

Contents lists available at [ScienceDirect](http://www.sciencedirect.com)

Journal of Adolescence

journal homepage: www.elsevier.com/locate/adolescence

Sexting as the mirror on the wall: Body-esteem attribution, media models, and objectified-body consciousness

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ARTICLE INFO

Keywords:

Sexting motivations
Body esteem
Media models
Objectified-body consciousness
Adolescents

ABSTRACT

Sexting motivations during adolescence are related to developmental dimensions—such as sexual identity and body-image development—or harmful intentions—such as aggression among peers and partners. Sociocultural and media models can affect explorations of sexuality and redefinitions of body image, which in turn are related to sexting behaviors and motivations. In this study, we investigated the roles of body-esteem attribution, the internalization of media models, and body objectification as predictors of three sexting motivations: sexual purposes, body-image reinforcement, and instrumental/aggravated reasons. The participants were 190 Italian adolescents aged from 13 to 20 years old ($M_{\text{age}} = 17.4$, $SD_{\text{age}} = 1.8$; 44.7% females). Sexual purposes were predicted by body-esteem attribution and body objectification; body-image reinforcement was predicted by the internalization of media models, and instrumental/aggravated reasons were not predicted by any variable. Thus, only sexual purposes and body-image reinforcement appeared to be affected by body-image concerns due to media models.

1. Sexting behaviors and motivations

During the last decade, new technologies and media-based communications have provided a new way for managing social interactions and intimate relationships. Smartphones, the Internet, and social networks can also be vehicles for exploring and expressing sexuality. Defined by Chalfen (2009) as the exchange of sexually suggestive and provocative contents via smartphones, the Internet, or social networks, sexting appears to be very common among young people (Dir, Coskunpinar, Steiner, & Cyders, 2013; Morelli, Bianchi, Baiocco, Pezzuti, & Chirumbolo, 2016a). The prevalence of sexting behaviors increases with the spread of new technologies. The first surveys on adolescents found the percentages of sexting to be between 20% and 33% (Eurispes & Telefono Azzurro, 2012; National Campaign & Cosmogirl, 2008). A more recent study (Morelli et al., 2016a) found higher percentages—distinguishing between receiving sexts (78%), privately sending sexts (73%), and publicly posting sexts (9%).

We conceived the present study in line with a developmental interpretation proposed by the psychological literature on adolescents' sexting (Levine, 2013). According to this perspective, sexting is now a normal expression of sexuality through new technologies (Bianchi, Morelli, Baiocco, & Chirumbolo, 2016), and it is just one of the new methods that media-based communications have provided for facing some of adolescents' normative and developmental tasks (Šmahel & Subrahmanyam, 2014).

Studies on sexting motivations (Siibak, 2009; Vanden Abeele, Campbell, Eggermont, & Roe, 2014) have revealed the need for acceptance and popularity among peers. This need also has a relevant role in facing adolescent developmental tasks related to identity construction, new interest in sexuality, and the redefinition of body image (Blos, 1979; Erikson, 1970). All of these

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developmental tasks contribute to identity redefinition through social comparisons with peers (Festinger, 1954; Suls, Martin, & Wheeler, 2002). Indeed, the most frequently reported motivation for sexting during adolescence has been related to achieving sexual and social aims (such as flirting, initiating sexual activity, capturing attention, arousing a potential partner as foreplay, having fun, joking, achieving popularity, and imitating friends), which are two key developmental tasks during adolescence (Lenhart, 2009). Furthermore, some recent studies (Bianchi, Morelli, Baiocco, & Chirumbolo, 2017; Bianchi et al., 2016; Chalfen, 2009; Henderson & Morgan, 2011; Siibak, 2009) have found that sexting can work as a form of self-expression underlying body-image redefinition. Thus, all of these sexting motivations relate to important developmental tasks that adolescents have to manage, supporting a normative interpretation of sexting behaviors (Levine, 2013). More specifically, online self-presentations appear to be frequently used by adolescents to express and explore their developing identities (Schmitt, Dayanim, & Matthias, 2008; Walrave, Heirman, & Hallam, 2014; Šmahel & Subrahmanyam, 2014).

On the other hand, the literature (Drouin, Ross, & Tobin, 2015) has also underlined the presence of more harmful motivations that go beyond sexuality itself and seem to hide aggressive aspects—such as being pressured by partners and friends; embarrassing someone, being aggressive, and seeking revenge among partners. There are also secondary aims of sexting, such as to receive gifts or telephone recharges (AP-MTV, 2009; Bianchi et al., 2016; Eurispes & Telefono Azzurro, 2012). These sexting motivations are related to a problematic and deviant facet of sexting behaviors. Several studies (Morelli, Bianchi, Baiocco, Pezzuti, & Chirumbolo, 2016b, 2016a; Vanden Abeele et al., 2014; Walrave et al., 2014) have found that sexting can be a vehicle for relational violence among peers and in dating relationships, becoming a new kind of gendered sexual harassment (Walker, Sanci, & Temple-Smith, 2013). The lack of direct feedback and nonverbal communication—the disinhibition effect, as defined by Suler (2004)—can facilitate young people's expressions of aggression in online environments. Furthermore, the false sense of privacy provided by the online dimension can facilitate the perpetration of violence (Walrave et al., 2014) and can explain the exploitation of sexual contents for the obtainment of some rewards. This instrumental use of sexting as an exchange of favors is based on a power imbalance between partners and peers, representing a source of pressure to engage in sexting. Gibson (2016) suggested that, in line with the social exchange theory (Cook, Cheshire, Rice, & Nakagawa, 2013), this power imbalance leads to a limitation of sexual freedom because providing sexual favors involves a feeling of obligation in spite of spontaneous self-disclosure (Emmers-Sommers et al., 2010).

We have demonstrated in our work that the abovementioned sexting motivations can be summarized in a three-factor model—composed of sexual motivations (related to the expression and exploration of sexuality among peers and between romantic partners), body-image reinforcement (sharing sexts to look for a feedback from peers about body adequacy), and instrumental/aggravated reasons (the exploitation of sexual contents for relational aggression or the obtainment of something else) (Bianchi et al., 2016). These three motivational areas can be conceived in the framework of motivational systems that guide individual behavior, as theorized by Lichtenberg (2013). Thus, instrumental/aggravated motivations are related to *aggravated* (harmful) sexting behaviors whereas the previous motivations (sexual aims and body-image reinforcement) are an expression of *experimental* (developmental and normative) sexting, as suggested by a study on the legal implications of sexting (Wolak, Finkelhor, & Mitchell, 2012).

1.1. Sociocultural correlates of sexting motivations

As suggested by Walrave et al. (2014), the willingness to engage in sexting is influenced by not only intraindividual factors but also extra individual factors—such as perceived social pressure and subjective norms, shaped by peer groups' approval. Recently, the social cognitive theory (SCT; Bandura, 2001) has also been applied to study the effects of media contents on individual cognitive processes. According to the SCT, social behaviors and cognitive processes are shaped in interactions with the social environment. As stated by van Oosten and Vandenbosch (2017) and in line with the SCT (Bandura, 2001), the individuals' observations of peers and media models could influence their attitudes and beliefs on a specific behavior; could shape their thoughts, affects, and actions; and consequently, could affect both behaviors and cognitions.

Within this theoretical framework, sexting behaviors and motivations are closely linked to other social contexts including peers and the media. According to Ringrose, Gill, Livingstone, and Harvey (2012), sexting can be interpreted as an expression of a sexualized culture which implies the sexual objectification of bodies through the sexualized images and models proposed in mainstream media. Moreover, the sexual objectification of bodies also leads to early sexual debut (Lerum & Dworkin, 2009; Pearson, Kholodkov, Henson, & Impett, 2012). Previous studies (Schick et al., 2010; Woertman & van den Brink, 2012) have also found that body satisfaction and body self-esteem, both in general and in sexual contexts, were indexes of normal and adaptive sexual functioning in adolescents.

Literature described body objectification as the internalization of an external gaze on one's body and the evaluation of the body as an object that needs to adapt to sociocultural standards (Fredrickson & Roberts, 1997; McKinley & Hyde, 1996). Some individuals who are more sensitive to sociocultural and media models perceive higher pressure from these standards, leading to a higher objectified-body consciousness (McKinley & Hyde, 1996). The objectified-body consciousness was defined by McKinley and Hyde (1996) as tendencies to consider one's body as an object under others' evaluation and to believe that one's body should conform to sociocultural standards. According to McKinley and Hyde (1996) this phenomenon is characterized by perceived shame and surveillance about own body, and by beliefs of control about appearance. During adolescence, people are more likely to develop body self-objectification because it arises from pubertal changes and increased peer attention (Lindberg, Grabe, & Hyde, 2007). There are high levels of body objectification in young people with a history of peer sexual harassment, which undermined their value as sexual partners and constituted a first experience of sexual objectification (Lindberg et al., 2007). Girls have been considered more sensitive than boys to body objectification due to sociocultural pressure to adapt to idealized models of beauty and thinness (Grabe, Hyde, & Lindberg, 2007; Tiggemann & Kuring, 2004). However, a recent study (Daniel & Bridges, 2010) found that boys are also

highly exposed to sociocultural and media pressure, specifically related to muscularity ideals, and research with adolescents has not found gender differences in issues related to body objectification, media models, and perceived pressure about the adolescents' bodies (Knauss, Paxton, & Alsaker, 2008). Individuals with high levels of body objectification show more body dissatisfaction (Knauss et al., 2008) and address their body concerns with negative coping strategies, such as avoidance or continued efforts to change one's appearance; on the contrary, positive coping strategies, such as self-care or rational acceptance, are negatively related to body objectification (Choma, Shove, Busseri, Sadava, & Hosker, 2009). The objectified-body consciousness can lead to negative outcomes for well-being—such as higher negative affection (Miner-Rubino, Twenge, & Fredrickson, 2002), sexual impairment (Wiederman, 2000), rumination, and depression (Grabe et al., 2007).

Body self-esteem has been conceived in the literature (Mendelson, Mendelson, & White, 2001) as a multidimensional construct. One of its dimensions refers to other people's evaluations of one's appearance, and it was named the body-esteem attribution, a concept similar to the objectified-body consciousness; both of them refer to a facet of self-esteem dependent on an external point of view and imply the sociocultural model's influence. Moreover, mass-media models affect adolescents' perceptions about their ideal body image, helping them to face developmental tasks related to body image and identity construction (Ata, Ludden, & Lally, 2007). This process seems to take place actively because adolescents seek information and models in television and media, but it also seems to take place by mere exposure to media contents (Harrison & Hefner, 2006). Thus, during adolescence, issues related to body changes, sexuality exploration, and identity construction seem to be associated with several individual, social, and media influences.

1.2. Individual differences in sexting motivations

Therefore, in line with the SCT (Bandura, 2001), we aimed to investigate how body-esteem attribution, body objectification, and the internalization of media models are related to different sexting motivations, controlling for sociodemographic variables—gender, age, and sexual orientation. Gender differences in sexting behaviors and motivations have been broadly described in the literature: Boys were found to be more likely than girls to engage in online sexual behaviors and risky sexual behaviors (Bongers, Koot, Van der Ende, & Verhulst, 2003; Jonsson, Priebe, Bladh, & Svedin, 2014) and to report more instrumental/aggravated motivations (Bianchi et al., 2016, 2017). Conversely, girls (vs. boys) are more likely to sext under pressure from partners and friends (Drouin & Tobin, 2014; Henderson & Morgan, 2011; Lippman & Campbell, 2014) or to sext to gain the attention of a potential partner and increase their popularity among their peers (Bianchi et al., 2017; Lippman & Campbell, 2014).

Regarding age differences, sexting behaviors increase with age (Dake, Price, Maziarz, & Ward, 2012; Rice et al., 2012; Strassberg, McKinnon, Sustaita, & Rullo, 2013), and young adults report more sexual motivations for sexting (Bianchi et al., 2017; National Campaign & CosmoGirl, 2008).

Finally, research has also shown sexual orientation differences, with sexual minority people, mostly gay men, reporting more sexting behaviors than their heterosexual counterparts do (Gámez Guadix, Almendros, Borrajo, & Calvete, 2015; Morelli et al., 2016a; Rice et al., 2012). Some studies (Bauermeister, Yeagley, Meanley, & Pingel, 2014; Chong, Zhang, Mak, & Pang, 2015; Rice et al., 2012) suggest that sexual minorities engage in a greater use of online environments for exploring their sexuality and meeting partners and that same-sex couples found sexting more acceptable than heterosexual ones (Chong et al., 2015; Hertlein, Shadid, & Steelman, 2015). As theorized by the minority stress model (Meyer, 2003), new technologies appeared to facilitate relationships and communication among sexual minorities—working as protective factors against the social stigma, prejudice, and discrimination that affect the psychological and relational well-being of sexual minorities.

2. Aims and hypotheses

Considering the abovementioned literature we aimed to examine the contributions of body esteem, objectified-body consciousness, and the internalization of media models to sexting motivations among adolescents, beyond the documented effects of gender, age, and sexual orientation. Because of the sexual double standard (Ringrose, Harvey, Gill, & Livingstone, 2013), we expected an effect of gender on sexting motivations related to instrumental/aggravated reasons, which appear more frequently with boys (vs. girls).

Due to the role of sexting as a precursor to sexual activity during development (Temple & Choi, 2014), we also expected that sexual motivations related to sexual aims could be reported more often by young adults (vs. adolescents). Finally, in line with the minority stress model (Meyer, 2003), we expected an effect of sexual orientation on sexual purposes; we specifically hypothesized that sexual minorities would show more sexual purposes than the heterosexual participants would.

However, beyond the effect of these variables that we controlled for as covariates, we hypothesized that sexting for sexual purposes is predicted by body-esteem attribution and body objectification, in line with the previous literature (Schick et al., 2010; Woertman & van den Brink, 2012). Moreover, we hypothesized that sexting for body-image reinforcement (i.e., achieving peers' confirmation about body adequacy) is predicted by the internalization of cultural and media models of idealized bodies. The comparison with idealized models provided by the media could make facing the developmental tasks related to the redefinition and acceptance of one's body image harder, increasing concerns of body adequacy among teenagers. Thus, sexting could become a new vehicle for facing concerns about body image because the positive feedback from peers and potential partners works as a confirmation of body adequacy, as suggested in previous studies (Chalfen, 2009; Siibak, 2009). Conversely, regarding sexting for instrumental/aggravated reasons (i.e., secondary aims and harmful intentions), we did not expect any relationship with body-esteem attribution, body objectification, or the internalization of media models.

3. Methods

3.1. Participants

The original sample included 257 participants aged from 13 to 20 ($M_{age} = 17.6$; $SD_{age} = 1.9$; 46.3% females). Only participants who sent sexts at least once during the last year were selected to take part to the study ($N = 190$). Thus, the participants included in the present study were 190 Italian adolescents aged from 13 to 20 ($M_{age} = 17.4$; $SD_{age} = 1.8$; 44.7% females) and were recruited in secondary schools in urban and suburban areas of Rome. Regarding their sexual orientation, the majority of participants were exclusively heterosexual (80.5%; $n = 153$). We conducted the data collection via an online survey because of research suggesting that sensitive information is more candidly reported if the assessment is conducted via computer or online rather than via paper-and-pencil questionnaires (Clark Newman et al., 2002). For underage participants, informed-consent forms were obtained from parents and school authorities. All participants gave their informed consent in accordance with the Declaration of Helsinki. The Ethics Committee of the Department of Social and Developmental Psychology of Sapienza University of Rome approved this study.

3.2. Measures

3.2.1. Sociodemographic data

We asked the participants about some demographic data such as age, gender, and sexual orientation. We assessed sexual orientation through the Kinsey Scale (Kinsey, Pomeroy, & Martin, 1948) on a 5-point Likert scale, from 1 (exclusively heterosexual) to 5 (exclusively homosexual). We then categorized the participants into two groups according to their answers: a group of exclusively heterosexual adolescents who answered 1 and a group of not exclusively heterosexual adolescents who answered from 2 to 5.

3.2.2. Motivations for sexting

The Sexting Motivation Questionnaire (Bianchi et al., 2016) assessed motivations for sending sexts. Sexting was defined as the exchange of sexually suggestive or provocative text messages, photos, or videos by smartphone, the Internet, or social network websites (Chalfen, 2009). The instrument, composed of 13 items rated on a 5-point Likert scale from 0 (Never) to 4 (Always), assessed three motivations for sending sexts: a) sexual purposes, which refers to the sending of sexts for sexual aims (five items; e.g., “Sometimes I sext for flirting or hooking up”); b) body-image reinforcement, which refers to the use of sexting in order to get social reinforcement about the adequacy of one's body (three items; e.g., “Sometimes I sext to test if I am pretty enough”); or c) instrumental/aggravated reasons, which refer to the use of sexting for secondary aims not related to sexuality (five items; e.g., “Sometimes I sext in exchange for money or gifts”). The three dimensions showed good reliability—with a Cronbach's alpha of 0.87 for sexual purposes, 0.89 for body-image reinforcement, and 0.86 for instrumental/aggravated reasons.

3.2.3. Body-esteem attribution

The Attribution subscale from the Body Esteem Scale (BES, Confalonieri, Gatti, Ionio, & Traficante, 2008; Mendelson et al., 2001) was used to assess a specific dimension of body esteem that is related to evaluations attributed to other people about one's body. This dimension included four items rated on a 5-point Likert scale from 1 (Never) to 5 (Always); a sample item is “My looks help me get dates.” In the present study, the Attribution subscale showed a moderate reliability ($\alpha = 0.64$).

3.2.4. Objectified body consciousness

The 14-item version of the Objectified-Body Consciousness Scale for Youth (Lindberg, Hyde, & McKinley, 2006) evaluated the objectified-body consciousness (McKinley & Hyde, 1996). The scale evaluated body surveillance, body shame, and appearance-control beliefs. A sample item was “I often compare how I look with how other people look.” Participants rated each item on a 7-point Likert scale from 1 (strongly disagree) to 7 (strongly agree). In this study, the scale showed a good reliability ($\alpha = 0.74$).

3.2.5. Internalization of sociocultural and media models

In order to assess the influence of sociocultural and mass media ideals on body evaluation, we selected four items from the Sociocultural Attitudes Toward Appearance Questionnaire (Stefanile, Matera, Nerini, & Pisani, 2011; Thompson, van den Berg, Roehrig, Guarda, & Heinberg, 2004) in order to investigate the internalization of beauty ideals and athletic body ideals provided by the mass media (e.g., “I compare my appearance to the appearance of TV and movie stars”). The participants rated their answers on a 5-point Likert scale from 1 (Completely disagree) to 5 (Completely agree), and we computed a total score. The scale reached a Cronbach's alpha of 0.78.

3.3. Data analysis

First, we computed correlations among all of variables included in the study. For descriptive purposes, we ran two independent sample *t*-tests only for the categorical variables in order to verify gender and sexual orientation differences in sexting motivations, and we computed the Cohen's *d* as effect sizes. Then, we ran three hierarchical-regression analyses in order to investigate whether body-esteem attribution, objectified-body consciousness, and the internalization of sociocultural and media models could differently predict the motivations for sending sexts (i.e., sexual purposes, body-image reinforcement, and instrumental/aggravated reasons)—controlling for age, gender, and sexual orientation. In the first step of each regression, we included gender, age, and sexual

Table 1
Correlations among variables.

	1	2	3	4	5	6	7	8	9	M	SD
1. Gender	1									–	–
2. Age	0.147*	1								17.04	1.76
3. Sexual Orientation	0.253**	0.132	1							–	–
4. BES	–0.180*	–0.046	–0.032	1						12.01	3.05
5. OBC	0.363**	0.098	0.113	0.070	1					61.97	13.24
6. ISMM	0.124	0.081	0.067	0.165*	0.529**	1				11.37	4.21
7. Sexual purposes	0.121	0.224**	0.239**	0.237**	0.224**	0.124	1			2.32	1.07
8. Body image reinforcement	0.026	0.051	0.098	0.146*	0.188**	0.285**	0.580**	1		1.80	0.93
9. Instrumental/aggravated reasons	–0.203**	–0.059	0.020	0.065	–0.099	–0.063	0.151*	0.037	1	1.13	0.44

Note 1: ***p* < 0.01; **p* < 0.05; Gender was coded as 0 = Males and 1 = Females. Sexual orientation was coded as 0 = exclusively heterosexuals and 1 = not exclusively heterosexuals; BES = Body Esteem Scale Attribution; OBC = Objectified Body Consciousness; ISMM = Internalization of socio cultural and media models.

orientation as covariates. In the second step, we regressed the criterion on body-esteem attribution, objectified-body consciousness, and the internalization of sociocultural and media models.

4. Results

4.1. Correlations among variables

Gender appeared related only to instrumental/aggravated reasons, which were reported more by males (vs. females), whereas age appeared positively related only to sexual purposes, which were reported more by older adolescents (vs. younger). Sexual orientation, too, was moderately related only to sexual purposes, which were more reported by not exclusively heterosexual participants (vs. heterosexuals). Body-esteem attribution and objectified-body consciousness appeared modestly and positively related to both sexual purposes and body-image reinforcement. Finally, the internalization of sociocultural and media models appeared to be positively and modestly related to body-image reinforcement. The correlations and descriptive statistics are reported in Table 1.

Regarding the categorical variables, we found significant gender differences only for instrumental/aggravated reasons—*t*(188) = 2.84, *p* < 0.01, Cohen's *d* = 0.29. Males reported more instrumental/aggravated reasons than females did, confirming the correlations. We found significant sexual orientation differences only for sexual purposes—*t*(188) = –3.37, *p* < 0.01, Cohen's *d* = 0.62. Participants who were not exclusively heterosexual reported more sexual purposes than their exclusively heterosexual counterparts did, confirming correlations.

4.2. Hierarchical-regression analyses

We conducted three hierarchical-regression analyses by following the previously described procedure to determine whether body-esteem attribution, objectified-body consciousness, and the internalization of sociocultural and media models predict sexual purposes, body-image reinforcement, and instrumental/aggravated reasons, respectively, as motivations for sending sexts—controlling

Table 2
Hierarchical-regression analyses (*N* = 190).

Predictor	Sexting motivations											
	Sexual purposes				Body image reinforcement				Instrumental/aggravated reasons			
	Δ <i>R</i> ²	B	SE	β	Δ <i>R</i> ²	B	SE	β	Δ <i>R</i> ²	B	SE	β
Step 1	0.10***				0.01				0.05*			
Gender		0.45	0.78	0.04		–0.02	0.43	–0.003		–0.95*	0.33	–0.22**
Age		0.58**	0.21	0.19**		0.06	0.12	0.04		–0.05	0.09	–0.04
Sexual Orientation		2.74**	0.98	0.20**		0.66	0.53	0.09		0.44	0.41	0.08
Step 2	0.09***				0.09**				0.003			
Gender		0.32	0.81	0.03		–0.17	0.45	–0.03		–0.20*	–2.46	–0.20*
Age		0.58**	0.21	0.19**		0.04	0.11	0.02		–0.03	–0.46	–0.03
Sexual Orientation		2.7**	0.93	0.20**		0.59	0.51	0.08		0.08	1.08	0.08
BES		0.44**	0.12	0.25***		0.09	0.07	0.10		0.04	0.49	0.04
OBC		0.07*	0.03	0.18*		0.01	0.02	0.06		–0.01	–0.15	–0.01
ISMM		–0.06	0.10	–0.04		0.16**	0.06	0.23**		–0.04	–0.46	–0.04
Total <i>R</i> ²	0.19***				0.10**				0.05			

Note. **p* < 0.05; ***p* < 0.01 ****p* < 0.001. Gender was coded as 0 = Males and 1 = Females. Sexual orientation was coded as 0 = exclusively heterosexuals and 1 = not exclusively heterosexuals; BES = Body Esteem Scale Attribution; OBC = Objectified Body Consciousness; ISMM = Internalization of socio cultural and media models. Interaction effects between each predictor (BES, OBC and ISMM) and gender were also tested, but no significant interaction effects were found.

for gender, age, and sexual orientation. Regarding the first hierarchical regression analysis in which we predicted sexual purposes, the predictors—gender, age, and sexual orientation—entered in the first step as covariates and accounted for 9.6% of the variance (Table 2).

Both age and sexual orientation emerged as significant predictors, with older adolescents (vs. younger) and people who were not exclusively heterosexual (vs. exclusively heterosexual) reporting more sexual purposes. In the second step—in which we added body-esteem attribution, objectified-body consciousness, and the internalization of sociocultural and media models to the equation—18.7% of the variance was accounted for, with a significant increment of 9.1% in the explained variance [$\Delta F(3, 183) = 6.84$; $p = 0.000$]. Age and sexual orientation were still significant predictors but, controlling for these variables, body-esteem attribution, and objectified body consciousness turned out to be significant predictors of sexual purposes.

Regarding the second hierarchical-regression analysis, body-image reinforcement was regressed on the predictors gender, age, and sexual orientation entered in the first step. These predictors were revealed to not be significant covariates, accounting for only 1.1% of the variance. In the second step, body-esteem attribution, objectified-body consciousness, and the internalization of sociocultural and media models were added to the equation, and 10.1% of the variance was accounted for, with a significant increment of 9% in the explained variance [$\Delta F(3, 183) = 6.07$; $p = 0.001$]. Only the internalization of sociocultural and media models turned out to be a significant predictor of body-image reinforcement.

Finally, regarding the third hierarchical-regression analysis, instrumental/aggravated reasons were regressed on the predictors gender, age and sexual orientation, entered in the first step as covariates. They accounted for 4.8% of the variance. Only gender emerged as a significant predictor, with boys (vs. girls) reporting more instrumental/aggravated reasons. In the second step—in which body-esteem attribution, objectified-body consciousness, and the internalization of sociocultural and media models were added to the equation—only the 5.1% of the variance was accounted for, and this increment of 0.3% in the explained variance was not significant [$\Delta F(3, 183) = 0.18$, $p = ns$]. Thus, body-esteem attribution, objectified-body consciousness, and the internalization of sociocultural and media models did not emerge as significant predictors of instrumental/aggravated reasons.

5. Discussion

In this study, we investigated sexting motivations during adolescence—distinguishing between developmental issues, such as sexual aims and body-image reinforcement, and more deviant or harmful motivations, such as instrumental/aggravated reasons. Specifically, we aimed to verify the relevance of body esteem, the objectified-body consciousness, and the internalization of sociocultural and media models in predicting different sexting motivations. We also controlled for gender, age, and sexual orientation.

In line with our hypotheses, results on demographic variables showed that older adolescents and not exclusively heterosexual participants were more likely to report sexual purposes as motivations for sending sexts. In recent literature (National Campaign & CosmoGirl, 2008), sexting for sexual purposes increased with age, becoming the most reported sexting motivation among young adults (Bianchi et al., 2016; 2017). A longitudinal study (Temple & Choi, 2014) showed that engaging in sexting leads to earlier sexual activity, working as a precursor of sexual initiation. Thus, we pose that older adolescents have learned during their previous experiences that sexting facilitates sexual intercourse and that they can purposely use it for sexual aims. Moreover, adolescents who were not exclusively heterosexual reported more sexual purposes for engaging in sexting, confirming previous literature about the higher acceptance of sexting among same-sex couples (Chong et al., 2015; Hertlein et al., 2015) and the greater use of online and mobile communication for meeting partners among sexual minorities (Bauermeister et al., 2014; Chong et al., 2015; Rice et al., 2012). This result can be explained by the facilitating role of new media communication in friendship and dating relationships among sexual minorities; online environments allow them to meet friends and potential partners and to express and explore their sexualities and identities—providing the perception of safeness from social stigma and discrimination and working as a protective factor for relational and psychological well-being among sexual minorities (Meyer, 2003).

Beyond the effects of age and sexual orientation, body-esteem attribution and objectified-body consciousness predicted sexting for sexual purposes. Thus, regarding body-esteem attribution, our results showed that adolescents who sext for sexual purposes had a body self-esteem that was strongly dependent on others' supposed evaluations of their bodies. It is conceivable that this use of sexting during adolescence implies the belief that, in order to engage in sexual intercourse, it is important to be well evaluated by a potential partner, on whom the adolescent's self-esteem is dependent. Sexting for sexual purposes appeared to also imply body objectification—which was composed of shame, concerns, and unrealistic beliefs of control about body appearance. Body objectification referred to belief of the body as an object that is evaluated according to cultural and sexualized standards and is perceived to belong less to the self and more to others (Fredrickson & Roberts, 1997). Sexual objectification of the body in the literature has been related to a general impairment of sexual functioning and sexual satisfaction—leading to more social and sexual avoidance, higher sexual anxiety, less sexual assertiveness, and lower sexual self-esteem (Calogero & Thompson, 2009; Sanchez & Kiefer, 2007; Steer & Tiggemann, 2008; Wiederman, 2000; Yamamiya, Cash, & Thompson, 2006). Thus, adolescents with high body objectification are also more concerned about sexuality and sexual intercourse, experiencing them with more anxiety and less assertiveness. Consequently, it is understandable how sexting could be a good vehicle for experiencing sexuality because it ensures control of body image, provides more emotional disengagement, and helps the sender to be more assertive, in spite of the anxiety related to body and sexual adequacy (Weisskirch & Delevi, 2011). A previous study on online behaviors (Suler, 2004) suggested that the characteristics of the online dimension allow more emotional and moral disengagement.

Thus, when these body-image concerns are high, our results suggested that sexting could be a first expression of sexuality during adolescence, simultaneously guaranteeing control over body disclosure and testing the partner's response. These findings seem to explain how sexting becomes a way of addressing developmental goals related to sexuality initiation and exploration, mostly for

teenagers more concerned about body and sexual adequacy. These results are also consistent with the stimulation hypothesis (Valkenburg & Peter, 2007; Valkenburg, Peter, & Schouten, 2006), which shows how media-based communication could improve self-esteem and well-being due to positive feedback from peers.

In line with the SCT (Bandura, 2001), our results also indicated that sexting for body-image reinforcement appears to be predicted by the internalization of mass-media models, after we controlled for demographic variables. These findings suggest that, when young people are used to compare their bodies with idealized and unrealistic media models, they are also more likely to engage in sexting to receive confirmation about the adequacy of their bodies, probably thinking their bodies should be in line with media standards of beauty and sexuality. These results are not affected by gender, age, and sexual orientation—showing how the effect of the internalization of media models on this sexting motivation is similar for males and females from early to late adolescence regardless to sexual orientation. Sexting in this case may become an expression of a teen's developmental task, as suggested in our previous work (Bianchi et al., 2017). It could also be an expression of a cultural issue related to comparisons with media models—generally affecting teens with higher appearance investment (Hargreaves & Tiggemann, 2004).

Finally, regarding instrumental/aggravated reasons for sexting, our results showed that they were more frequently reported by males, which is consistent with previous literature (Morelli, Bianchi, Baiocco, Pezzuti, & Chirumbolo, 2016c; Romer & Hennessy, 2007) that found risky sexual behaviors more frequently among boys (vs. girls). After we controlled for demographic variables, none of the body-image variables that we investigated were predictive of instrumental/aggravated motivations. Actually, our previous work (Bianchi et al., 2016) showed that instrumental/aggravated sexting motivations were related to aggravated sexting behaviors, such as not allowed sharing of sexts, suggesting the presence of other underlying variables, such as antisocial personality traits, that future research should investigate.

This study has significant research implications, as it confirms the importance of taking into account the roles of cultural context and developmental stages as antecedents of sexting for sexual aims and body-image confirmation. Some of the relevant research implications are also related to instrumental and aggravated sexting motivations, the antecedents of which should be deeply investigated. In other work (Bianchi et al., 2016, 2017) we documented the low prevalence of this sexting motivation but pointed out its high-risk consequences, which are related to cyber aggression and the exploitation of sexual contents. Because of the low prevalence of this motivation, it is conceivable that this dimension could characterize specific high-risk samples regardless of socio-cultural issues, which deserves further studies. For example, Romer, Reyna, and Satterthwaite (2017) found that maladaptive tendencies toward sensation seeking and impulsive action are typical of young people with weak control over limbic motivation. Moreover, further studies are needed to explore whether instrumental/aggravated sexting motivations are more strongly related to the tendency to aggress toward peers and partners than sexual and body image motivations are. It is also conceivable that sexual and body-image motivations for sexting could expose young people to suffer cyber-victimization and other forms of violence, but it is possible that only instrumental/aggravated motivations could be indicators of the tendencies to perpetrate aggression and cyber-aggression. Thus, research should investigate the influence of different individual and contextual variables in this process.

Our findings also have clinical and educational implications. In consideration of the harmful and risky consequences of an unwise use of sexting, prevention programs should be directed toward adolescents and preadolescents, as they are specific at-risk groups for sociocultural pressure and concerns about body image. These educational programs should focus on improving knowledge of sexual development and pubertal changes and deconstructing the idealized body image presented in the media—paying particular attention to the needs of specific vulnerable groups such sexual minorities, as suggested by our findings and previous literature. Specific education programs aimed at deconstructing gender stereotypes and media ideals could be useful in the prevention of sexting for sexual purposes and body-image reinforcement. Conversely, increasing awareness about specific features of online contexts, such as the false sense of privacy and easiness of disinhibition and aggressions, could be used to prevent sexting for instrumental and aggravated reasons. Adolescents could also benefit from interventions based on considerations of future consequences, with an emphasis on problem solving and improving interpersonal sensitivity and empathy. Educational and prevention programs for specific at-risk groups should be implemented with consideration for the higher prevalence of instrumental/aggravated motivations among boys. These programs should focus on improving impulse control and awareness of risky behaviors, as suggested by recent neuroscience studies on risk-taking during adolescence (Romer et al., 2017; Shulman, Harden, Chein, & Steinberg, 2015). Regarding clinical implications, brief screenings on adolescents could consider body-image concerns as a possible index of a normative use of sexting, with requests for clinical attention only in the presence of a severe impairment of body image. Thus, our findings sustain the interpretation of sexting as a common, normative behavior during adolescence that could support developmental goals and that would deserve further attention only in the presence of specific high-risk motivations.

Nevertheless, the limitations of this study are related to the use of self-report instruments, which are usually affected by social desirability when sensitive information is investigated. Specifically, the null findings related to instrumental/aggravated reasons could be due to both the low frequency of this specific motivation and the tendency to underreport these answers for social desirability. Moreover, our results could be affected by the cultural context. As suggested by a recent cross-cultural study on sexting behaviors (Baumgartner, Sumter, Peter, Valkenburg, & Livingstone, 2014), attitudes and behaviors are shaped by cultural values and spread by relevant social institutions—such as families, schools, and the media. Thus, future cross-cultural studies about sexting motivations should be conducted in order to confirm these results, taking into account the roles of traditionalism (Baumgartner et al., 2014) and post-feminist media culture (Ringrose et al., 2013). Specifically, it is conceivable that gendered values in traditionalist cultures could explain gender differences in sexting behaviors and motivations.

Finally, the study was cross sectional. Thus, we cannot infer causal but rather correlational relationships. Future longitudinal studies should explore the causal relationships between body-image variables and sexting motivations during adolescence.

Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

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