Personality Traits as Predictors of Intentions to Seek Online Information about STDs and HIV/AIDS among Junior and Senior College Students in Taiwan

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ABSTRACT

The purpose of this cross-sectional study is to examine how personality traits such as sensation-seeking and impulsive decision-making affect Taiwanese college students' intentions to seek online information about sexually transmitted diseases (STDs) and human immunodeficiency virus/acquired immune deficiency syndrome (HIV/AIDS). Five hundred thirty-five (n = 535) junior and senior college students in Taiwan were recruited and completed self-report questionnaires. This study found high sensation-seekers were more likely to seek information about STDs and HIV/AIDS on the Internet than low sensation-seekers. Impulsive decision-makers were less likely than rational decision-makers to seek information about STDs and HIV/AIDS on the Internet. These findings suggest that personality needs to be considered as an exploratory factor which potentially influences intentions to seek STD and HIV/AIDS information on the Internet among Taiwanese college students.

INTRODUCTION

PERSONALITY TRAITS influence individuals' intentions for health information seeking regardless of the nature of the information environment or their health knowledge.1 Researchers have suggested that personality theories can expand the potential to understand differences between online information seekers and non information seekers.1,2 However, few studies have produced empirical findings that explain how personality traits influence online sexually transmitted disease (STD) and human immunodeficiency virus/acquired immune deficiency syndrome (HIV/AIDS) information-seeking intentions.

Studies have found that young people who are both high sensation-seekers and impulsive decision-makers (HSS/IDMs) are more likely to initiate sex at an early age, have multiple sexual partners, and engage in unprotected sex to increase their feelings of rapid rewards and sensation of the experience than those who are low sensation-seekers and rational decision-makers.3–7 Information-seeking theories indicate individuals who face threats in daily life need information to reduce uncertainty and answer questions about the threat.8 Thus, HSS/IDMs may need more information to deal with their higher risk status than those who are not HSS/IDMs.

Recently, the Internet has been used for STD and HIV/AIDS information seeking among some populations, such as HIV/AIDS patients and young people.9–12 This study accordingly explores how personality traits such as sensation-seeking and imp-
pulsive decision-making influence individuals’ intentions to seek information about STDs and HIV/AIDS on the Internet.

This study specifically focuses on junior and senior college students in Taiwan, a group found to be more likely to engage in risky sexual behavior and to increasingly depend on the Internet for health-related information.13 The findings of this study can assist in the tailoring and the design of appropriate online STD and HIV/AIDS prevention messages for college students with different personality traits.

Online health information seeking

Online health information seeking is defined as purposefully obtaining health-related messages from the Internet. Access to the health information on the Internet has the potential to empower information seekers, to increase their understanding of their own health problems, and to improve their ability to avoid, manage, and cope with their health problems.14–16

The Internet has become a critical source of information for individuals who are actively seeking health information.17–20 In Taiwan, talking about sex-related issues is not encouraged in terms of social norms21; young Taiwanese are increasingly turning to the Internet for STD and HIV/AIDS information.13

Personality traits and information seeking

Personality traits may affect individuals’ information seeking1,22 or avoidance.22 As Napoli1 put it, personality traits influence individuals’ intentions for health information seeking. An exploration of the ways how personality traits affect individual’s STD and HIV/AIDS information-seeking intentions is specifically insightful. Personality traits such as sensation-seeking4,23 and impulsivity4 appear to put individuals at greater risk of STDs or HIV/AIDS. Therefore, sensation-seeking and impulsivity should be two important components exploratory factors that help determine intentions to seek STD and HIV/AIDS information on the Internet.

Sensation-seeking

Sensation-seeking is defined as “the seeking of varied, novel, complex, and intense sensations and experiences, and the willingness to take physical, social, legal, and financial risks for the sake of such experience.”24 As a biologically based trait,25 sensation-seeking has been widely studied to describe individuals’ novelty and risk seeking. That is, high sensation-seekers appear more likely to seek stimuli which are intense, novel, and arousing. They are also more likely to seek alternative sources of information than are low sensation-seekers.3,4,23,24,26–29

In general, sensation-seeking peaks in youth and diminishes in adulthood.24 There are a number of studies that distinguish preferences between high and low sensation-seekers. For example, compared to low sensation-seekers, high sensation-seekers are more likely to prefer rock and heavy metal music,30 action/adventure television,31 use of violent films, computer, and website content,28 risky sexual behavior,32 sexual curiosity,33 and substance abuse.34 Recently, researchers have also found that the Internet provides opportunities for high arousal and stimulation. In these studies, individuals who prefer more complex visual design and use the Internet for sex-oriented materials have high levels of sensation-seeking.35,36 In Taiwan, Lin and Tsai37 found that Internet dependents scored higher on disinhibition (the level of ignoring social constraints) than did Internet non-dependents.

Because researchers38 in Taiwan have reported excessive Internet use among college students, an exploration of how sensation-seeking can predict online STD and HIV/AIDS information seeking among this population is especially relevant. The following hypothesis guides the current exploration:

**H1:** There are different levels of intentions to seek information about STDs and HIV/AIDS on the Internet between high and low sensation-seekers among junior and senior college students in Taiwan.

Impulsivity

Impulsivity typically refers to “behavior that incorporates a component of rashness, lack of foresight or planning or as a behavior that occurs without reflection or careful deliberation.”39 From the perspective of psychology, impulsivity is at least a two-factor construct labeled “reward sensitivity” and “rash-spontaneous impulsiveness.”39,40 Compared to psychologists, psychiatrists have a tendency to consider impulsivity in a broader way. They view impulsivity as an aspect of various behavior disorders. Psychiatrists are more concerned about behavioral disorders, borderline personality disorders (BPD), and antisocial personality disorders caused by impulsivity.41–44

Psychologists and psychiatrists treat impulsivity as a heterogeneous construct. Definitions from different disciplines about impulsivity have signifi-
cant implications for future impulsivity-related studies. That is, dimensions of impulsivity should at least include risk-taking, responding quickly to stimuli without reflection, and the inability to plan ahead. Individuals with impulsivity are inclined to have impulsive behavior and personality disorders which are difficult to manage.

Studies have found people who are impulsive decision-makers (IDMs) are more likely to engage in, attempt, or suffer risky sexual behavior, drug and alcohol use, smoking, suicide, gambling, eating disorders, and criminal activities than those who are rational decision-makers (RDMs). Accordingly, impulsivity has been linked to sensation-seeking. However, Zimmerman and Donohew suggested sensation-seeking and impulsivity, which are moderately correlated and somewhat overlapping, need to be treated as two separate constructs. Impulsive decision-making, therefore, can be an important variable in predicting online STD and HIV/AIDS information seeking. Specifically, we have a good understanding of how impulsive decision-making is related to risky sexual behavior, but our understanding of how information-seeking behavior is influenced by impulsive decision-making is less developed.

Considering this, the following hypothesis is posed:

**H2:** There are different levels of intentions to seek information about STDs and HIV/AIDS on the Internet between impulsive and rational decision-makers among junior and senior college students in Taiwan.

**METHODS**

**Procedures**

This cross-sectional survey was conducted in the sampled classes from March 15 to April 1, 2005 in Taiwan. All respondents voluntarily participated in the study. Respondents were given the questionnaire and anonymously completed it during class time. All data were stored only with identification numbers and were not linked to any name in the data set.

**Participants**

Taiwan has four geographic areas: North Taiwan, Middle Taiwan, South Taiwan, and East Taiwan. This study randomly sampled one university from each geographic area. Sampled universities included one major public university, one university of technology, one private major university, and one normal university. Five hundred thirty-five (535) juniors and senior college respondents enrolled in the four universities completed the self-report questionnaire.

Of those respondents, 243 (45.4%) were males and 292 (54.6%) were females; 359 (67.1%) were juniors and 176 (32.9%) were seniors. Respondents included 133 (24.9%) students from a major public university (South Taiwan), 122 (22.8%) from a major private university (North Taiwan), 141 (26.4%) from a university of technology (Middle Taiwan), and 139 (26.0%) from a normal university (East Taiwan).

**Measures**

**Sensation-seeking.** Sensation-seeking was assessed by the eight-item Brief Sensation-Seeking Scale (BSSS). Respondents were asked how much they agreed or disagreed with items such as "I would like to explore strange places," "I like to do frightening things," "I would like to try bungee jumping," and "I would love to have new and exciting experiences, even if they are illegal." Higher scores indicated respondents’ greater sensation-seeking. The scale has exhibited a good coefficient alpha of around 0.78 and good construct validity.

In this study, the sensation-seeking scale was uni-dimensional and yielded a coefficient alpha of 0.79. Because prior studies have reported gender differences (males scored significantly higher than females on total sensation-seeking), a median split (taking gender into account) was used on the composite sensation-seeking variable to separate the sample into two groups. That is, within the same gender, high sensation-seekers were those whose scores were above the median, while low sensation-seekers were those below the median. All respondents were then categorized into two groups: high sensation-seeking and low sensation-seeking.

**Impulsive decision-making.** Impulsive decision-making was measured with a 12-item decision making style scale developed by Donohew et al. In this study, items of decision making included statements such as "I think about all of my choices very carefully" and "I do the first thing that comes into my mind." Respondents will indicate how often these things took place in their lives (from "strongly disagree" to "strongly agree"). Rational decision-making items were reversely scored. Higher scores indicated greater impulsivity in decision making. Recently, Zimmerman et al. used it to measure young adults’ (70% of whom were col-
lege students) impulsive decision-making in two cities in the United States in a study of the effects of safer sex media campaigns and reported a reliable coefficient alpha of 0.84.

The impulsive decision-making scale in this study yielded a coefficient alpha of 0.65. Impulsive decision-making behavior was also differentiated between gender groups, and a median split (taking gender into account) was used to separate the samples into two groups: impulsive decision-making and rational decision-making.

Intention to seek STD and HIV/AIDS information on the Internet. Respondents’ online STD and HIV/AIDS information-seeking intentions were obtained by asking respondents questions such as: in the next three months, “how likely is it that you will use the Internet to seek the nature of STDs (e.g., syphilis, gonorrhea, and chlamydia) or HIV/AIDS infection (M\textsubscript{MHSSs} = 2.60; M\textsubscript{MLSSs} = 2.41) [t (460.8) = -2.60, p < 0.01, d = 0.2], the causes of STD or HIV/AIDS infection (M\textsubscript{MHSSs} = 2.60; M\textsubscript{MLSSs} = 2.40) [t (454.37) = -2.11, p < 0.05, d = 0.2], the things they could do to prevent contracting STD or HIV/AIDS infection (M\textsubscript{MHSSs} = 2.52; M\textsubscript{MLSSs} = 2.26) [t (452.68) = -2.83, p < 0.01, d = 0.3], the things they could do to prevent contracting STD or HIV/AIDS infection (M\textsubscript{MHSSs} = 2.57; M\textsubscript{MLSSs} = 2.38) [(446.57) = -1.98, p < 0.05, d = 0.2].

Additionally, hypothesis 2 predicted different levels of intentions to seek information about STDs and HIV/AIDS on the Internet between impulsive and rational decision-makers among junior and senior college students in Taiwan. The results of an independent sample t-test supported hypothesis 2. Compared to rational decision-makers, respondents who were impulsive decision-makers had lower intentions to seek information describing the nature of STDs (e.g., syphilis, gonorrhea, and chlamydia) or HIV/AIDS infection (M\textsubscript{MRDMs} = 2.65) [t (533) = 3.11, p < 0.01, d = 0.3], the causes of STD or HIV/AIDS (M\textsubscript{MRDMs} = 2.30; M\textsubscript{MRDMs} = 2.66) [t (533) = 3.97, p < 0.001, d = 0.3] how vulnerable they personally might be to STD or HIV/AIDS infection (M\textsubscript{MRDMs} = 2.23; M\textsubscript{MRDMs} = 2.51) [t (533) = 3.22, p < 0.01, d = 0.3], the medical treatments for STD or HIV/AIDS infection (M\textsubscript{MRDMs} = 2.43; M\textsubscript{MRDMs} = 2.63) [(t (533) = 2.21, p < 0.05, d = 0.2], and medical treatments for STD or HIV/AIDS infection (M\textsubscript{MRDMs} = 2.33; M\textsubscript{MRDMs} = 2.60) [(t (533) = 2.85, p < 0.01, d = 0.3].

DISCUSSION

This study found high sensation-seekers were more likely to seek information about STDs and HIV/AIDS on the Internet than were low sensation-seekers. This finding is consistent with several studies indicating that sensation-seeking could be a mechanism to explain individuals’ media consumption. For example, Weisskirch and Murphy indicated that individuals who used the Internet to get sex-oriented materials scored higher on total sensation-seeking.

High sensation-seekers have a greater need for stimuli with high complexity, symmetry, ambiguity, and abstractness than low sensation-seekers. High sensation-seekers tend to find an information source that is stimulating. The Internet, which is interactive and provides users with many online activities (e.g., chat rooms, music, video games), is
viewed as a high tech adventure, and it meets the needs for stimuli that high sensation-seekers have. In addition, STD and HIV/AIDS information on the Internet enables surfers to access sexually-related issues. It allows Internet surfers to be less bounded by normal constraints and rules of social interaction. Under such circumstances, the Internet and STD and HIV/AIDS information online possess an arousing quality (e.g., adventure seeking and excitement seeking) and can be particularly appealing to sensation-seekers. Therefore, it is not surprising that there are significant differences between high and low sensation-seekers about intentions to seek information about STDs and HIV/AIDS on the Internet.

Sensation-seeking is not the only personal trait that leads to different intentions of seeking information about STDs and HIV/AIDS on the Internet. This study also found rational decision-makers had higher intentions to seek information about STDs and HIV/AIDS on the Internet than did impulsive decision-makers.

Impulsivity is a personal trait which impacts one’s emotion, cognition, and behavior. Impulsive decision-makers are more likely than rational decision-makers to consume cigarettes and alcohol, use drugs, commit suicide, and engage in risky sexual behavior without carefully considering consequences. Zimmerman et al. investigated the effectiveness of public service announcements (PSAs) about safer sex by targeting young adults and found impulsive decision-makers consistently rated all of the PSAs as less effective than rational decision-makers. They also indicated that all of the PSAs made impulsive decision-makers think less than rational decision-makers did. These findings provide some evidence that explains why impulsive decision-makers are less likely to seek information about STDs and HIV/AIDS on the Internet than rational decision-makers. Impulsive decision-makers are not concerned with negative consequences for themselves or others. It is no wonder, then, that impulsive decision-makers, who are also higher sexual risk takers, were found to have fewer intentions to seek information about STDs and HIV/AIDS on the Internet than rational decision-makers.

CONCLUSION

According to the Centers for Disease Control (CDC) in Taiwan, STD and HIV/AIDS rates among young people are rising at an alarming rate. The aforementioned findings about how sensation-seeking and impulsivity affect intentions to seek information about STDs and HIV/AIDS on the Internet may have educational implications for young people. Health educators can use high sensation value messages to reach high sensation-seeking college students who are more likely to engage in risky sexual behavior. On the flip side, impulsive decision-makers, who are also found to be more likely to engage in risky sexual behavior, have fewer intentions to seek information about STDs and HIV/AIDS on the Internet than rational decision-makers. Health educators need to raise impulsive makers’ awareness of susceptibility regarding being infected with STDs and HIV/AIDS, while designing STD- and HIV/AIDS-related information to be used online to target such a group. By doing so, messages will be imparted to the appropriate targets.

Limitations of this study

The aforementioned findings, however, cannot be generalized to the whole population of college students in Taiwan, because participants in this study were junior and senior college students who are at greater risk than younger Taiwanese college students. In addition, this study did not specifically analyze what characteristics of the Internet (e.g., faster communication, real-time capabilities, interactivity, and anonymity) influence young people’s intentions to seek information about STDs and HIV/AIDS on the Internet. Future studies may need to include specific Internet-related factors to more effectively tailor health messages.

REFERENCES


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