, the perpetrator's dissatisfaction with women leading them to want to vent their resentment, or a sexual abuse tendency in the perpetrator (Groth & Birnbaum, 1979; Huang, 2000). In addition to the physical, violence can take psychological and verbal forms (Coker, Smith, McKeown, & King, 2000), and these forms of violence are common in sexual assaults (Anderson & Anderson, 2008; Koss et al., 2007; Rees, 2011). Men's sexual assault of women can also have components of gender rights and prejudice. That is, some men place themselves above women (Brownmiller, 1975; Groth & Birnbaum, 1979), and this is demonstrated in men's hostility toward women and in the unequal rights attitudes of male chauvinism (Malamuth, Linz, Heavey, Barnes, & Acker, 1995; Whaley, 2001). In the United States, sexual assault of men on women was found to be more prevalent in states with unequal rights between sexes (Baron & Strauss, 1989). A novel titled *Flowers in the Mirror* (Lee, 1763–1830), written during the Qing dynasty of China, has a main male character who was admired by the empress of the Nation of Girls. The empress pillaged the male character and demanded he get dressed up in a phoenix coronet and robes of rank. The empress wanted the male character to be a queen, and the man experienced considerable pain and torment. Two hundred years ago, Chinese authors thus already objected strongly to gender inequality in a patriarchal society and implied the role of gender inequality in sexual assault. The components of sex, violence, and gender inequality were perspectives employed in this study. Therefore, we selected impersonal-promiscuous sex, acceptance of violence, and hostility toward women as representative variables of sex, violence, and gender inequality to conduct our

investigation.

*Correlations Between Impersonal-promiscuous Sex, Hostility toward Women, Acceptance of Violence, Empathy, and Sexual Assault*

Among the numerous variables related to sex, violence, and gender inequality, this study selected impersonal-promiscuous sex, acceptance of violence, and hostility toward women as representative variables because the relationships between these three variables and sexual assault have been verified by numerous studies. The meaning of these variables and their correlations with sexual assault are elaborated in the following.

Impersonal-promiscuous sex refers to behaviors such as having multiple sexual partners, cheating, seeking one night stands, and prostitution (Malamuth et al., 1995) and has two major components, namely infidelity and promiscuous behavior (Schmitt & Buss, 2000). Malamuth et al. (1995) suggested that those who commit sexual assault are not sexually repressed but consider sex to be a game. Individuals who commit sexual assault are generally considered to do so because they lack a sexual partner or opportunity for sexual intercourse. However, this is an erroneous belief because research has found that impersonal-promiscuous sex is a critical predictor of sexual assault behavior (Abbey, Jacques-Tiura, & LeBreton, 2011; Casey et al., 2017; Malamuth, et al., 1995; Widman, Olson, & Bolen, 2013).

Acceptance of violence refers to a person's attitude toward acceptance of violence and tolerance for the tendency to use violence to solve problems (Ponce, Williams & Allen, 2004). The violence component of sexual assault has greater implications than its sex component (Groth & Birnbaum, 1979; Sanday, 1981). For example, Baron and Straus (1989) verified that legitimate violence was a factor affecting the sexual assault occurrence rate in each state of the United States. Reyes and Foshee (2013) targeted male adolescents and discovered that individuals who had been physically violent toward their partners or peers were more likely to sexually assault their partners in the future. Lonsway and Fitzgerald (1994) suggested a correlation between acceptance of violence and sexual assault myth acceptance. They also specifically indicated that violence should be given a broad definition. Corporal punishment, the acceptance of death penalty, using the armed forces to resolve disputes with other countries, or using violence as a means of resolving problems should all be considered violence and not limited to violence among couples. Therefore, this study used the Attitude Toward Violence Scale of Velicer, Huckel, and Hansen (1989). The scale measures acceptance

of violence in various dimensions including penal code violence, military weapons, violence in war, corporal punishment of children, and violence within a sexual relationship. The aim was to examine the effect of attitude toward general violence on sexual assault behavior.

Hostility toward women refers to an attitude of having negative feelings toward women and considering women difficult to get along with (Huang, 2014). Men who sexually assault women usually have this attitude (Abbey & Mcauslan, 2004; Anderson & Anderson, 2008; Malamuth et al., 1995; Mann, Hanson, & Thornton, 2010; Marshall & Moulden, 2001). A Taiwanese study suggested that men who force women to have sexual intercourse usually have the following impressions of women: women are arrogant, want to control men, enjoy taking advantage of men and trifling with men's affection, and exhibit lascivious behavior (Huang, 2000). Malamuth et al. (1995) used hostile masculinity to explain men's sexual assault of women. Malamuth and Brown (1994) also reported that suspicious schema is the main reason men misunderstand the implications of women's communications (e.g., interpreting women's intimate or friendly behavior as their wanting to have sexual intercourse). Suspicious schema refers to a cognitive structure in which a person is suspicious and mistrustful of a person. One study found that the recognition levels of male sex criminals regarding the pairing of the words hostility and sex were higher than those of average adult men; thus, the words hostility and sex were connected in the cognitive schema of sexual criminals (Huang, 2009).

The present study also examined the effect of empathy on sexual assault. Empathy refers to the ability to think and feel from another person's perspective and thus understand that person's thoughts and emotions (Bellet & Maloney, 1991). Empathy is thus related to altruistic behavior (Bartlett & Desteno, 2006). Empathy can be separated into cognitive and affective empathy (Rogers, Dziobek, Hassenstab, Wolf, & Convit, 2007), which refer to understanding another person's thoughts and feelings, respectively, from his or her viewpoint. The separation between the two empathy types can be explained using psychopathy and autism (Cox et al., 2012). People with psychopathy have intact cognitive empathy but are deficient in affective empathy. Consequently, these people understand how a behavior can cause pain to others, but cannot feel the other's pain. This usually leads to cold-blooded behavior because of an inability to sympathize with others. Conversely, people with autism have intact

affective empathy but impaired cognitive empathy. They are unable to understand the thoughts of others and thus have no interest in being in contact with society. Nevertheless, they can understand the pain of others and would not hurt others on purpose. Current research on the effect of empathy on sexual assault behavior has not obtained consistent results (Covell & Scalora, 2002). This may be because previous studies did not measure affective empathy in the same manner. The present study employed affective empathy as the variable for investigation. We examined the effect of affective empathy on sexual assault behavior. We proposed that people with impaired affective empathy are less capable of feeling other people's pain and are thus more likely to sexually assault others.

### *Research Framework*

On the basis of the presented literature review, we hypothesized that impersonal-promiscuous sex, hostility toward women, acceptance of violence, and affective empathy affect sexual assault behavior. Mann, Hansen, and Thornton (2010) suggested that sexual preoccupation, deviant sexual interest, offense-supportive attitude, grievance/hostility, hostility toward women, and callousness/lack of concern for others are risk factors for sexual recidivism. To a certain extent, these factors correspond to impersonal-promiscuous sex (e.g., sexual preoccupation and deviant sexual interest), acceptance of violence (e.g., offense-supportive attitude and grievance/hostility), hostility toward women, and affective empathy (e.g., callousness/lack of concern for others). Recidivism indicates that a person reoffends after their first criminal offense; therefore, this study also proposed that impersonal-promiscuous sex, acceptance of violence, hostility toward women, and affective empathy can predict frequency of sexual assault behavior.

The impersonal-promiscuous sex, hostility toward women, acceptance of violence, and affective empathy discussed in this study have different constructs but are nonorthogonal. For example, people who have hostility toward women usually have general hostility (Malamuth et al., 1995) and therefore have a higher level of acceptance of violence. People who engage in impersonal-promiscuous sex have a reckless, playful, and unfaithful attitude toward sex, and this attitude can easily cause dissatisfaction in their partners and thus conflict. People with hostility toward women are more likely to engage sexual intercourse without affection. Therefore, this study predicted that hostility toward women and impersonal-promiscuous sex are related. Impersonal-

promiscuous sex, hostility toward women, and acceptance of violence can all occur because of a lack of affective empathy, and we predicted that these variables are correlated. Overall, we constructed the model illustrated in Fig. 1, and this model had two hypotheses: (a) impersonal-promiscuous sex, hostility toward women, acceptance of violence, and affective empathy affect the occurrence and frequency of sexual assault behavior; and (b) impersonal-promiscuous sex, hostility toward women, acceptance of violence, and affective empathy are correlated.

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## **Method**

Studies have shown that self-report criminal data have acceptable reliability and validity (Jolliffe, Farrington, Hawkins, Catalano, Hill, & Kosterrman, 2003; Loza & Green, 2003). Questionnaire surveys ensure more protection of participants' privacy than other methods (Koss, Gidycz, & Wisniewski, 1987). Moreover, internet questionnaire and traditional paper-based questionnaire exhibit equal reliability, validity, factor loading structure, and latent means (Yu & Yu, 2006). Therefore, in the present study, data were collected online through anonymous self-report questionnaire.

### *Participants*

The participants of the present study were men aged more than 20 years who live in Taiwan. The survey was conducted between April and July 2017. The online questionnaire was designed such that each question had to be answered; thus, no question was left unanswered. In total, 998 subjects were retrieved. Demographic information of the participants is as follows: age ranged from 20 to 55 years (mean =  $23.01 \pm 4.38$  years); most participants had a university or college degree (84.20%), followed by a postgraduate degree (11.30%), senior high school degree (3.50%), junior high school degree (0.60%), and elementary school degree (0.40%); 87.10% of the participants were raised by both parents, followed by the mother (6.10%), grandparents (3.10%), the father (2.40%), other people (0.90%), and other relatives (0.40%).

### *Procedure*

In this study, participants were recruited by posting messages on university websites and bulletin boards and on Facebook. The questionnaire was uploaded on

Google Cloud. The research purpose, risk and benefits, and ethical concerns were carefully explained on the homepage. The content of the questionnaire could not be linked to any personal data. Moreover, the participants were kindly reminded to pay attention to antivirus software and firewall to maintain appropriate security standards.

After the research data were entered into the computer, SPSS software was used for statistical analysis. Both the hard disk and computer are kept in the author's office. The account is password protected, and the disk is locked in a drawer in the office. The study results are for academic purposes only. This study signed a nondisclosure agreement with all people linked with the present study. For each participant who completed the questionnaire, a set of serial numbers was automatically generated using the computer after the questionnaire was sent out. The participants could use this serial number to redeem a convenience store gift coupon. The present study was approved by the ethical review board (REC number: 10503ES009).

### *Materials*

*Impersonal-promiscuous sex.* In this study, with reference to the related literature (Malamuth et al., 1995; Thompson, Swartout, & Koss, 2013) five items were formulated to measure impersonal-promiscuous sex: (1) frequency of sexual intercourse with people in the last 12 months (including sexual intercourse, oral sex, and anal sex): none, once every 2 or 3 weeks, once a week, once every 4 or 5 days, once every 2 or 3 days, or daily or more, coded sequentially as 1–6; (2) frequency of one-night stand experience in the last 12 months: none, once or twice, three to five times, six to ten times, ten to twenty times, or twenty or more times, coded sequentially as 1–6; (3) frequency of sex trade experience in the last 12 months: none, once or twice, three to five times, six to ten times, ten to twenty times, or twenty or more times, coded sequentially as 1–6; (4) the number of sexual partners in the last 12 months: none, one or two, three to five, six to ten, ten to twenty, or twenty or more, coded sequentially as 1 to 6; and (5) the number of times you have been unfaithful/extramarital affairs in the last 12 months: none, once or twice, three to five times, six to ten times, ten to twenty times, or twenty or more times, sequentially coded as 1–6. Through confirmatory factor analysis (CFA), all the estimates of factor loadings met the .50~.95 criterion and reached a significant level ( $p < .01$ ). The overall model fit, goodness-of-fit index (GFI) = .93, root-mean-square error of approximation (RMSEA) = .18, comparative fit index (CFI) = .91, incremental fit index (IFI) = .91, Tucker–Lewis index (TLI) = .82, and



standardized root-mean-square residual (SRMR) = .06, most indicators showed a good fit, the construct validity was verified. The scale had good internal consistency (Cronbach's  $\alpha = .80$ ).

*Hostility toward women.* This study employed the hostility toward women scale of Huang (2014), which has three dimensions: (1) poor relationship with women, (2) resentment toward women, and (3) no negative feelings toward women. The third dimension has the opposite meaning to the other two dimensions (and was constructed using negatively worded items). Research has suggested that the third dimension cannot distinguish between those who do and do not sexually assault others (Huang, 2014); therefore, the first two dimensions of Huang (2014) are required, and they have 10 items (e.g., 'I have poor relationships with women'; 'Occasionally, I feel irritated just because women are present'; 'Women usually use any possible means to achieve their goal'; and 'Women are largely responsible for mistakes I make'). The items were rated on a 6-point Likert scale (with 1 being 'strongly disagree' and 6 being 'strongly agree'). CFA was employed to determine the factor loadings of each indicator of the two dimensions, and the loadings were between .57 and .89, greater than .50 and thus reaching statistical significance ( $p < .01$ ). The overall goodness of fit of the model was favorable and as follows: GFI = .91; RMSEA = .12; CFI = .90; IFI = .90; TLI = .86; SRMR = .06. This demonstrated that the model had construct validity. The Cronbach's  $\alpha$  was .87.

*Acceptance of violence.* Velicer, Huckel, & Hansen (1989) constructed the Attitudes Toward Violence Scale, and this scale was translated into Chinese by Huang and Lin (2017). The Chinese version of the scale was shown to have sufficient reliability and validity. We used this Chinese scale as a measurement tool. The scale has 14 items including five subconstructs: penal code violence, armed forces, violence in war, corporal punishment, and partner violence. The participants' responses were evaluated on a 6-point Likert scale (1 = strongly disagree, 6 = strongly agree). Through exploratory factor analysis, five factors were obtained, corresponding to the five subconstructs of the scale (table 1); thus, the scale had construct validity. The five factors altogether could explain 78.23% of the variance of all the items. Regarding the content of each item composing each factor, the penal code violence and armed forces are related to legitimate violence, and the violence in war, corporal punishment, and partner violence are related to interpersonal violence. The Cronbach's  $\alpha$  of the scale achieved .85.

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*Affective empathy.* This study consulted a previous study (Reniers, Corcoran, Drake, Shryane, & Völlm, 2011) to construct an affective empathy scale. The scale had the following five items: ‘I feel sad when I see small injured animals’; ‘When I see other people being punished, I can relate to their feelings’; ‘When good things happen to others, I feel happy for them’; ‘I can feel other people’s emotions’; and ‘When I receive some form of honor, I hope that other people can also obtain the honor’. CFA was conducted on these items, and the analysis revealed that the factor loadings were between .70 and .80, greater than .50 and thus reaching statistical significance ( $p < .001$ ). The overall goodness of fit of the model was favorable and as follows: GFI = .96; RMSEA = .14; CFI = .96; IFI = .96; TLI = .91; and SRMR = .04, which also indicated that the model had construct validity. Its Cronbach’s  $\alpha$  was .87.

*Sexual aggression.* The Revised Sexual Experiences Survey proposed by Koss et al. (2007) was adopted. Participants were asked about the experiences and the number of times of sexual aggression in the past 12 months. According to the tactics used (verbal pressure, showing anger, drinking opportunities, threats of injury, and physical violence), and sexual contact with women (fondling; kissing; rubbing her private parts, such as lips, chest, intergluteal cleft, and hips; or taking off her clothes) or sexual intercourse (including oral sex, vaginal intercourse, or anal sex), sexual aggressors were divided into five types from moderate to severe degrees. Specifically, the participants sexually contacted women with any of the tactics used were classified as forced sexual contactors; those who attempted to have sexual intercourse with women with the tactics of verbal pressure or showing anger but for some reasons without achieving it were classified as attempted sexual coercers; those had sexual intercourse with women with the tactics of verbal pressure or showing anger were classified as sexual coercers; those who attempted to have sexual intercourse with women with the tactics of drinking opportunities, threats of injury, or physical violence but for some reasons without achieving it were classified as attempted rapists; those who had sexual intercourse with women with the tactics of drinking opportunities, threats of injury, or physical violence were classified as rapists. The occurrences of the five types of sexual aggression are presented in Table 2. Most (65.39%) participants perpetrated multiple types of sexual aggression; therefore, the total percentage for each type exceeded 100%. After

eliminating overlapping cases (for example, those who self-reported having raped women were excluded from those who coerced women), the number of occurrences and the percentage of different types of sexual aggression were presented in the right column of Table 2. Irrespective of the type of sexual aggression, of all 998 male participants, 130 (13.02%) people admitted to perpetrating acts of sexual aggression in the last 12 months.

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#### *Data analysis*

This study used the t test to determine differences in impersonal-promiscuous sex, hostility toward women, acceptance of violence, and affective empathy between a group of men who had sexually assaulted women and a group who had not. Additionally, binary logistic regression analysis was employed to examine the effect and explanatory power of impersonal-promiscuous sex, hostility toward women, acceptance of violence, and affective empathy. Stepwise regression and structural equation modeling were used to analyze the effect of impersonal-promiscuous sex, hostility toward women, acceptance of violence, and affective empathy on sexual assault frequency.

## **Results**

### *Descriptive Statistics and Correlation Between Variables*

Table 3 shows the descriptive statistics and correlations for each variable. Skewness and kurtosis indicated that the ages of participants were relatively concentrated in the young population. The participants tended to have a relatively high education level and to engage in low levels of impersonal-promiscuous sex. The levels of hostility toward women, acceptance of violence, and affective empathy in the participants were normally distributed.

Variable analysis revealed different correlations (no, weak, and moderate correlations) between the four variables of interest and sexual assault frequency (Table 4). No excessive overlap was discovered between the variables. However, acceptance of violence was only positively correlated with hostility toward women and was noncorrelated with the other variables. Therefore, we reexamined the five factors that comprise acceptance of violence and discovered that they were mostly positively correlated with each other. However, the factors were inconsistently related to sexual

assault frequency: partner violence was positively correlated with sexual assault frequency; armed forces and penal code violence were negatively correlated with sexual assault frequency; and corporal punishment for children and violence in war were not correlated with sexual assault frequency (Table 4). The five factors thus were mostly correlated with sexual assault frequency, but the correlations offset each other, resulting in no total correlation.

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*Using Impersonal-promiscuous Sex, Hostility Toward Women, Acceptance of Violence and Affective Empathy to Predict Sexual aggression*

An independent-sample t test was used to examine the average difference in each variable between the sexual-assault and non-sexual-assault groups. The results revealed that the sexual-assault group had more impersonal-promiscuous sex and were more hostile toward women. The sexual-assault group also had lower affective empathy and a lower education level. No significant intergroup difference was discovered in age and acceptance of violence (Table 5). Fewer men in the sexual-assault group came from a two-parent home compared with the non-sexual-assault group (being raised by two parents was coded as 1, and other upbringing conditions were coded as 2; Cramer's  $V = .08$ ,  $p = .01$ ). Acceptance of violence comprised five factors, and the sexual-assault group was found to have higher acceptance levels toward partner violence, corporal punishment of children, and violence in war. However, they also had lower acceptance of penal code violence and the armed forces. The total acceptance of violence was obtained from the average scores of the five aforementioned factors. The positive and negative effects of the factors offset each other; therefore, no total significant difference was discovered between the two groups.

We subsequently used binary logistic regression analysis for examination. This analysis suggested that education level and being raised in a two-parent home had an effect on sexual assault behavior; thus, the two variables were added to the regression model. The results revealed that impersonal-promiscuous sex, hostility toward women, affective empathy, and education level were independent predictors of sexual assault behavior, but acceptance of violence was not (Table 6). The Hosmer–Lemeshow test showed that the goodness of fit of the model was ( $\chi^2 = 6.83$ ,  $df = 8$ ,  $p = .56$ ), and the overall model could explain 19.9% (Nagelkerke  $R^2$ ) of the variance in sexual assault

behavior.

The factors comprising acceptance of violence had inconsistent effects on sexual assault behavior. We therefore named the aggregation of three factors (partner violence, corporal punishment for children, and violence in war) as interpersonal violence, and the aggregation of penal code violence and armed forces were named legitimate violence. These two aggregations were added into the binary logistic regression. Impersonal-promiscuous sex, hostility toward women, interpersonal violence, legitimate violence, and affective empathy were then found to be predictors of sexual assault behavior (Table 6). The Hosmer–Lemeshow test indicated the model’s goodness of fit ( $\chi^2 = 4.51$ ,  $df = 8$ ,  $p = .81$ ), and the overall model was discovered to explain 23.7% of the variance in sexual assault behavior. In terms of the odds ratio, an increase in impersonal-promiscuous sex, hostility toward women, interpersonal violence, affective empathy and (legitimate violence) increased (decreased) the likelihood of engaging in sexual assault behavior. The impersonal-promiscuous sex variable had the highest odds ratio. A unit increase in impersonal-promiscuous sex resulted in a 2.22-fold increase in the likelihood of engaging in sexual assault behavior within 1 year.

Other than evaluating overall sexual assault, this study also examined the effect of these variables on three types of sexual assault, sexual contact, sexual coercion, and rape. Logistic regression analysis revealed that impersonal-promiscuous sex, hostility toward women, interpersonal violence, legitimate violence, and affective empathy were all predictors of sexual contact and explained 25.50% of the variance. Impersonal-promiscuous sex, hostility toward women, interpersonal violence, and legitimate violence were all predictors of sexual coercion and explained 28% of its variance. Finally, impersonal-promiscuous sex, interpersonal violence, legitimate violence, and affective empathy were all predictors of rape and explained 36% of its variance.

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*Using Impersonal-promiscuous Sex, Hostility Toward Women, Acceptance of Violence and Affective Empathy to Predict Sexual aggression Frequency*

Acceptance of violence was not correlated with sexual assault frequency. Therefore, this study used impersonal-promiscuous sex, hostility toward women, interpersonal violence, legitimate violence, and affective empathy as independent variables for predicting sexual assault frequency. Additionally, both education level (r

=  $-.19$ ,  $p < .01$ ) and two-parent home or otherwise ( $t = -3.02$ ,  $df = 139.87$ ,  $p < .01$ ) were correlated with sexual assault frequency, and we thus included these two variables. Stepwise regression was employed and revealed that impersonal-promiscuous sex, affective empathy, education, legitimate violence, interpersonal violence, two-parent home or otherwise, and hostility toward women (according to their sequence of entering the model) were all predictors of sexual assault frequency. The model explained 18.3% (adjusted) of the variance in sexual assault frequency. Impersonal-promiscuous sex alone could explain 8.40% of the variance in sexual assault frequency, and affective empathy independently explained 3.80% of the variance. The variance inflation index of the overall model was lower than 2, and this showed that no collinearity existed between the independent variables. The Durbin–Watson test obtained a value of 1.90. This was close to 2 and indicated the high probability of mutual independence between error terms.

We also conducted structural equation modeling regarding the effect of impersonal-promiscuous sex, hostility toward women, interpersonal violence, legitimate violence, and affective empathy. Impersonal-promiscuous sex comprised five indicators. Hostility toward women and its two factors were made into packaging. Interpersonal violence and its three factors were indicators. Legitimate violence and its two factors were also indicators. Affective empathy comprised five indicators. Endogenous latent variable was sexual assault frequency. We conducted square root conversion because of high skewness and kurtosis. This made the distribution of sexual assault frequency closer to normal distribution, which facilitated model estimation and comparison of conversion with nonconversion. The analysis results revealed the model's overall goodness of fit before the conversion of sexual assault frequency. Six out of 10 indicators were found to have goodness of fit before the conversion (Table 7). The estimated route of the standardized parameter showed that hostility toward women and affective empathy were not predictors of sexual assault frequency, but all other variables were ( $p < .01$ ). The overall model explained 24% of the variance in sexual assault frequency. When sexual assault frequency was converted to a square root, 7 out of the 10 indicators had goodness of fit in terms of the model's overall goodness of fit (Table 7). Estimation of the standardized parameter demonstrated that hostility toward women and affective empathy were not predictors of the square root of sexual assault frequency ( $p < .01$ ). The variance in frequency of sexual assault explained by the overall

model was increased to 30%.

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## **Discussion**

Men's sexual assault of women has three easily observable components: sex, violence, and gender inequality. Therefore, we used three representative variables (impersonal-promiscuous sex, acceptance of violence, and hostility toward women) to examine the effect of these components on sexual assault occurrence and frequency. Additionally, the effect of affective empathy has rarely been discussed in studies. Therefore, we examined the effect of affective empathy. The results revealed that impersonal-promiscuous sex, hostility toward women, and affective empathy were predictors of sexual assault behavior, but acceptance of violence was not.

We also conducted detailed analysis regarding the acceptance of violence and discovered that three of the factors comprising acceptance of violence—partner violence, corporal punishment for children, and violence in war—could be grouped as interpersonal violence, which was a positive predictor of sexual assault frequency. Penal code violence and armed forces were termed legitimate violence, which was a negative predictor of sexual assault frequency. Acceptance of violence comprised these two factor combinations (one positive and one negative), and the two offset each other, resulting in acceptance of violence being nonpredictive of sexual assault frequency. This result does not support our hypothesis or research findings obtained outside Taiwan and is thus worthy of further investigation.

In Western theories, acceptance of legitimate violence is positively correlated with sexual assault. For example, Baron and Straus (1989) used the violent activities permitted by government and society (e.g., number of those given the death penalty, level of violence in news reports, and population participating in American football and hunting) and a society's supportive attitude toward violent behavior (e.g., acceptance of the death penalty, attitude toward armament expansion, gun control, and police officers' use of violence to sanction illegal activities) as indicators for measuring legitimate violence. The results suggested that the level of support for legitimate violence was positively correlated with the forcible rape rate. The operational definition of legitimate violence in this study was not identical to that of Baron and Straus, but the two definitions do majorly correspond. We conclude that an inconsistent result was

obtained in this study because of sociocultural differences between America and Taiwan.

American society tends toward individualism (Triandis, 1988; Yang, 2005) and considers the pursuit of personal well-being, power, and achievement to be more important than collective interest. Consequently, legitimate violence tends to be considered a type of violence in American society. By contrast, Chinese culture tends toward collectivism and thus considers the pursuit of collective and societal interests to be more important than individual well-being, power, and achievement. Therefore, strong troops, expansion of armaments, and violent punishments are considered necessary because they obtain achievement, security, and well-being of the nation or society. Given these cultural differences, the higher acceptance of legitimate violence among sexual assaulters than nonassaulters in American society can be understood. This is because both legitimate and illegitimate violence are considered violence, and for sexual assaulters, violence is more acceptable. By contrast, legitimate violence may not be considered violence in Chinese culture. Instead, legitimate violence is considered a necessary means for establishing social order and the prosperity of the country. The collective safety and insurance of dignity of a society can be achieved through legitimate violence, and thus legitimate violence should be supported. In this cultural context, legitimate violence and interpersonal violence are unconnected. Legitimate violence is regarded authoritative and respectable because it is used to ensure collective safety. Illegitimate violence (e.g., interpersonal violence) is regarded illegal and unrespectable because it arises from personal emotions or self-interest. Therefore, the general public is more accepting of legitimate violence. From the perspective of personal interests and behavioral rationalization, the general public's acceptance of legitimate violence corresponds to their interests. The general public does not engage in illegitimate violence and has no need to rationalize their behavior; thus, they are unlikely to accept illegitimate violence. Those who commit sexual assault engage in illegitimate violence to protect their interests, and such individuals are less likely to accept legitimate violence such as severe punishment for violent crimes and the use of the armed forces. Those who commit sexual assault may show acceptance to rationalize their behavior. This can be inferred from their lower acceptance of penal code violence in this study. This is the result of thinking from the viewpoint of self-interest. By contrast, the general public does not engage in sexual assault and therefore has the



viewpoint that violent crimes should be severely punished.

Affective empathy was correlated with sexual assault behavior in this study. This indicates that the sexual-assault group lacked affective empathy and were thus more willing to inflict hurt. Stepwise regression analysis revealed that affective empathy was an independent predictor of frequency of sexual assault. However, the structural equation modeling findings showed that affective empathy was not an independent predictor.

Frequency of sexual assault can be considered a continuous variable. We conducted stepwise regression analysis and structural equation modeling analysis and determined whether the results obtained were consistent. Stepwise regression analysis found that impersonal-promiscuous sex, affective empathy, legitimate violence, interpersonal violence, and hostility toward women were predictors of sexual assault frequency after excluding the mutual influences of the variables. However, structural equation modeling analysis indicated that only impersonal-promiscuous sex, legitimate violence, and interpersonal violence were predictors of sexual assault frequency after excluding the mutual influences of the variables. The difference in the results obtained using these two analytical methods is related to variable definition. In the regression analysis, each variable was measured using the average of the scores of all items. However, in the structural equation modeling, each variable was defined by indicators (items for measurement). Therefore, the structural equation modeling reflected the original condition of the variables, not their sum or average.

Structural equation modeling indicated that impersonal-promiscuous sex, legitimate violence, and interpersonal violence together explained 24% of the variance in sexual assault frequency. When sexual assault frequency was converted into a square root, these variables explained 30% of the variance. This may have been because the distribution of sexual assault frequency was closer to normal after conversion to a square root, with parameter estimation thus more stable.

Our result implies that the men coerced women to engage in sexual intercourse or contact, this type of behavior is referred to as sexual aggression, sexual violence, or sexual assault in academia. Such behavior has both sex and violence components. Higher hostility toward women among the sexual-assault group suggested the high accuracy of several scholars' observation of gender bias and gender inequality characteristics in those who commit sexual assault (Brownmiller, 1975; Burt, 1980;

Russell, 1984). Moreover, impersonal-promiscuous sex, acceptance of violence, and hostility toward women—which represent sex, violence, and gender inequality—were correlated in the present study.

This study was one of few studies conducted in Taiwan to use a community population as the sample and construct a theoretical model to explain sexual assault occurrence and frequency. The importance of the theoretical model is that it will extend the relevant research in the future (Huang, 2015). Our community sample was closer to the real world situation than the studies using inmate sample. Therefore, in the future, scholars can investigate the cause of impersonal-promiscuous sex, hostility toward women, and acceptance of violence and compare Western and Chinese societies.

In terms of application, this study demonstrated that impersonal-promiscuous sex, hostility toward women, legitimate violence, interpersonal violence, and affective empathy were predictors of sexual assault behavior. Secondary school and university students could be evaluated, and appropriate attention and counseling should be given to students who score highly in these factors. Those who exhibit signs of potentially committing sexual assault can be transferred to specialized agencies for treatment. Moreover, structural equation modeling in this study revealed that impersonal-promiscuous sex, legitimate violence, and interpersonal violence were correlated with sexual assault frequency. Thus, these measures can be used as a tool for evaluating sexual assault recidivism.

Variables such as impersonal-promiscuous sex, hostility toward women, legitimate violence, interpersonal violence, and affective empathy are less extreme and sensitive measures compared with proclivity or likelihood to commit rape (Malamuth, 1988). Therefore, the measurements we employed were less intrusive and thus more convenient.

In terms of future research, this study used a community population as the target. Future studies may once again use prisoners as the target of investigation to test the hypothesis of this study, which would help confirm the model's external validity. Furthermore, prisoners who have been imprisoned due to sexual assault may exhibit a reserved attitude toward severe punishment of violent crime. Consequently, the difference in attitude of two types of prisoners (those who did and did not commit sexual assault) toward legitimate violence might differ, and this requires verification.

### **Declaration of Conflicting Interests**

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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Table 1 Exploratory factor analysis (EFA) of acceptance of violence ( $N = 998$ )

Item	PV	CP	AF	VW	PCV
Violent criminals should be punished with violence	.01	-.11	.02	-.01	<b>.92</b>
The death penalty should be a part of the penal code	-.01	.10	.29	-.22	<b>.72</b>
Those who serve sentences in prison can be treated harshly	.02	.04	-.21	.29	<b>.72</b>
A country should maintain a strong military at all times	.02	-.01	<b>.89</b>	.05	.06
A country should manufacture weapons	.01	-.01	<b>.93</b>	.09	-.03
Wars are necessary	-.01	-.01	.25	<b>.80</b>	-.14
It is acceptable that during war, the civilian population of the enemy can be killed	.05	-.02	-.13	<b>.87</b>	.03
The government has the power to attack people illegally entering into the country	-.08	.07	.11	<b>.56</b>	.17
Disobedient children should receive corporal punishment	-.05	<b>.94</b>	.04	-.02	-.03
Naughty children should be beaten to prevent them from continuing to make trouble	.07	<b>.81</b>	-.04	.10	.00
Corporal punishment of children can make them more mature and responsible	.00	<b>.94</b>	-.02	-.05	-.01
If your partner is unfaithful, you can hit him/her	<b>.90</b>	.02	.00	-.05	.07
If your partner is sarcastic, you can slap him/her	<b>.94</b>	.03	.00	-.01	-.01
If your partner is provocative, you can hit him/her	<b>.95</b>	-.04	.03	.04	-.05

PV: partner violence; CP: corporal punishment; AF: armed forces; VW: violence in war; PCV: penal code violence.



Table 2 Percentage and occurrences of all types of sexual aggression in the last 12 months

Types of sexual aggression	Occurrences (including overlapping cases)	Occurrences (excluding overlapping cases)
Sexual contact	103 (10.3%)	28 (2.8%)
Attempted sexual coercion	53 (5.3%)	6 (0.6%)
Sexual coercion	71 (7.1%)	21 (2.1%)
Attempted rape	51 (5.1%)	12 (1.2%)
Rape	63 (6.3%)	63 (6.3%)
Total sexual aggression	130 (13.0%)	130 (13.0%)

Table 3 Descriptive statistics for each variable ( $N = 998$ )

	Min	Max	M	SD	S	K
AGE	20.00	55.00	23.01	4.38	3.17	13.33
EDU	1.00	5.00	4.05	.46	-1.2	11.03
IPS	1.00	6.00	1.43	.68	2.95	12.30
HTW	1.00	6.00	2.24	.95	.57	-.18
AV	1.00	6.00	3.03	.80	.14	.17
AE	1.00	6.00	4.42	.98	-.81	1.05
SA	0.00	84.00	1.83	8.28	6.03	40.12

S: skewness; K: kurtosis; EDU: education; IPS: impersonal-promiscuous sex;  
 HTW: hostility toward women; AV: acceptance of violence; AE: affective empathy;  
 SA: sexual aggression

Table 4 Correlation matrix ( $N = 998$ )

	AGE	EDU	IPS	HTW	AV	PV	CP	AM	VW	PCV	AE
AGE											
EDU	.11**										
IPS	.12**	-.09**									
HTW	-.03	-.01	.07*								
AV	.06	.04	.05	.30**							
PV	-.01	-.03	.12**	.32**	.58**						
CP	.04	.00	.08**	.24**	.80**	.40**					
AF	.06	.14**	-.08*	.06*	.53**	-.02	.24**				
VW	.05	.04	.05	.24**	.76**	.33**	.47**	.38**			
PCV	.06*	.04	-.07*	.12**	.69**	.12**	.39**	.46**	.41**		
AE	-.03	.09**	-.08*	-.19**	-.03	-.14**	-.05	.21**	-.17**	.13**	
SAF	.04	-.19**	.29**	.14**	.02	.21**	.05	-.22**	.06	-.11**	-.22**

EDU: education; IPS: impersonal-promiscuous sex; HTW: hostility toward women;

AV: acceptance of violence; PV: partner violence; CP: corporal punishment;

AF: armed forces; VW: violence in war; PCV: penal code violence;

AE: affective empathy; SAF: sexual aggression frequency

\* $p < .05$ ; \*\* $p < .01$

Table 5 Mean difference (*t* test) for sexual aggressors and nonsexual aggressors for each variable (*N* = 998)

Variable	Sexual aggression	No.	Mean	Standard deviation	<i>t</i> value
Age	Yes	130	23.22	4.26	.59
	No	868	22.98	4.39	
Education level	Yes	130	3.92	.77	-2.33*
	No	868	4.07	.38	
IPS	Yes	130	1.95	1.05	6.41**
	No	868	1.35	.57	
Hostility toward women	Yes	130	2.82	.92	4.65**
	No	868	2.42	.91	
Acceptance of violence	Yes	130	3.05	.97	1.52
	No	868	2.91	.76	
Partner violence	Yes	130	2.15	1.25	4.65**
	No	868	1.62	.88	
Corporal punishment	Yes	130	3.04	1.26	3.03**
	No	868	2.69	1.19	
Violence in war	Yes	130	3.08	1.31	2.39*
	No	868	2.81	1.19	
Armed forces	Yes	130	4.06	1.54	-4.35**
	No	868	4.68	1.22	
Penal code violence	Yes	130	3.54	1.40	-2.32*
	No	868	3.84	1.21	
Affective empathy	Yes	130	3.90	.70	-5.19**
	No	868	4.50	.54	

IPS: impersonal-promiscuous sex

\**p* < .05; \*\**p* < .01

Table 6 Binary logistic regression analysis: Predicting sexual aggression

DV	IV	B	Wald	Exp(B)	HL( $\chi^2$ )	R <sup>2</sup> (%)	PA (%)
Sexual Aggression	Impersonal sex	.86	45.66**	2.37	6.83	19.9	88.0
	Hostility toward women	.35	9.35**	1.43			
	Acceptance of violence	.08	.39	1.09			
	Affective empathy	-.46	22.19**	.63			
	Education level	-.43	4.11*	.65			
	Person(s) who raised	.07	.06	1.08			
Sexual Aggression	Impersonal sex	.80	36.01**	2.22	4.51	23.7	88.2
	Hostility toward women	.33	7.37**	1.39			
	Interpersonal violence	.18	15.17**	1.19			
	Legitimate violence	-.23	17.94**	.79			
	Affective empathy	-.30	8.25**	.74			
	Education level	-.33	2.43	.72			
	Person(s) who raised	.11	.14	1.12			

DV: dependent variable; IV: independent variable; HL: Hosmer-Lemeshow goodness-of-fit test; PA: prediction accuracy.

\* $p < .05$ ; \*\* $p < .01$

Table 7 Structural equation modeling of sexual assault frequency and its square root model

		Sexual assault frequency		Square root of sexual assault frequency	
Goodness-of-fit indicator	Goodness-of-fit standard	Examination result	Goodness-of-fit judgment	Examination result	Goodness-of-fit judgment
<i>Absolute indicators</i>					
<i>WLS<math>\chi^2/df</math></i>	< 3	6.51	N	6.44	N
<i>SRMR</i>	<.08	.06	Y	.06	Y
<i>RMSEA</i>	<.08	.07	Y	.07	Y
<i>GFI</i>	>.90	.92	Y	.92	Y
<i>Relative indicators</i>					
<i>NFI</i>	>.90	.88	N	.88	N
<i>TLI</i>	>.90	.87	N	.87	N
<i>IFI</i>	>.90	.89	N	.90	Y
<i>Simplified indicators</i>					
<i>PNFI</i>	>.50	.69	Y	.70	Y
<i>PGFI</i>	>.50	.65	Y	.65	Y
<i>PCFI</i>	>.50	.71	Y	.71	Y

N: no; Y: yes

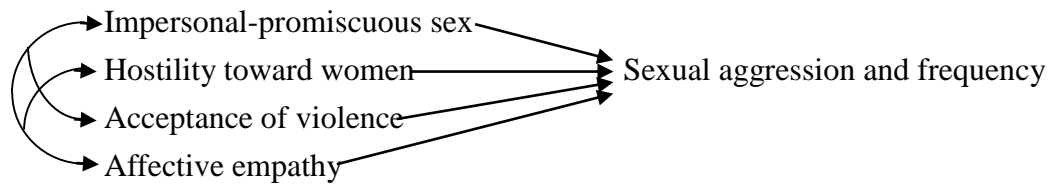


Fig. 1 Study framework

# 性雜亂、敵視女性、暴力接受度與情感同理心

## 對性攻擊的影響

黃軍義<sup>1</sup>、林耀盛<sup>2</sup>、李嘉豐<sup>3</sup>

### 摘要

本研究檢視性雜亂、敵視女性、暴力接受度與情感同理心對性攻擊及其發生次數的影響。以無記名自陳式問卷在線上蒐集資料，共計有 998 位居住於台灣的成年男性接受問卷調查。結果顯示有 13% 的參與者自陳在最近一年內曾從事性攻擊。性雜亂、敵視女性與情感同理心皆可預測性攻擊，但暴力接受度則否。就暴力接受度做進一步分析，發現組成此構念的人際暴力與合法暴力兩成分，各自對性攻擊具有正向與負向關聯，在相互抵銷的效果下，暴力接受度對性攻擊不具預測力。此外，結構方程模型分析顯示，性雜亂、人際暴力、與合法暴力接受度（將暴力接受度的此二成分分開），皆可預測性攻擊的次數。文末就研究結果的意涵、實務應用、研究限制與後續研究方向提出討論。

**關鍵詞：**同理心、性攻擊、性雜亂、暴力接受度、敵視女性

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<sup>1</sup> 黃軍義為玄奘大學應用心理學系教授。

<sup>2</sup> 林耀聖為國立台灣大學心理系教授。

<sup>3</sup> 李嘉豐為國立清華大學研究生。

通訊作者為黃軍義教授，Email：[jiun@hcu.edu.tw](mailto:jiun@hcu.edu.tw)

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