The Pleasure Principle: Impulsivity Overpowers Condom Use Efficacy among Men who have Sex with Men (MSM)

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Despite continuous efforts to control the prevalence of HIV/AIDS in the Philippines, the rate of the spread of the virus has skyrocketed. Risky sexual practices among men-who-have-sex-with-men have been identified as one of the top contributors for the heightened spread of HIV/AIDS. There have been growing studies looking into self-efficacy and impulsivity as psychological factors that carry impact toward sexual practices. In the present study, both self-efficacy toward condom use and impulsivity were tested as predictors of risky sexual practices. A total of 93 MSM participated in the survey. Results of hierarchical regression analysis indicates a cooperative suppression effect, that is, the presence of impulsivity as a suppressor increases the capacity of both self-efficacy toward condom use and impulsivity in predicting risky sex. In line with cognitive-experiential self-theory, implications of the findings indicated that the automatic and pleasure-driven impulsivity overpowers the deliberative and reason-oriented ability and knowledge toward condom use in engaging in risky sex.

Keywords: Self-efficacy, impulsivity, risky sex

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Introduction

In the heat of the moment, people lose their sense of rationality and caution. This may lead to unfortunate circumstances such as secret affairs and broken hearts, unplanned pregnancies, and the probable transmission of the Human Immunodeficiency Virus (HIV) – a virus that attacks the immune system and may be transmitted form one person to another through the exchange of bodily fluids, needle sharing, and sexual intercourse. Although global HIV cases are starting to subside (UNAIDS, 2015), there is a continuous increase in the rate of HIV in the Philippines (DOH, 2016).

Numerous studies have been conducted to tackle this matter. One factor that has caused the spread of HIV among MSM is the misuse of condoms, or lack thereof (DOH, 2015). A strong predictor of condom use is increased self-efficacy (Southerland, 2003). However, self-efficacy may not be enough, as the heat of the moment may overpower knowledge, control, and awareness of the importance of safe sex (Ariely & Loewenstein, 2006). Impulsivity—the failure to consider the negative outcomes of behaviors (Enticott & Ogloff, 2006)—is also found to increase risky sexual practices (e.g., Derefinko et. al., 2014). With this, we investigated the predictive roles of both self-efficacy in condom use and impulsivity toward engagement in risky sexual practices among MSM.

The Philippines confronts problem of HIV in a number of ways including the involvement of local government agencies, support from non-government organizations, integrating HIV education into the school curriculum, and anti-discrimination laws of individuals infected with HIV and those who belong to the high-risk group (Mateo, Poblete, & Sarol, 2004).

There has been an increase of 10 percent in the number of HIV/AIDS cases in the Philippines compared to 2015 (DOH, 2016). Men who engage in sexual relations with men is currently the predominant mode transmission of HIV, based on the March 2016 report of the Department of Health. The cases of HIV/AIDS in the Philippines are increasing amid the global decline (UNAIDS,

2015). Although the quantity of heterosexual transmissions has remained stable, the yearly increase among MSM is observable (DOH, 2016). DOH (2015) has reported that among the MSM respondents, 32 percent claimed not to have used a condom the last time they had anal sex, whereas 31 percent claimed never to have used a condom during anal sex. With these responses, we attempted to provide a social psychological understanding of the factors that may influence MSM in their engagement in risky sexual practices.

First is the influence of self-efficacy on risky sexual practices. Self-efficacy focuses on the belief that one possesses the ability to carry out behaviors that may lead to desired results (Strecher, McEvoy DeVellis, Becker, & Rosenstock, 1986). Self-efficacy has three dimensions, namely magnitude, strength, and generality. Bandura (1994) refers to magnitude as the level of difficulty of a task an individual feels is met when accomplishing it. The amount of conviction an individual has about performing successfully at diverse levels of difficulty defines strength. Generality refers to the degree to which the outcome is true across situations.

Self-efficacy has been an influential factor in studies about sexual practices. In fact, two of the most studied models related to health behavior such as Health Belief Model (Champion & Skinner, 2008) and Theory of Planned Behavior (Ajzen, 1991) include self-efficacy as one of the factors. There have even been studies that make use of these models to predict risky sexual practices (e.g., Vanlandingham, Suprasert, Grandjean, & Sittitrai, 1995). In general, self-efficacy is believed to be a powerful influence on changes in behavior. People must not only have the incentive to take action, or feel threatened by their current behavioral patterns, in order to successfully change their behavior; they must also feel capable of performing such change (Rosentock, Strecher, & Cecker, 1988). Success, therefore, requires a strong belief in one's ability and competence (Bandura, 1994).

Several studies have pointed to the contribution of self-efficacy toward the increasing practice of safe sex. For example, African males and females who have high self-efficacy use condoms during their sexual encounters (Sayles et al., 2006). Men who have high self-efficacy also negotiate safer sex practices with regular or casual sex partners (Bauermeister et al., 2014). Taiwanese immigrants in the US who had low self-efficacy were more likely to have multiple sex partners, and used condoms inconsistently (Lin, Simoni, & Zemon, 2005). Thus, self-efficacy is an influential factor toward sexual practices.

In general, there have been early studies linking self-efficacy and risk-reducing behaviors among men who have had sex with men (Aspinwall et al., 1991). However, the relationship between self-efficacy and HIV-risk-reducing behaviors has not been well-supported in studies using global self-efficacy measures (Forsyth & Carey, 1998). It has been suggested that the measure of self-efficacy must be particular to both the circumstance in which the behavior will happen, and the level of test (or obstructions to successful execution) in that circumstance (Murphy, Stein, Schlenger, & Maibach, 2001). Thus, we focused on the self-efficacy of MSM in terms of their condom use.

Another interesting factor that influences sexual practices is impulsivity – hasty behavior that neglects the negative consequences of engaging in sex. While functional impulsivity—which is the ability to make decisions when it is necessary—exists, there is also dysfunctional impulsivity, or the inability to consider consequences before taking action (Dickman, 1990). Dysfunctional impulsivity has been linked to risk-taking (Zadravec, Bucik, & Socan, 2005) and potentially dangerous acts like engaging in unsafe sexual behaviors including one-night stands and having different sex partners (Macapagal, Janssen, Fridberg, Finn, & Heiman, 2011). Meyer (2013) suggests that impulsivity is linked to sexual risk-taking and that higher impulsivity results in a higher number of sexual partners and more sexual encounters. One of the reasons for the spread of HIV is the risky behaviors and high impulsivity of youth, thus explaining why they are more prone to HIV compared to adults (Kotchick, Shaffer, & Forehand, 2001).

Dévieux and colleagues (2002) have found that highly impulsive individuals reported greater perceived susceptibility to HIV and less sexual self-efficacy. Their study is particularly important to our argument regarding the association of self-efficacy, impulsivity, and risky sexual practices. In their attempt to extend the studies on impulsivity and HIV-risk behaviors to adolescent offenders, they have corroborated the empirical findings that impulsivity is indeed a risk factor for acquiring HIV/AIDS. In our study, we attempted to investigate these associations among MSM as they are an at-risk population, especially in the Philippines. Moreover, high impulsivity was also reflective of less sexual self-efficacy and less favorable sexual attitudes, indicating that impulsivity somehow lessens an individual's protective capacity against risky sexual practices (Dévieux et al., 2002). In our study, we predict that both impulsivity and self-efficacy are influential factors toward risky sexual practices.

In this connection, Epstein's (2013) Cognitive-Experiential Self-Theory (CEST) suggests that impulsivity as a disposition is resistant to change and can only be modified through repeated intense experiences. In CEST, there are two systems influencing one's behavior. First, the experiential system is the effortless and automatic system that rests on emotions and pleasant experiences. In an emotion-charged event such as engaging in sex, the experiential system instantly activates memories related to it, and if those memories make the individual feel good, then actions and thoughts related to attaining similar feeling is produced. We argue that impulsivity among MSM may appear to be a disposition that they acquire through repeated exposure to risky sexual practices that elicit pleasant feelings. In addition, impulsivity requires less effort, is automatically activated, and even lacks reflective thought processes (Crews & Boettiger, 2009; Strack, & Deutsch, 2004). This suggests that impulsivity is a disposition reflective of an experiential system.

On the other hand, self-efficacy toward condom use reflects a rational system. In CEST, a rational system is the active and deliberative system in charge of conscious thoughts. One's knowledge, capacity, and deliberative efforts toward condom use, or self-efficacy toward condom use in general, are indicative of being part of a rational system. In addition to self-efficacy, which may be influenced by educating individuals about proper health behaviors, the individual's impulsivity can also affect his/her health behaviors—in this case, engaging in risky sexual practices.

To date, few studies have looked into the combined roles of self-efficacy and impulsivity toward risky sexual practices among MSM. Through a survey, we looked into the roles of both impulsivity and self-efficacy in predicting risky sexual practises among MSM.

METHODS

Participants

There were 93 men who have had sex with men over the past 12 months who participated in the study. The age of the participants ranged from 18 to 35 years old *($M = 23.5$ years, $SD = 4.3$ years)*. The sample consists of gay men *($N = 44$),* bisexual men *($N = 37$),* and cisgender men *($N = 12$)*.

Measures

The UPPS Impulsive Behavior Scale (Whiteside & Lynam, 2001) was used to measure impulsivity. It is a 45-item self-report measure (4-point rating scale) used with adults and adolescents to identify separate personality facets categorized under the term "impulsivity". UPPS has four subscales, namely urgency (e.g., I always keep my feelings under control), (lack of) premeditation (e.g., Before making up my mind, I consider all the advantages and disadvantages), (lack of) perseverance (e.g., I almost always finish projects that I start), and sensation seeking (e.g., I generally seek new and exciting experiences and sensations). In our study, a higher score indicates higher impulsivity. In the actual data set, the measure yielded a strong reliability coefficient ($\alpha = .929$).

The Condom Use Self-Efficacy Scale (Brien, Thombs, Mahoney, & Wallnau, 1994) was used to measure self-efficacy for condom use. It is a 15-item measure (4-point rating scale) that assesses one's perception of their ability to use condoms and also to discriminate among the three types of condom users: non-users, irregular, and ritualistic. Sample items include "I feel confident in my ability to put a condom on myself or my partner" and "I feel confident that I would remember to use a condom even if I were high". In our study, a higher score indicates higher condom use efficacy. In the actual data set, the measure yielded a strong reliability coefficient ($\alpha = .759$).

To measure risky sexual practices, the researchers created a checklist of different risky sexual behaviors such as failure to use condoms, participating in simultaneous sex partnerships, having sex with random people, and having sex under the influence of alcohol consumption. There are 13 items in which participants responded whether they have engaged in a specific sex behavior or not over the past 12 months. (See Appendix A).

Procedure

Through a pen-and-paper survey, we recruited male participants with an inclusion criterion of their having had sex with men over the past 12 months. Participants were recruited through snowball sampling. Initial members of the snowball sample were college students or came from salons; these participants then referred the survey to other target samples from different salons, universities, and BPO companies. Men who participated in the study were asked to give their informed consent and were assured that whatever information they disclosed would remain confidential and used strictly for research purposes.

RESULTS

Both correlation and regression analyses were conducted to look into the association and predictive roles of self-efficacy and impulsivity toward risky sexual practices. Further inspection of the data was also employed to assert the presence of the suppression effect.

Descriptive statistics indicate that the participants exhibited relatively low engagement in risky sexual practices (*M = 3.84, SD = 2.96, min = 0, max = 11*), relatively high engagement in impulsivity (*M = 107.05, SD = 18.96, min = 60, max = 146*), and relatively high self-efficacy toward condom use (*M = 44.76, SD = 6.9, min = 22, max = 60*).

Moreover, results of the bivariate correlation indicated that self-efficacy toward condom use was not associated with risky sexual practices ($r = .145$, $p > .05$). Interestingly, increased impulsivity was associated with increased risky sexual practices ($r = .248$, $p < .01$) and low self-efficacy toward condom use ($r = -.268$, $p < .01$).

Hierarchical regression analysis was used to look into the predictive capacity of self-efficacy only, and the combined self-efficacy and impulsivity toward risky sexual practices. When self-efficacy only was entered to predict risky sexual practices, no significant result was found [$F(1, 91) = 1.94$, $p = .167$, $R^2 = .021$; $\beta = .145$, $t = 1.39$, $p = .167$]. When impulsivity was added to the equation, the result was significant [$F(2, 90) = 5.54$, $p = .005$, $R^2 = .110$]. In this new predictive model, impulsivity ($\beta = .309$, $t = 2.996$, $p = .004$) showed relatively more predictive capacity than self-efficacy ($\beta = .228$, $t = 2.2$, $p = .03$) in predicting risky sexual practices. It was also noted that the standardized beta coefficient of self-efficacy toward condom use increased upon the presence of impulsivity (*from .145 to .228*). The presence of impulsivity added approximately 9 percent to the overall predictive power of the model (*from R^2 of .021 to R^2 of .110*). Thus, impulsivity seems to be what Horst (1941) called a suppressor variable. This indicates that the presence of both impulsivity and self-efficacy toward condom use better predict risky sexual practices.

Although the suppression effect is interesting, there are continued arguments that such an effect seems to be only a statistical artifact not warranting meaningful interpretations (Ghiselli, 1972). However, renewed interest in the suppression effect indicated that proper inspection of data and ruling out of other statistical explanations may suggest the presence of a suppression effect (Watson, Clark, Chmielewski, & Kotov, 2013). Thus, we opted to further inspect the data set so as to examine the presence of the suppression effect.

We employed mean-centering to all our variables to reduce multicollinearity, ensure normal distribution or avoid Poisson distribution (especially because risky sexual practices were measured through counts), and provide a meaningful interpretation of results (Cronbach, 1987; Kreft, de Leeuw, & Aiken, 1995). Aside from the assumption of a linear relationship among the variables, we also tested the other assumptions of multiple linear regression analysis. First, the data set met the assumption that error terms are normally distributed through the visual inspection of the normal probability plot. Second, there was no multicollinearity in our data set because the correlation of self-efficacy and impulsivity was not too large ($r = -.268, p < .01$), and collinearity statistics of these independent variables such as Variance Inflation Factor ($VIF_{self\text{-}efficacy} = 1.078; VIF_{impulsivity} = 1.078$) was not greater than 10 and Tolerance ($Tolerance_{self\text{-}efficacy} = .928; Tolerance_{impulsivity} = .928$) was not less than 0.1. Upon inspection of the residuals of both self-efficacy and impulsivity as plotted against risky sexual practices, the scatter plot depicted homoscedasticity. In general, the data set met the assumptions of multiple regression analysis. We also checked for a moderation effect through hierarchical regression analysis and in the last step where we entered the interaction term, it yielded non-significant results ($\beta = -.118, t = -1.739, p = .086$). Thus, we have ruled out the idea that impulsivity moderates self-efficacy and risky sexual practices. Through further inspection of the data set, we asserted that cooperative suppression may be present. In cooperative suppression, both predictors are associated positively with the criterion but negatively with one another (Watson et al., 2013).

Including both predictors in the regression equation increases both of their beta weights and the overall predictive power of the model.

In general, self-efficacy and impulsivity have variances that are naturally negatively related to each other, which is reflective of their negative correlation. However, when they are used together to predict risky sex, they also share a common variance that somehow leads to increased engagement in risky sex. We suspect that the more deliberative process of self-efficacy, which is reflective of a rational system, has been removed upon entering impulsivity. This leaves the automatic and pleasure-driven impulsivity, which is reflective of an experiential system and the confidence that one can use a condom, which is an aspect of self-efficacy reflective of the experiential system. Further discussion of the implications of the results can be found in the next section. In summary, the presence of both self-efficacy and impulsivity contribute to a larger variance of risky sex being explained, compared to when only one variable is present. This indicates that both experiential and rational systems are present in an individual, and work together to better explain human behavior—in this case, risky sexual practices.

GENERAL DISCUSSION

Despite efforts extended and the availability of preventive measures, HIV transmission through sexual contact continues to be a growing problem among MSM in the Philippines. Interventions by NGOs and the AIDS Prevention Law of the Philippines have met with difficulty as there has been an alarming increase of HIV cases, mostly among men who have sex with men (DOH, 2016). Findings of the present study indicate that self-efficacy is not enough to influence the practice of safe sex, but impulsivity also plays a role in risky sexual practices among MSM.

Increased impulsivity predicted engagement in risky sexual practices. Meyer (2013) found that those with high impulsivity engaged in riskier behaviors such as having more sexual partners (see also Zadravec, Buick, & Socan, 2005). It has

also been found that acts that may involve potential danger could be a source of reward for some (Lejuez et al., 2002). Thus, those high in impulsivity engage in risky sexual practices such as casual sex, having multiple partners, and having one-night stands. In general, the results of the present study indicate that when a man who has sex with men is in the actual sex situation, his impulsive desire pushes him to give in to the heat of the moment.

Impulsivity seems to be a substantial factor in facilitating risky sexual practices among MSM. Engaging in risky sexual practices may have been repeatedly experienced by MSM as such practices elicit pleasant feelings. As CEST argues, the pleasant feelings associated with impulsively engaging in risky sex serve to motivate an individual to reproduce similar behaviors in order to experience those pleasant feelings repeatedly. A sexual encounter might be associated with pleasure and is programmed as a positive experience. Thus, future sexual encounters might activate these associations even without deliberate cognitive processes (i.e., engaging in risky sex without thinking about the consequences). Epstein (2013) indicates that our experiential system, which impulsivity is part of, reflects the idea that even rational humans can act and think in unreasonable ways – that despite one's knowledge and efficacy toward condom use, impulsivity is still a seemingly potent force toward engaging in risky sex.

Ability and knowledge toward condom use are somehow reflective of the rationality system. These aspects, we suspect, are those in which the presence of impulsivity has removed and therefore increased the overall equation's predictive capacity toward risky sex. To be specific, there are items in condom use efficacy that tap one's ability to assert the use of condoms during sex as well as intoxicant control. This indicates that the individual may still be able to use condoms in spite of being intoxicated. We suspect that the controlled and deliberative nature of these items is the variance that naturally correlates negatively with impulsivity.

On the other hand, other items tap fear of partner rejection upon the suggestion that condoms be used, and the "feeling of confidence" in condom use, as beliefs reflective of an

experiential system and thus constituting the variance shared with the automatic and pleasure-driven nature of impulsivity. The fear of partner rejection and confidence that one can use a condom are in part reflective of an experiential system. Several of the attributes of an experiential system include its cognitive-affective components being organized in a rudimentary manner, making its associated behaviors pleasure-driven, in contrast to the more reason-oriented operation of the rational system. Apart from the rationality-system-related aspect of self-efficacy, which is being competent and knowledgeable toward condom use, there is also the experiential-system-related aspect, which includes the fear of rejection and confidence that one can use condoms. This fear of rejection from the partner when suggesting the use of condoms during sexual encounters may have been facilitative of engaging in risky sex. Moreover, these aspects of fear of partner rejection and confidence in being able to use condoms can be easily overpowered by the automatic and pleasure-driven motivation of the experiential system. When the individual is in the heat of the moment during a sexual encounter, the fear of partner rejection and confidence of condom use are suppressed by the more potent and pleasure-driven impulsivity, and thus leads to the non-use of condoms and other related risky sexual practices.

Our findings offer an initial glimpse into understanding risky sexual practices among MSM through self-efficacy and impulsivity. Yet, there are some limitations that need to be considered in future studies. First, increasing the number of MSM participants may provide better generalizability. Second, other psychometrically sound measures of risky sexual practices may be employed to better capture the thoughts, emotions, and behaviors related to risky sex. Finally, other dual-process models may also help us understand self-efficacy and impulsivity as influential factors toward risky sexual practices among MSM, and as such may influence the manner in which the data gathered is processed.

Despite the limitations of our study, the findings suggest that HIV/AIDS education and prevention programs may just be one of many solutions that need implementation. In addition to educating citizens on the importance of safe sex, it would also be wise for individuals to have the capability to control themselves, despite the luring need for satisfaction and pleasure. Directly influencing impulsivity and learning to control impulses may be an effective scheme in preventing risky sexual practices. A method developed by Chang, Moog, Astolfi, and Rivadeneira (2014) has utilized a mathematical model to discuss the idea of impulse control by studying the physiological and general effects of antiretroviral drugs. They argue that learning the science behind impulse control may facilitate HIV prevention and control.

Hofmann, Friese, and Wiese (2008) also found that treatments of impulsive behavior may be most effective by simultaneously attempting to (a) change the individual's beliefs and attitudes for the better, (b) encourage self-monitoring, and (c) tackle the person's impulsivity straight on. As the findings of our study show, one's impulsivity is a crucial factor toward engaging in risky sexual practices and needs to be controlled.

HIV has been a continuing problem in the Philippines. Our country has shown an increased rate of HIV/AIDS cases despite its global decline (UNAIDS, 2015). The official response of the Philippine government was to enact the Philippine AIDS Prevention and Control Act of 1998 (RA 8504). Although the programs created in support of RA 8504 were helpful, improvements in the programs by incorporating how to handle impulsive behaviors may also be beneficial.

CONCLUSION

Self-efficacy toward condom use and impulsivity are found to be contributing factors toward the practice of safe sex among men-who-have-sex-with-men. Interestingly, our findings suggest that it is not enough for MSMs to be competent in condom use. Learning to control their impulses is necessary to carry out successful and positive behavior change.

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APPENDIX A
Checklist on risky sexual practices.

Mark with a check (√) those that apply to you.

In the past 12 months, I have…

○ Had anal sex without using condoms
○ Had sex under the influence of recreational drugs
○ Had sex under the influence of alcohol
○ Had sex with multiple partners
○ Had sex with a casual partner (one-night stand)
○ Engaged in group sex
○ Had oral sex without using condoms
○ Had sex with a partner whose HIV status I was not sure of
○ Had sex with random people
○ Accepted money and other favors in exchange for sex
○ Knowingly had sex with an HIV-positive partner
○ Engaged in unprotected receptive anal intercourse
○ Engaged in unprotected interceptive anal intercourse