

Sexting, psychological distress and dating violence among adolescents and young adults

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Abstract

Background: Sexting is the exchange of sexually explicit or provocative content (text messages, photos, and videos) via smartphone, Internet, or social networks. Recent evidence enlightened its relationships with several risk and aggressive behaviors. This study aimed to investigate the relationship between the amount of sexting, psychological distress, and dating violence in adolescents and young adults. **Method:** The study involved 1,334 participants (68% females; mean age = 20.8) who completed a survey containing Kinsey Scale, Sexting Behavior Questionnaire, Conflict in Adolescent Dating Relationships Inventory, and General Health Questionnaire. **Results:** Results showed gender and sexual orientation differences: Males (vs. females) did more sexting, while non-heterosexuals (vs. heterosexuals) were more involved in sexting. Moreover, high/moderate users of sexting committed more offline and online dating violence. Regarding psychological distress, no differences were found between high and low/moderate users of sexting. **Conclusions:** Results suggested that moderate and high use of sexting could be a risk factor for some problematic behaviors such as dating violence, even if there is not a relationship with anxiety and depression symptoms.

Keywords: Sexting, dating violence, psychological distress, adolescence, young adults.

Resumen

Sexting, trastorno psicológico y noviazgo violento en adolescentes y adultos jóvenes. **Antecedentes:** sexting es el intercambio de material explícitamente sexual o de contenido provocante (mensajes de texto, fotos y vídeos) mediante el uso de Smartphone, Internet y social network. Las pruebas recientes han descubierto la relación entre varios riesgos y comportamientos de tipo agresivo. El presente estudio tuvo como objetivo investigar la relación entre la cantidad de sexting, malestar psicológico y violencia durante el noviazgo entre adolescentes y adultos jóvenes. **Método:** el estudio incluyó a 1.334 participantes (68% mujeres, edad media de 20,8) que completaron una encuesta con la Kinsey Scale, Sexting Behavior Questionnaire, Conflict in Adolescent Dating Relationships Inventory y General Health Questionnaire. **Resultados:** los resultados mostraron diferencias de orientación sexual, los hombres (vs. mujeres) practicaron más sexting, mientras los homosexuales (vs. heterosexuales) están más involucrados en sexting. Por otra parte, los que más usaban el sexting cometieron más actos violentos durante las citas o el noviazgo. En cuanto a trastornos psicológicos, no se encontraron diferencias entre alto o poco/moderado uso del Sexting. **Conclusiones:** los resultados demostraron que el uso moderado y alto del sexting podría ser un factor de riesgo para algunos comportamientos problemáticos como el noviazgo violento, si bien no hay una relación con los síntomas de ansiedad y depresión.

Palabras clave: sexting, noviazgo violento, trastorno psicológico, adolescentes, adultos jóvenes.

Several studies in the last few years have investigated sexting behaviors among adolescents and young adults. Sexting has been defined by Chalfen (2009) as the exchange of sexually explicit or provocative content (text messages, photos, and videos) via smartphone, Internet, or social networks. One of the most relevant surveys on sexting (The National Campaign & CosmoGirl.com, 2008) showed that 20% of adolescents and 33% of young adults have sent or posted nude or seminude sexts of themselves. In Italy, where the present study was conducted, only two surveys on sexting behaviors among adolescents were carried out by Eurispes and

Telefono Azzurro (2011, 2012). These studies indicated that, after only one year from the first data collection, the percentages had doubled both for receiving (from 10% to 26%) and for sending (from 6.7% to 12%). Regarding gender differences in sexting behaviors, literature showed inconsistent results (Dir, Cyders, & Coskupinar, 2013; Gordon-Messer, Bauermeister, Grodzinski, & Zimmerman, 2013; Strassberg, McKinnon, Sustaita, & Rullo, 2013). Regarding sexual orientation, few studies have investigated differences in sexting behaviors between heterosexuals and non-heterosexuals: In two different studies, Rice, Gibbs et al. (2014) and Rice, Rhoades et al. (2012) found that non-heterosexual adolescents were found to be more likely to send a sext. In line with these results, Gámez-Guadix, Almendros, Borrajo and Calvete (2015) found that sexting and online sexual victimization were more common among non-heterosexual adults. On the contrary, Gordon-Messer et al. (2013) found no differences by sexual orientation in sexting behaviors. Research suggests that sexual minority people suffer from stigma,

prejudice, and discrimination in the social environment and this could interfere with their psychological and relational well-being as theorized in the Minority Stress Model (Lingiardi, Baiocco, & Nardelli, 2012; Meyer, 2003; Mohr & Daly, 2008).

A recent review of sexting (Van Ouytsel, Walrave, Ponnet, & Heirman, 2015) showed that several studies have found relationships between sexting and risky sexual behaviors (Dake, Price, Maziarz, & Ward, 2012; Temple et al., 2012), health risk behaviors, such as smoking, substance use, alcohol abuse, and binge drinking (Temple et al., 2014), and several online and offline aggressive behaviors, such as cyber-bullying and bullying (Dake et al., 2012; Lee, Moak, & Walker, 2013). Regarding online violence, a study reported that adult women who had sexted with strangers were more at risk of sexual online victimization (Gámez-Guadix et al., 2015). Another study showed that sexters were at higher risk of several types of cyber-victimization (Reyns, Burek, Henson, & Fisher, 2013). Moreover, it was found that young adults involved in unwilling sexting behaviors were significantly more likely to be victims of physical dating violence (Tobin & Drouin, 2013) and that not-allowed sharing of sexts could lead to more dating violence in presence of high level of hostile sexism, but not in presence of high level of benevolent sexism (Morelli, Bianchi, Baiocco, Pezzuti, & Chirumbolo, 2016).

Regarding the psychological wellbeing correlates of sexting, several studies reported inconsistent results: Some authors underlined the relationship between sexting, depression, anxiety, and suicide attempts (Dake et al., 2012; Van Ouytsel, Van Gool, Ponnet, & Walrave, 2014). On the contrary, other investigations found no associations with psychological distress (Hudson, 2011; Temple et al., 2014). In line with these findings, O'Sullivan (2014) found no significant differences between teen sexters and non-sextingers in terms of several psychological health factors. Accordingly, Levine (2013) suggested that sexting should not be exclusively defined as a risky and unhealthy behavior but could be a new way for adolescents and young adults to explore sexuality. Therefore, this study aims to investigate, in a sample of adolescents and young adults, the relationship between the amount of sexting behaviors and psychological distress, victimization, and perpetration of dating violence, and sexual orientation. Specifically, the purpose of this study was to verify whether high users of sexting showed more psychological distress, online and offline dating violence perpetration and victimization, and risky sexting behaviors (i.e., exchange of sexts with strangers, sexting during substance use and forced sexting) than low/moderate users of sexting. Finally, we aimed to verify if non-heterosexual participants were higher users of sexting behaviors than heterosexuals.

Method

Participants

Participants were 1334 Italian adolescents and young adults aged from 13 to 30 ($M_{age} = 20.8$; $SD_{age} = 4.3$). Females were 68% ($N = 907$; $M_{age} = 20.9$; $SD_{age} = 4.2$) and males were 32% ($N = 427$; $M_{age} = 20.5$; $SD_{age} = 4.6$). The majority of participants were Italian (95.3%): Specifically, 80.4% were from central Italy, 14.9% were from southern Italy, and 4.6% were from northern Italy. Regarding their living situations, 71.2% of the participants lived with both their parents and 11.3% lived with only one parent. Regarding their sexual orientation, the majority of the participants were exclusively heterosexuals (87.4%).

Instruments

Socio-demographic data. Participants were asked about demographic data such as age, gender, nationality, family composition, and socio-economic status. Regarding their age, participants were divided into two groups: adolescents from 13 to 19 years old ($N = 612$, 45.8%) and young adults from 20 to 30 years old ($N = 722$, 54.12%).

Sexual orientation. Participants assessed their sexual orientation via the Kinsey Scale (Kinsey, 1948) on a 5-point Likert scale from 1 (*exclusively heterosexual*) to 5 (*exclusively homosexual*). Participants were categorized into two groups according to their answer: Exclusively heterosexuals ($N = 1163$, 87.2%), who answered 1, and non-exclusively heterosexuals ($N = 168$, 12.6%), who answered from 2 to 5. Three participants omitted to state their sexual orientation.

Sexting behaviors. A modified version of the Sexting Behaviors Scale (Dir, 2012) was used to assess sexting behaviors. The original version of the scale was composed by 11 items investigating only receiving, sending or posting provocative or suggestive text messages and pictures (not considering videos). This scale did not evaluate other important details about the content: for example, it was not investigated who was the subject of the pictures. Therefore, we modified the scale, adding eighteen items in order to investigate more deeply the three sexting sub-dimensions: receiving, sending, and posting sexts. These items measured the identity of the individuals in the photo/video and whether sexts were sent or posted with their consent. Sexting behaviors were defined as "sending or receiving sexually suggestive or provocative messages/photos/videos via mobile phone and/or Facebook or other internet social networking site," and participants were asked to rate each sexting behavior (from item 1 to item 29) on the following 5-point Likert scale: 1 (*never*); 2 (*rarely or a few times*); 3 (*occasionally or 2-3 times a month*); 4 (*often or 2-3 times a week*); 5 (*frequently or daily*). The final scale comprised 29 items and reached a Cronbach alpha of .93. The receiving sub-scale exhibited an alpha of .86, the sending sub-scale .85, and the posting subscale .92. An additional item (item 30) was added in order to assess the number of people whom they exchanged sexts with (i.e., nobody; only one person; two people; 3/5 people; more than 5 people). Two further items assessed the identity of people they exchanged sexts with, in terms of sending (item 31) and receiving (item 32) sub-dimensions (i.e., nobody, partner, ex-partner, friends, strangers, someone you like, someone you betray the partner with) and participants were allowed to give more than one answer. Other three items (item 33, 34 and 35) investigated sexting during substance use on a 5-point Likert scale from 1 (*never*) to 5 (*always*): This scale reached a Cronbach alpha of .64. Finally, two more items assessed whether participants had ever been forced to sext, respectively by a partner (item 36) or by friends (item 37), on a 5-point Likert scale from 1 (*never*) to 5 (*always*). The final instrument was named Sexting Behavior Questionnaire and all the items are listed in Table 1.

Psychological distress. We used the 12 item version of the General Health Questionnaire (Goldberg & Hillier, 1979) to assess psychological symptoms related to anxiety and depression. Participants rated how often they suffered different types of symptoms over the last two weeks on a 4-point Likert scale from 0 (*more than usual*) to 3 (*significantly less than usual*). Higher scores indicated more psychological distress. This scale showed a Cronbach's alpha of .82.

Table 1
Sexting Behaviors Questionnaire (SBQ)

1. How often have you received sexually suggestive or provocative *text messages*?*
2. How often have you received sexually suggestive or provocative *photos/videos* by sms/mms/ Whatsapp/Snapchat?*
3. How often have you received sexually suggestive or provocative *photos/videos about yourself* by sms/mms/ Whatsapp/Snapchat?
4. How often have you received sexually suggestive or provocative *photos/videos about your partner* by sms/mms/ Whatsapp/Snapchat?
5. How often have you received sexually suggestive or provocative *photos/videos about someone you know* by sms/mms/ Whatsapp/Snapchat?
6. How often have you responded to sexually suggestive or provocative text messages or photos/videos you received?*
7. How often have you received sexually suggestive or provocative *photos/videos or messages over the internet* (i.e., Facebook, e-mail, Twitter, etc...)?*
8. How often have you received sexually suggestive or provocative *photos/videos or messages about yourself over the internet* (i.e., Facebook, e-mail, Twitter, etc...)?
9. How often have you received sexually suggestive or provocative *photos/videos or messages about your partner over the internet* (i.e., Facebook, e-mail, Twitter)?
10. How often have you received sexually suggestive or provocative *photos/videos or messages about someone you know over the internet* (i.e., Facebook, e-mail, Twitter)?
11. How often have you sent sexually suggestive or provocative *text messages*?*
12. How often have you sent sexually suggestive or provocative *photos/videos* by sms/mms/Whatsapp/Snapchat?*
13. How often have you sent sexually suggestive or provocative *photos/videos about yourself* by sms/mms/Whatsapp/Snapchat?
14. How often have you sent sexually suggestive or provocative *photos/videos about your partner* by sms/mms/Whatsapp/Snapchat *with his/her consent*?
15. How often have you sent sexually suggestive or provocative *photos/videos about your partner* by sms/mms/Whatsapp/Snapchat *without his/her consent*?
16. How often have you sent sexually suggestive or provocative *photos/videos about someone you know* by sms/mms/Whatsapp/Snapchat *with his/her consent*?
17. How often have you sent sexually suggestive or provocative *photos/videos about someone you know* by sms/mms/Whatsapp/Snapchat *without his/her consent*?
18. How often have you sent sexually suggestive or provocative *photos/videos or messages over the internet* (i.e., Facebook, e-mail, Twitter)?*
19. How often have you sent sexually suggestive or provocative *photos/videos or messages about yourself over the internet* (i.e., Facebook, e-mail, Twitter)?
20. How often have you sent sexually suggestive or provocative *photos/videos or messages about your partner over the internet* (i.e., Facebook, e-mail, Twitter) *with his/her consent*?
21. How often have you sent sexually suggestive or provocative *photos/videos or messages about your partner over the internet* (i.e., Facebook, e-mail, Twitter) *without his/her consent*?
22. How often have you sent sexually suggestive or provocative *photos/videos or messages about someone you know over the internet* (i.e., Facebook, e-mail, Twitter) *with his/her consent*?
23. How often have you sent sexually suggestive or provocative *photos/videos or messages about someone you know over the internet* (i.e., Facebook, e-mail, Twitter) *without his/her consent*?
24. How often have you publicly posted sexually suggestive or provocative *photos or videos* on Facebook, Twitter, or MySpace?*
25. How often have you publicly posted sexually suggestive or provocative *photos or videos about yourself* on Facebook, Twitter, or MySpace?*
26. How often have you publicly posted sexually suggestive or provocative *photos or videos about your partner* on Facebook, Twitter, or MySpace *with his/her consent*?
27. How often have you publicly posted sexually suggestive or provocative *photos or videos about your partner* on Facebook, Twitter, or MySpace *without his/her consent*?
28. How often have you publicly posted sexually suggestive or provocative *photos or videos about someone you know* on Facebook, Twitter, or MySpace *with his/her consent*?
29. How often have you publicly posted sexually suggestive or provocative *photos or videos about someone you know* on Facebook, Twitter, or MySpace *without his/her consent*?
30. How many people have you exchanged sexually suggestive or provocative text messages/photos/videos with?*
31. Who do you usually send sexually suggestive or provocative text messages/photos/videos to?
32. Who do you usually receive sexually suggestive or provocative text messages/photos/videos from?
33. Sometimes I sext when I am drinking alcohol*
34. Sometimes I sext when I am smoking marijuana*
35. Sometimes I sext when I am doing other drugs*
36. Sometimes I sext because my partner forced me
37. Sometimes I sext because my friends forced me

* Items inspired by the Dir's scale (2012) are indicated by an asterisk. In the SBQ' scale: a) we used the expression "sexually suggestive or provocative" instead of "provocative or suggestive" used in the Dir's scale; b) we used the expression "photos/videos" instead of "pictures" used in the Dir's scale. The Sexting Behavior Questionnaire is available from the first author

Dating violence. Dating violence behaviors were assessed by a modified version of the Conflict In Adolescent Dating Relationships Inventory (Wolfe et al., 2001). We used 25 items of the original scale to assess different types of dating violence behaviors such as threatening behaviors and physical, sexual, relational, and verbal/emotional abuse. Twelve items were added to investigate online dating violence, specifically related to relational, verbal/emotional, and threatening dimensions (a sample item is: "I tried to turn her/his friends against her/him by SMS/mail/Facebook"). Each item was repeated twice to investigate the dimensions of perpetration and victimization: The final scale was composed of 74 items rated on a 4-point Likert scale from 0 (*never*) to 3 (*often or 6 times or more*). In the present study we referred to the following sub-dimensions: perpetration total score (37 items, $\alpha = .92$), victimization total score (37 items, $\alpha = .93$), online perpetration score (12 items, $\alpha = .85$), and online victimization score (12 items, $\alpha = .86$).

Procedure

Adolescents were recruited in secondary schools of Rome after receiving written consent forms from school authorities and their parents. The return rate of questionnaires in schools was about 95%. Young adults were recruited via an online survey (33.1% were university students): Their consent was requested by clicking "yes" on the initial page of the survey. The response rate for the online survey was of 70%. This study was approved by the Ethics Committee of the Department of Dynamic and Clinical Psychology of Sapienza University of Rome.

Data analysis

Firstly, we measured the frequencies of all sexting dimensions. On the basis of the total score obtained on the Sexting Behavior

Questionnaire, participants were categorized into three groups divided for the amount of sexting: Low users of sexting (below one standard deviation, $N = 1193$, 89.4%; $M_{SBS} = 1.16$; $SD_{SBS} = 0.16$), moderate users of sexting (between one and one and a half standard deviation, $N = 44$, 3.3%; $M_{SBS} = 1.68$; $SD_{SBS} = 0.05$), high users of sexting (above one and a half standard deviation, $N = 97$, 7.3%; $M_{SBS} = 2.20$; $SD_{SBS} = 0.46$). After that, we ran a Chi-square in order to test possible differences in gender, age and sexual orientation distribution. A series of ANOVAs were run to compare the three sexting groups regarding risky sexting behaviors (i.e., sexting during substance use, sexting forced by partner, sexting forced by friends). A Chi-square was conducted to compare three sexting groups regarding sexting with strangers and, finally, a MANOVA was run to compare the three sexting groups regarding psychological distress, perpetration and victimization of dating violence, also in the online dimension.

Results

For descriptive analyses of sexting behaviors, results showed that 1097 participants (82.23%) reported having sexted at least once. As regards the three sexting sub-dimensions, 1040 participants (77.96%) reported that they had received sexts at least once, 842 (63.12%) reported that they had sent sexts at least once, and 117 (8.77%) reported that they had posted sexts at least once. Moreover, 442 participants (33.13%) reported that they had sexted during substance use at least once, 44 (3.30%) reported that they had been forced to sext by a partner at least once, 28 (2.10%) reported that they had been forced to sext by friends at least once, and 26 (1.95%) reported that they had sent sexts to strangers. Finally, 380 participants (28.48%) reported that they had sent their own sexually suggestive photos or videos at least once, and 168 (12.59%) reported that they had sent sexts about someone else without her/his consent at least once. Means and standard deviations are reported in Table 2.

On the basis of the total score obtained on the Sexting Behavior Questionnaire, participants were categorized into low, moderate, and high users of sexting, as previously described in data analysis section. Regarding gender differences, males were more likely to be moderate users (6.1%) and high users of sexting (14.1%) than females (respectively 2% and 4.1%), $\chi^2(2) = 60.96$, $p = .000$. Regarding sexual orientation, non-heterosexual participants were more high users of sexting behaviors (12.5%) than heterosexual participants (6.5%), $\chi^2(2) = 8.39$, $p = .01$. Sexting groups did not significantly differ regarding age (adolescents vs. young adults).

Table 2
Means and standard deviations of sexting sub-dimensions and percentages and frequencies of participants who have sexted at least once ($n = 1334$)

Sexting sub-dimensions	M (SD)	% (n)*
Sexting Total Score	1.26 (0.34)	82.23 (1097)
Receiving sexts	1.43 (0.51)	77.96 (1040)
Sending sexts	1.21 (0.33)	63.12 (842)
Posting sexts	1.04 (0.25)	8.77 (117)
Sending not allowed sexts	1.06 (0.24)	12.59 (168)
Sending sexts about myself	1.19 (0.41)	28.48 (380)
Sexting during substances use	1.25 (0.50)	33.13 (442)

* Percentages and frequencies of participants who reported to have sexted at least once

High users of sexting reported doing more sexting during substance use compared to moderate and low users of sexting, $F(2, 1328) = 81.03$, $p = .000$. High users of sexting were more likely to report being forced to do sexting both by partners, $F(2, 1329) = 15.61$, $p = .000$, and by friends, $F(2, 1329) = 8.84$, $p = .000$, compared to moderate and low users of sexting. High users of sexting were more likely to send sexts to strangers (6.2%) compared to moderate (0%) and low users of sexting (1.7%), $\chi^2(2) = 10.38$, $p = .006$ (see Table 3 for descriptive and post-hoc).

Differences among three sexting groups regarding psychological distress, victimization and perpetration of dating violence, also in the online dimension, were tested and it was found a significant multivariate effect, Wilks's lambda = .34, $F(5, 1326) = 515.01$, $p = .000$. Specifically, sexting groups did not significantly differ regarding psychological distress. Regarding dating violence, moderate and high users of sexting reported more total perpetration, $F(2, 1330) = 16.08$, $p = .000$, and total victimization, $F(2, 1330) = 19.74$, $p = .000$, than low users of sexting (see Table 3). Finally, moderate and high users of sexting reported more online perpetration, $F(2, 1330) = 17.46$, $p = .000$, and online victimization, $F(2, 1330) = 16.81$, $p = .000$, than low users of sexting (see Table 3).

Table 3
Mean and standard deviations of sexting during substances use, forced sexting, psychological distress and dating violence, divided by amount of sexting

	Low users ($n = 1193$, 89.4%) M (SD)	Moderate users ($n = 44$, 3.3%) M (SD)	High users ($n = 97$, 7.3%) M (SD)	Total ($n = 1334$) M (SD)
Sexting during substances use ^a	1.20 (0.42)	1.54 (0.61)	1.80 (0.85)	1.25 (0.50)
Forced sexting – Partner ^b	1.04 (0.27)	1.07 (0.33)	1.24 (0.77)	1.05 (0.34)
Forced sexting – Friends ^b	1.02 (0.18)	1.00 (0.00)	1.11 (0.48)	1.03 (0.21)
Psychological distress ^c	1.46 (0.52)	1.48 (0.37)	1.39 (0.45)	1.45 (0.51)
Perpetration total score ^d	0.42 (0.34)	0.55 (0.40)	0.62 (0.51)	0.44 (0.36)
Victimization total score ^d	0.39 (0.34)	0.53 (0.42)	0.62 (0.51)	0.41 (0.37)
Online perpetration score ^d	0.27 (0.36)	0.41 (0.42)	0.49 (0.53)	0.29 (0.38)
Online victimization score ^d	0.25 (0.36)	0.38 (0.42)	0.47 (0.55)	0.27 (0.39)

^aLow < moderate < high
^bLow = moderate < high
^cLow = moderate = high
^dLow < moderate = high

Discussion

This investigation aimed to study the relationship between sexting, psychological distress, victimization, and perpetration of dating violence, exploring also gender and sexual orientation differences. The principal results suggested that individuals who are high and moderate users of sexting (vs. low) engaged in more victimization, and more perpetration of dating violence, including online dating violence. Moreover, high users of sexting (vs. moderate and low) showed more risky sexting behaviors (i.e., sexting during substance use, being forced to sext both by partner and friends, and sharing sexts with strangers). On the other

hand, no differences regarding psychological distress were found between low and high users of sexting.

To our knowledge, this is one of the first reports about sexting behaviors in the Italian context and results are consistent with previous international studies: The majority of participants reported receiving more than sending sexts (Dir, Coskunpinar, Steiner, & Cyders, 2013; Eurispes & Telefono Azzurro, 2011, 2012), a result that could be explained by social desirability. A low percentage reported posting sexts on social networks at least once (8.77%). Usually, previous studies about sexting assessed sending and posting in a composite measure and so, found a higher percentage of posting (The National Campaign & CosmoGirl.com, 2008). Our results showed a relevant percentage of participants (almost one third) reporting to have sexted during substance use at least once: This alarming result seems in line with studies that found sexting often related to substance use (Benotsch, Snipes, Martin, & Bull, 2013; Dake et al., 2012; Dir, Cyders et al., 2013) and could be explained with the disinhibitory effect of alcohol and drugs on sexual responsiveness (Justus, Finn, & Steinmetz, 2000; MacDonald, Zanna, & Fong, 1998; Wilson & Niaura, 1984). Moreover, a sizable proportion of participants that should not be overlooked (12.5%) reported to have sent sexts about someone else without his/her consents: This behavior, defined secondary sexting (Calvert, 2009), may sometimes hide harmful intentions and its consequences are often negative for the victims as enlightened in studies about the so called revenge porn (Calvert, 2013; Tungate, 2014).

In line with our expectations, we found differences regarding gender and sexual orientation: Males (vs. females) and non-heterosexuals (vs. heterosexuals) are higher users of sexting. These results are also consistent with previous research studies and suggest that higher sexting behaviors among non-heterosexuals could be due to a more frequent use of social media communication: As recently found by Chong, Zhang, Mak, and Pang (2015), social media facilitate communication and relationships, and improve psychological and social-emotional well-being among lesbian, gay and bisexual people. Thus, social media could be a protective factor against stressors due to social stigma, prejudice and discrimination, as theorized in Minority Stress Model (Meyer, 2003). Regarding age, no differences were found between adolescents and young adults: Previous studies investigated sexting prevalence either among adolescents or among young adults (Dake et al., 2012; Gámez-Guadix et al., 2015; Lenhart, 2009; Strassberg et al., 2013; Temple et al., 2012) and found differences between younger and older adolescents and between young adults and older ones. Maybe this study could not find differences between adolescents and young adults because the focus was on sexting frequencies: Probably some age differences could be enlightened in a deeper investigation regarding motivations and expectations related to sexting behaviors.

This study suggests that a high use of sexting is more related to other problematic behaviors. Specifically, high users of sexting are more likely to sext during substance use, to be forced to sext by partners and by friends, and to send sexts to strangers. These results extend previous similar findings (Benotsch et al., 2013; Dake et al., 2012; Dir, Cyders et al., 2013; Temple et al., 2014) by pointing out the differences between low and high users of sexting.

Our results also confirmed the relationship between sexting and dating violence (Gámez-Guadix et al., 2015; Tobin & Drouin, 2013). Specifically, moderate and high users of sexting are more likely to be perpetrators and victims of dating violence, including online, than low users of sexting. On the other hand, we did not find significant differences regarding psychological health among the three groups of sexting, as found in previous studies (Hudson, 2011; O'Sullivan, 2014; Temple et al., 2014). Results suggested that moderate and high use of sexting could be a risk factor for some problematic behaviors such as dating violence, even if there is no relationship with anxiety and depression symptoms. On the other hand, low use of sexting could be a weak index of the tendency to other problematic behaviors because it seems to be less related to dating violence: However, also low users should be deeply monitored across age by future longitudinal studies because previous studies showed an increasing of sexting behaviors due to the spread of new technologies in only two years (Eurispes & Telefono Azzurro, 2011; 2012). Therefore, our results suggested that sexting, practiced at a low level, could not be defined per se as a risk factor, supporting Levine's hypothesis (2013). Future studies should be conducted to examine more deeply whether there are differences regarding motivations, expectations, and attributed meanings of sexting behaviors among different groups of sexting use.

Limitations of this study are related to the use of a convenience sample that could not be considered as representative of the population. There could have being a social desirability effect due to the self-report questionnaire, even if they were anonymous. Moreover, this study was conducted only among Italian participants and so results may be not generalized to other countries. Cross-cultural studies should be conducted to extend and compare results in other cultures. Moreover, psychological distress was assessed by a 12-item self-report scale focused only on anxiety and depression symptoms but, probably, future studies could evaluate mental disease taking into account also externalizing symptoms and personality traits that could be more related to sexting and dating violence. Finally, this research evaluated risky sexting behaviors taking into account the frequencies of behaviors. Future studies should further investigate risky dimensions of sexting focusing on different types of sexting and severity of the related consequences, that is, studying the sharing of sexts of others without their consent or publicly posting one's own photos.

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