

# Development of an online animated sexting prevention module based on the prototype willingness model to reduce intention and willingness to sexting among diploma students

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## ABSTRACT

**Introduction:** Sexting refers to the act of sending and receiving sexually explicit content in the form of in the form of texts, photos, or videos via the Internet and mobile phones. This behaviour is associated with many negative health consequences among young people. However, there is a lack of intervention studies to curb this behaviour. We have developed a new sexting prevention module and tested it using a randomised controlled field trial. This paper reported the phase one of the study i.e., the development of an animated sexting prevention module using the prototype willingness model (PWM) to reduce the intention and willingness to sext amongst diploma students in Malaysia.

**Materials and Method:** The initial phase involved a review of previous interventions, validation from field experts, and the process of developing video. Then the module pilot was tested among 30 diploma students from a public university. They were given access to the newly developed videos posted on a private YouTube channel and asked to evaluate the videos quantitatively and qualitatively by using the acceptability of the intervention module (AIM), intervention appropriateness measure (IAM) and feasibility of the intervention measure (FIM). The minimum and maximum scores of each measure were 12 and 24 respectively whereby a higher score indicated greater acceptability, appropriateness and feasibility.

**Results:** The intervention consisted of five sections addressing the constructs of PWM, namely attitude, perceived norm, prototype perception, as well as intention and willingness of sexting. The contents were then converted into five videos with a total duration of 23 minutes. Based on the pilot test, the scores of AIM, IAM and FIM were not normally distributed and their median and the interquartile range values were 20 (4), 21 (4) and 22 (4) respectively. Most of the respondents gave favourable opinions on the intervention besides providing some input for improvement.

**Conclusion:** This animated sexting intervention module based on PWM to reduce the intention and willingness was novel. The module was acceptable, appropriate and feasible to be implemented among undergraduate students. Further

evaluation of this intervention module can be performed to provide more comprehensive evidence of its effectiveness.

## KEYWORDS:

*Social media, intention, Malaysia, students, sexting, pilot projects*

## INTRODUCTION

The term sexting is a combination of sex and texting. It refers to the act of sending and receiving sexually explicit content in the form of texts, photos, or videos via the Internet and mobile phones.<sup>1,2</sup>

Sexting is a new form of sexual communication among the young population in discovering sexual needs and desires as well as for them to maintain sexual intimacy.<sup>3</sup> However, recent studies reported that sexting might cast some adverse psychosocial consequences on young people, for example, cyberbullying, depression and attempted suicide.<sup>4-8</sup> Furthermore, it is also associated with sexually risky behaviours such as sexual intercourse with multiple partners. Due to the profound impact of sexting and its association with other risky behaviours that can burden young people's health, sexting must be curtailed. In relation to that, sending obscene content via media is a punishable act under Malaysian law, and the penalty is more severe if minors were involved.<sup>9,10</sup>

Currently, interventional studies are scarce on sexting-related issues. The majority of previous studies followed a within-subject experimental study design that focused on the effects of social images on the prototype perception and willingness to sext among adolescents.<sup>11</sup> To date, observational studies have asserted that engagement in sexting can be forecasted by intention and willingness to sext.<sup>12-14</sup> By definition, intention refers to a deliberately planned behaviour<sup>15</sup> while willingness refers to an individual's spontaneous response to risky circumstances.<sup>16</sup> Both intention and willingness are involved in the behaviour that precedes any cognitive process.<sup>17</sup> By focusing on the intention and willingness to sext, the intervention aimed at preventing sexting amongst those who have never sexted, reducing the act of sexting among those who have sexted and minimising multiple risky behaviours associated with sexting.

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The application of a theory-based intervention is more likely to yield a better outcome.<sup>18,19</sup> Therefore, we used the prototype willingness model (PWM) theory as the backbone of our intervention to reduce the intention and willingness to sext. The PWM has been applied to predict risky behaviours amongst the adolescents and young adult population.<sup>14,20-22</sup> However, this theory has not been applied to sexting interventions to date. To our knowledge, this is the first intervention module developed based on PWM for sexting. The evaluation of the effectiveness of this module involved two phases, i.e., phase one involved the development and validation of the newly developed module and the second phase involved evaluating the effectiveness of this module using randomised controlled trial (RCT). In this paper, we reported phase one of the study. The second phase is reported elsewhere.

## MATERIALS AND METHODS

Phase one involved the identification of the suitable contents for the intervention based on the respective constructs of the PWM before matching them with the suitable behavioural change techniques (BCT).<sup>18</sup> These processes involved reviewing previous literature and consultation with experts in the field. Three public health experts and a clinical psychologist were invited to examine the content validity. Once the contents were agreed upon by all the experts, the storyboard and scripts for the animated video was created. A private multimedia company was then appointed to develop the animated video. The animated video used to deliver the intervention was assessed for its objective, structure, presentation and relevance as a part of the validation process. A series of reviews of the scripts and the flow of the storyboard was also conducted by the same experts before it was finalised. The flow of the development of the video as in Appendix 1.

Later, a pilot study was conducted at a public university, which is the same university where phase two of the study was conducted. The university has 13 diploma programmes. One programme was randomly selected for the pilot study. The remaining 12 programmes were involved in phase two of this study, where a randomised controlled field trial (RCT) was conducted to test the effectiveness of this module. Thirty voluntary students who fulfilled the inclusion criteria of the RCT but were not included in the main study were invited to participate in the pilot study. The sample size of 30 was derived from 10% of the sample size calculated for the RCT.<sup>23</sup>

YouTube channel was utilised as the online medium to distribute the newly developed video as it was convenient and easily accessible. The videos were set to be private and only those with access could view them. The pilot study aimed to determine the acceptability, appropriateness, and feasibility of the intervention module by using quantitative measures.<sup>24</sup> Acceptability is a form of personal judgment made by individuals about the intervention and it can vary according to individual needs, preferences or expectations. In comparison, appropriateness refers to the perceived fit, relevance or compatibility of the intervention to be practiced in a given setting. In other words, it assesses the technical or social perspective towards the intervention. Feasibility, on the

other hand, is the practicality with which the new intervention can be successfully carried out in a given setting.

Three quantitative scales were used, namely acceptability of intervention measure (AIM), intervention appropriateness measure (IAM) and feasibility of intervention measure (FIM).<sup>24</sup> Each of these scales consisted of four-item statements. The response scale for all item statements ranged from 1 (completely disagree) to 5 (completely agree). The minimum and maximum scores of each of the measures are 12 and 24 respectively. A higher score indicates greater acceptability, appropriateness and feasibility. The respondents were also requested to provide opinions and feedback on the videos.

The studies involving human participants were reviewed and approved by the Ethics Committee for Research Involving Human Subjects at Universiti Putra Malaysia (JKEUPM-2020-321). The patients/participants provided their written informed consent to participate in this study. The RCT of this intervention module was prospectively registered in the Thai Clinical Trials Registry (TCR20201002001). The approval from the administration department of the higher education institution and the head of the program, as well as respondents' written consent, were obtained before the commencement of the study.

## RESULTS

The PWM consists of five constructs, i.e. intention, willingness, attitude, perceived norm and prototype perception. Figure 1 illustrates the theoretical construct of the PWM.<sup>21,25</sup>

The intervention was developed in the Malay language to suit the target population. It comprises five sections, namely Section 1 (Sexting and Z generation), Section 2 (What are the implications of sexting?), Section 3 (Who is behind sexting?), Section 4 (What others' opinion?) and Section 5 (What can you do?). The summary of constructs and contents in each section of the intervention is summarised in Table I.

### Section 1: Sexting and Z generation

This was an introductory session that was delivered via an animated video. Participants were informed of the definition of sexting and the population was deemed to be at risk of being involved in it.

### Section 2: What are the implications of sexting?

Participants were educated on the consequences of sexting from four aspects, including sexual and reproductive health, cyberbullying, mental health and the legal aspect. The content of this section was based on the literature review on the implications of sexting.<sup>2,6-8,26-28</sup> In this section, the participants were also exposed to the real scenario of negative consequences of sexting as reported in the local media.

### Section 3: Who is behind sexting?

Participants were exposed to the different personalities of people who are more prone to engage in sexting (for example, individuals with a high sensation-seeking

Table 1: Summary of the sexting intervention module (SIM)

Section	PWM constructs	Aim	Behaviour change techniques	Duration
Section 1 Sexting and Z generation	-	To increase the knowledge of sexting amongst the participants.	2. Provide information about the sexting trend amongst the Z generation and the reasons why it is common among them.	2.4 minutes.
Section 2 What are the implications of sexting?	Attitude	To improve the attitude towards sexting. To reduce the intention and willingness to sext amongst participants.	i. Provide information on the negative consequences of sexting from four aspects which are sexual and reproductive health, cyberbullying, mental health and legality. ii. Provide real world negative and legislation consequences of sexting to the individuals based on the reports by local media.	9.3 minutes.
Section 3 Who is behind sexting?	Prototype perception	To improve the prototype perception. To reduce the intention and willingness to sext amongst participants.	i. Provide information about the characteristics or personality of individuals who are associated with sexting behaviour.	3 minutes.
Section 4 What others' opinion?	Perceived norm	To reduce the perceived norm, intention and willingness to sext amongst participants.	i. Provide opinions of parents and other young adults on individuals who are involved in sexting.	3.2 minutes.
Section 5: What you can do?	Perceived norm Prototype perception	To reduce the perceived norm, prototype perception, intention, and willingness to sext amongst participants	i. Provide information on potential scenarios that might lead to sexting. ii. Provide information on potential barriers of resisting sexting. iii. Provide skills to resist sext requests by others and information on where to get help.	5.4 minutes.

**Table II: Acceptability intervention measure (AIM)**

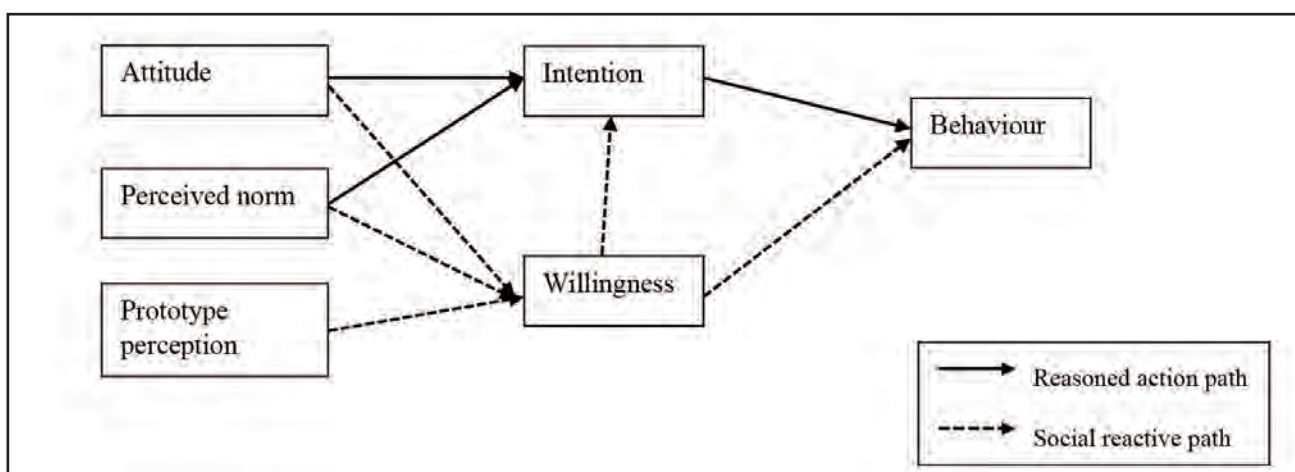
Items	Item statement	Responses (n=30)				
		Completely disagree (%)	Disagree (%)	Neither agree nor disagree (%)	Agree (%)	Completely agree (%)
AIM 1	This SIM meets my approval	0	0	17%	53%	30%
AIM 2	This SIM is appealing to me	0	0	20%	50%	30%
AIM 3	I like SIM	0	0	23%	50%	27%
AIM 4	I welcome SIM to be given to other students	0	0	10%	47%	43%

**Table III: Appropriateness measure**

Items	Item statement	Responses (n=30)				
		Completely disagree (%)	Disagree (%)	Neither agree nor disagree (%)	Agree (%)	Completely agree (%)
IAM 1	This SIM seems fitting in the sexting prevention effort	0	0	10%	50%	40%
IAM 2	This SIM seems suitable for university students	0	0	13%	50%	37%
IAM 3	This SIM seems applicable	0	0	13%	40%	47%
IAM 4	This SIM seems like a good match with the current technology era.	0	0	13%	37%	50%

**Table IV: Feasibility of intervention measure**

Items	Item statement	Responses (n=30)				
		Completely disagree (%)	Disagree (%)	Neither agree nor disagree (%)	Agree (%)	Completely agree (%)
FIM 1	Things that we learn from SIM seem implementable	0	0	13%	37%	50%
FIM 2	Things that we learn from SIM seem possible	0	0	13%	37%	50%
FIM 3	Things that we learn from SIM seem doable	0	0	13%	37%	50%
FIM 4	Things that we learn from SIM seem easy to apply in real life	0	0	13%	37%	50%



**Fig. 1:** The theoretical construct of the prototype willingness model.

personality trait, low agreeableness, neuroticism and attachment anxiety). The content of this section was based on the findings from the literature review on studies of the relationship between personality type and sexting behaviour.<sup>28-30</sup>

#### Section 4: What others' opinion?

Participants were provided with relevant information on the perceived and actual prevalence of sexting in Western and Asian countries as a comparison. Besides, they were also provided with information about the perception and approval of others about sexting behaviour, particularly parents, friends, religion and culture. The content was adapted from the findings of quantitative and qualitative studies obtained during the literature review.<sup>31-33</sup>

#### Section 5: What can you do?

Participants were provided with the instructions on how to resist social pressure to sext, such as a demonstration on how to resist sext requests by others. The participants were also reminded to use prompts, whereby they are taught to identify environmental prompts that can be applied as a reminder for them to avoid potential situations that can lead to sexting. The participants were also prompted to think about the potential barriers that can prevent them from engaging in sexting and to identify ways to overcome the behaviour.

Based on the response of the pilot study, the majority of the respondents found this intervention module to be acceptable (Table II). The scores were not normally distributed, giving a median (interquartile range, IQR) of 20 (4). Qualitatively, respondents suggested improvement in the video's graphics and animation, as well as increasing examples using real-world sexting scenarios. Furthermore, some respondents recommended for the intervention be expanded to school children.

Based on the response, the majority of the respondents found this intervention to be appropriate (Table III). The scores were not normally distributed, giving a median (IQR) of 21 (4). No additional comment was made qualitatively in this section.

Based on the response, the majority of the respondents found that this intervention was feasible (Table IV). The scores were not normally distributed, giving a median (IQR) of 22 (4). Qualitatively, the respondents suggested uploading the video on social media platforms such as TikTok to gain more attention.

## DISCUSSION

In this paper, we reported the development of an online animated sexting intervention module based on the PWM aimed at reducing the intention and willingness to sext among diploma students in Malaysia. The PWM was chosen as the model to address the intention and willingness of sexting, both of which represented important precursors to sexting behaviour. This model has also been used in previous interventions for the reduction of risky behaviours.<sup>14,20-22</sup> Therefore, this intervention module was established based on the previous interventions using PWM, and consultation with experts, before being validated via a pilot study involving a

subgroup of the study population who were not participants of the main RCT.

Sexting is a complex behaviour that has been explained by several behavioural theories, including PWM. The application of PWM in the design of the intervention video in this study represented a systematic approach to determine its efficacy in reducing the sexting intention and willingness among young adults. Since most of the published literature focused on the use of PWM for smoking, skin tanning prevention and prevention of alcohol consumption, it is necessary to acknowledge how PWM could contribute to the reduction of the intention and willingness to sext among undergraduate students.

Next, the design of this intervention was adapted from the several experimental studies that were conducted based on PWM.<sup>34-37</sup> Based on an experimental study, sharing the negative social consequences of having unsafe sex with university students has been effective in decreasing their willingness to perform unsafe sex.<sup>34</sup> One of the possible reasons could be how the information might change their attitude with regard to their willingness to have unsafe sex. Therefore, we postulated that the provision of relevant information on possible negative outcomes resulting from engagement in sexting behaviour might contribute to the change in attitude and subsequently the willingness to sext among young adults.

With regard to the best approach to improve the perceived norm of sexting, we included information on the pattern of sexting behaviour globally and locally, previous opinions on sexting prevalence, and others' opinions on sexting behaviour in the intervention module. These were based on an experimental study that provided information on the typical drinking behaviour, average drinking behaviour on campus, and previous thoughts on the average drinking behaviour on campus for undergraduate students in the USA.<sup>35</sup> The study outcome showed a successful reduction in the perceived norm regarding drinking among the respondents. Therefore, in our study intervention, we provided the opinions of parents and other young adults on individuals involved in sexting in order to reduce the perceived norm among the respondents.

Lastly, the review findings of the behavioural change techniques used in PWM were applied to improve the prototype perception towards the sexters.<sup>38</sup> Several studies provided positive and negative identities for the actors or abstainers.<sup>34,39</sup> For example, a study has described the personality of people who practiced unsafe or safe sex in a bogus survey created for the intervention which in turn, the technique was found to successfully increase participants' willingness to wear condoms.<sup>34</sup> This technique was considered adequate to modify the prototype perception.<sup>36</sup> Therefore, in our intervention, we provided information on the type of personality associated with sexting behaviour and a brief explanation of why this type of person would be more prone to engage in sexting.

Based on the results from the pilot study, the online video was considered to be a form of acceptable, appropriate and

feasible intervention. Furthermore, these videos were uploaded to a private YouTube channel, making it convenient for the participants to access during their free time. Besides, the videos were considered to be more attractive for the participants because they were in the form of animation, easy to understand, with contents that might relate to them and short (only took a few minutes of their time to complete viewing). However, they provided some comments on improving the graphics and animation of the video, apart from incorporating more examples based on real-world sexting scenarios. In addition, they also suggested that the videos be uploaded to other social media platforms once the effectiveness of this intervention has been established. Last but not least, they also recommended that the intervention module be expanded to school children.

Despite the positive feedback from this pilot study on our module, we acknowledge that this module will be one of the strategies to prevent sexting and cannot be a standalone strategy. There are several other factors that could influence sexting that are beyond the scope of this module. For example, family dynamics, interrelationships between family members and peers, and financial constraints. Therefore, other strategies could be implemented in parallel with the implementation of this module in order to have a greater impact on sexting prevention. Such strategies include parental involvement, peer-to-peer education, digital literacy programmes, sexting-related legislation awareness, reporting mechanisms for sexting victims, religious workshops, moral guidance and public campaigns on sexting that emphasise the importance of responsible online behaviour.

## CONCLUSION

This animated sexting intervention module aimed at reducing the intention and willingness to sext represented an important contribution to the body of literature on the use of prototype willingness model (PWM). The intervention was deemed acceptable to the majority of diploma students that were involved in this study. However, a randomised controlled field trial (RCT) can be undertaken to establish its effectiveness.

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## CONSENT FOR PUBLICATION

The authors would like to thank the Director-General of Health Malaysia and Director-General of National Population and Family Development Board for their permission to publish this article.

## CONFLICT OF INTEREST

The authors declare that they have no competing interest.

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## REFERENCES

1. Courtice EL, Shaughnessy K. Technology-mediated sexual interaction and relationships: a systematic review of the literature. *Sex Relatsh Ther* 2017; 32(3/4): 269-90.
2. Klettke B, Hallford DJ, Mellor DJ. Sexting prevalence and correlates: A systematic literature review. *Clin Psychol Rev* 2014; 34(1): 44-53.
3. Döring N. Consensual sexting among adolescents: Risk prevention through abstinence education or safer sexting? *Cyberpsychology*. 2014; 8(1): 1-18.
4. Gassó AM, Mueller-johnson K, Montiel I. Sexting, online sexual victimization, and psychopathology correlates by sex: Depression, anxiety, and global psychopathology. *Int J Environ Res Public Health* 2020; 17(3): 1018.
5. Klettke B, Mellor D, Silva-Myles L, Clancy E, Sharma MK. Sexting and mental health: A study of Indian and Australian young adults. *Cyberpsychology J Psychosoc Res Cybersp* 2018; 12(2).
6. Kričkić D, Šincek D, Čike AB. Sexting, cyber-violence and sexually risk behaviour among college students. *Kriminologija Soc Integr*. 2017; 25(2): 15-28.
7. Makgale OL, Plattner IE. Sexting and risky sexual behaviours among undergraduate students in Botswana: An exploratory study. *Cyberpsychology*. 2017; 11(2).
8. Medrano JL, Lopez Rosales F, Gámez-Guadix M. Assessing the Links of Sexting, Cybervictimization, Depression, and Suicidal Ideation Among University Students. *Arch Suicide Res* 2018; 22(1): 153-64.
9. Malaysian Communications and Multimedia Commission. Malaysia Communications and Multimedia Act 1998. [cited Mar 2023]. Available from: <https://www.mcmc.gov.my/en/legal/acts/communications-and-multimedia-act-1998-reprint-200>
10. Laws of Malaysia. Act 792. Sexual Offences Against Children Act 2017. p. 1–21. [cited Mar 2023]. Available from: [https://lom.agc.gov.my/ilims/upload/portal/akta/outputaktap/aktaBI\\_20170707\\_WJW008739BI.pdf](https://lom.agc.gov.my/ilims/upload/portal/akta/outputaktap/aktaBI_20170707_WJW008739BI.pdf)
11. Owens N. The unintended consequences of sexting literacy campaigns: The effect of image characteristics on teenagers' attitudes towards sexters and willingness to engage in sexting. Unpubl Diss MSc Tilburg, Netherlands Tilburg Univ. 2017
12. Low J, Khader M. Sexting in Singapore: an Empirical Study. In: Introduction to Cyber Forensic Psychology: Understanding the Mind of The Cyber Deviant Perpetrators 2021: 353373.
13. Schreurs L, Sumter SR, Vandenbosch L. A Prototype Willingness Approach to the Relation Between Geo-Social Dating Apps and Willingness to Sext with Dating App Matches. *Arch Sex Behav* 2020; 49(4): 1133-45.
14. Walrave M, Ponnet K, Van Ouytsel J, Van Gool E, Heirman W, Verbeek A. Whether or not to engage in sexting: Explaining adolescent sexting behaviour by applying the prototype willingness model. *Telemat Informatics* 2015; 32(4): 796-808.
15. Pomery EA, Gibbons FX, Reis-Bergan M, Gerrard M. From Willingness to Intention: Experience Moderates the Shift from Reactive to Reasoned Behavior. *Pers Soc Psychol Bull* 2009; 35(7): 894.
16. Gibbons FX, Gerrard M, Lane DJ. A Social Reaction Model of Adolescent Health Risk. *Soc Psychol Found Heal Illn* 2003; 107–36.
17. Gerrard M, Gibbons FX, Houlihan AE, Stock ML, Pomery EA. A dual-process approach to health risk decision making: The prototype willingness model. *Dev Rev* 2008; 28(1): 29-61.
18. Michie S, Prestwich A. Are interventions theory-based? Development of a theory coding scheme. *Health Psychol* 2010; 29(1): 1-8.

19. Craig P, Dieppe P, Macintyre S, Michie S, Nazareth I, Petticrew M. Developing and evaluating complex interventions: the new Medical Research Council guidance. *BMJ* 2008; 37: a1655.
20. Armenta BE, Hautala DS, Whitbeck LB. The utility of the prototype/willingness model in predicting alcohol use among North American indigenous adolescents. *Dev Psychol* 2015; 51(5): 697.
21. Gerrard M, Gibbons FX, Stock ML, Lune LS Vande, Cleveland MJ. Images of smokers and willingness to smoke among African American pre-adolescents: An application of the prototype/willingness model of adolescent health risk behavior to smoking initiation. *J Pediatr Psychol* 2005; 30(4): 305-18.
22. Ataee M, Jouybari TA, Mirzaei Alavijeh M, Aghaei A, Mahboubi M, Motlagh Z. Images of methamphetamine users among Iranian adolescents: An application of prototype willingness model. *Life Sci J* 2014; 11(4): 224-7.
23. Connelly LM. Pilot studies. *Medsurg Nurs* 2008; 17(6): 411-2.
24. Weiner BJ, Lewis CC, Stanick C, Powell BJ, Dorsey CN, Clary AS, et al. Psychometric assessment of three newly developed implementation outcome measures. *Implement Sci* 2017; 12(1): 108.
25. Gibbons FX, Gerrard M, Ouellette JA, Burzette R. Cognitive antecedents to adolescent health risk: Discriminating between behavioral intention and behavioral willingness. *Psychol Heal* 1998; 13(2): 319-39.
26. Reyns BW, Burek MW, Henson B, Fisher BS. The unintended consequences of digital technology: Exploring the relationship between sexting and cybervictimization. *J Crime Justice* 2013; 36(1): 1-17.
27. Gassó AM, Agustina JR, Mueller-Johnson K, Montiel I. Sexting and Mental Health among a Spanish College Sample: An Exploratory Analysis. *Int J Cyber Criminol* 2019; 13(2): 534.
28. Trub L, Starks TJ. Insecure attachments: Attachment, emotional regulation, sexting and condomless sex among women in relationships. *Comput Human Behav* 2017; 71: 140-7.
29. Dir A, Cyders M, Dir AL, Cyders MA. Risks, Risk Factors, and Outcomes Associated with Phone and Internet Sexting Among University Students in the United States. *Arch Sex Behav*. 2015 Aug; 44(6): 1675-84.
30. Delevi R, Weisskirch RS. Personality factors as predictors of sexting. *Comput Human Behav* 2013; 29(6): 2589-94
31. Walrave M, Heirman W, Hallam L. Under pressure to sext? Applying the theory of planned behaviour to adolescent sexting. *Behav Inf Technol* 2014; 33(1): 85-98.
32. Speno AG, Aubrey JS. Adolescent Sexting: The Roles of Self-Objectification and Internalization of Media Ideals. *Psychol Women Q* 2019; 43(1): 88-104.
33. Walker S, Sanci L, Temple-Smith M. Sexting: Young women's and men's views on its nature and origins. *J Adolesc Heal* 2013; 52(6): 697-701.
34. Blanton H, VandenEijnden RJM, Buunk BP, Gibbons FX, Gerrard M, Bakker A. Accentuate the negative: Social images in the prediction and promotion of condom use. *J Appl Soc Psychol*. 2001; 31(2): 274-95
35. Lewis M, King K, Litt D, Swanson A, Lee C. Examining daily variability in willingness to drink in relation to underage young adult alcohol use. *Addict Behav* 2016; 61: 62-7.
36. Dohnke B, Dewitt T, Steinhilber A. A prototype-targeting intervention for the promotion of healthy eating in adolescents: Development and evaluation using intervention mapping. *Health Educ* 2011; 118(6): 450-69
37. Todd J, Mullan B. Using the theory of planned behaviour and prototype willingness model to target binge drinking in female undergraduate university students. *Addict Behav* 2011; 36(10): 980-6.
38. Davies E, Martin J, Foxcroft D. Development of an adolescent alcohol misuse intervention based on the Prototype Willingness Model: A Delphi study. *Health Educ* 2016; 116(3): 275-91.
39. Andrews JA, Gordon JS, Hampson SE, Christiansen SM, Gunn B, Slovic P, et al. Shortterm efficacy of Click City®: Tobacco: changing etiological mechanisms related to the onset of tobacco use. *Prev Sci* 2011; 12(1): 89-102.