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Falling Standards of Sexuality: Exploring the Associations between Sexting, Parental involvement and Sexual Risk Behaviour of Young Persons

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Global studies on sexuality and sexual orientations have shown that young persons' attitudes and orientations towards sexuality differ from their parents' largely due to generational shifts. For instance, the acceptance of same sex relations and premarital sex have risen significantly since the 1970s to the present; research reports this increase to be about 29% and 24% for premarital sex and same sex marriage respectively. While these changes may be attributable to generational shifts on the one hand, it is also possible that Parental Involvement (PI) may have explanations for the shifting standards of sexuality in the present generation. In this study, we explored how PI may be moderating the relationship between a relatively harmless sexual behaviour (sexting) and its consequent progression into Sexual Risk Behaviour (SRB) in adolescents. Participants were 330 (50% females, $M_{age}= 16$, $SD=.92$) undergraduate students who responded to measures on the three variables as well as some demographics. PI was conceptualised to include parental discipline, parental monitoring, parental school participation and home discussion. Results showed significant associations between PI, sexting and SRB as well as interactions between sexting and PI in predicting SRB. Discussions explored the current findings viz a viz suggestions and recommendations for intervention and further studies.

Keywords: Sexuality, sexting, parenting, sexual risk, intervention

Introduction

Sexuality is a fundamental quality of human life, important for health (Diamond & Huebner, 2012; Lindau *et al.*, 2007) and happiness (Sarigianides, 2014), individual development (Haesler, Bauer & Fetherstonhaugh, 2016; Kar, Choudhury & Singh, 2015) and indeed for the preservation of the human race (Friedman, 1992). Issues of sexuality and sexual orientation have become highly debatable all across cultures (Stein, 2001; Worthington, 2004; van Klinken, 2013). On the more extreme ends are people who are inclined towards the debate on homosexuality and transgender issues. On the other end are those who argue for gender roles and equality. However, evidence for a general shift in sexuality and various sexual orientations among young person's exists (Friedman, 1992; Techasrivichien, 2016), stating that gradually, sexual patterns, trends and standards are shifting

and falling below what was previously acceptable. While the seemingly bigger issues (of homosexuality and transgender) stirring debates have received wide attention in scientific literature, the shift however has received little attention. However, it is important that if the future generation of humans on earth will have a proper orientation about sexuality and the best sexual practices that encourage continuity of the human race, then the scientific community needs to pay attention to the changing patterns (falling standards) of sexual behaviour, especially among adolescents. The question of whether sexuality standards are cross-cultural and globally accepted remains an age-long one and on its own, has sparked several debates across cultures, religions and ideologies (Beyrer, 2014; Can, 2018). Sexuality, like any other social behaviour, is always in a context and often is the interface between

structural characteristics of the prevailing socio-cultural situation and the psychological state of the individual (Adeboyejo & Onyeonuru, 2005). Within the context of this paper however, sexuality standards will be viewed through a moral lens and therefore practices which erode certain values attached to marriage and procreation in humans will be categorised as falling below the standard (Aquinas, Regan & Baumgarth, 2003; Bolatito, 2012). This categorisation may not be generally acceptable, but it was used to guide the framework of the present study as well as the interpretation of its findings.

Global studies on sexuality and sexual orientations have shown that young persons' attitudes and orientations towards sexuality differ from those of their parents largely due to generational shifts (Friedman, 1992; Techasrivichien, 2016). For instance, the acceptance of same sex relationships and premarital sex have risen significantly from the 1970s to the present; research estimates this increase to be about 29% and 24% for premarital sex and same sex marriage respectively (Little, 2016; Noroozi *et al.*, 2014). While these changes may be attributable to generational shifts on the one hand, it is also possible that Parental Involvement (PI) may have explanations for the shifting standards of sexuality in the present generation. In this study, we explored how PI (and the lack of it thereof) may be independently influencing sexuality and possibly moderating the relationship between a relatively harmless sexual behaviour (sexting) and its consequent progression into Sexual Risk Behaviour (SRB) in adolescents.

SRBs are commonly defined as behaviours related to unintended pregnancy and sexually transmitted infections (STI), including human immunodeficiency virus (HIV) infection (Coyle, Guinosso, Glassman, Anderson, Wilson, 2017). SRBs increase the susceptibility of an individual to problems related to sexuality and reproductive health, abortion, and psychological distress. SRBs include having more than one sexual partner, early sexual initiation, inconsistent use of contraceptives, and having sex with commercial sex workers. Recent research and clinical observations (e.g. Schuster, Bell & Kanouse, 1996; Gates & Sonenstein, 2000; Remez, 2000) suggest that a substantial proportion of teenagers, including those who report having never had vaginal sex, are

engaging in oral sex and other forms of sexual risk behaviours and this necessitates the need for a multifaceted investigation of SRBs. As children mature, exploring and developing their sexuality becomes part of growing up and generally, this exploration goes gradually from less intimate behaviours (e.g., kissing and petting) to more intimate behaviours (e.g., oral sex or intercourse) (De Graaf, Vanwesenbeeck, Meijer, Woertman & Meeus, 2009). In this digital era, relatively new risks have arisen that sexually developing adolescent's face which have extended sexual risks to include online sexual behaviours (Ringrose, Harvey, Gill, Livingstone, 2013). However, SRB conceptualisation in research has often been limited to the use of dichotomous measures exploring usually the use of condom or other contraceptive methods and more than four lifetime sexual partners. In this regards, Noar, Cole and Carlyle (2006) suggested in their review on the relation between condom use measures and sexual risk that it is preferable to use a combination of multiple factors in order to get a clearer and more valid picture of the actual amount of risk involved. Noar *et al.* (2006) also suggested that measures of behaviour related to sexual risk should be sensitive to partner type, specific sexual behaviour (oral, vaginal, or anal), and number of partners or frequency of sex. This approach will capture more inclusively, sexual risk and will allow for a wide range of sexual risks to be investigated either individually or as a composite.

In this age of online communications, sexual (risk) behaviour is no longer confined to the offline world (De Graaf, Verbeek, Van den Borne & Meijer, 2018). Online sexual risk behaviour is usually defined as either sexting (i.e., the sending and receiving of sexual images and messages) or looking for and meeting sexual partners online (see Livingstone, Haddon, Görzig & Ólafsson, 2011; Baumgartner, Sumter Peter & Valkenburg, 2012) and may also be seen as involving receiving or posting sexual content online. These behaviours in themselves may not be inherently risky but may lead to the development of unhealthy attachment and relationships and may have its associated long-term risks. Sexting in particular, used to be a prevalent and normalised practice among youths in many Western countries; however, due to globalisation, it is becoming predominant in most African countries including Nigeria.

Researches in sexting behaviour of young persons have returned with mixed findings. For instance, Döring (2014) explained that sexting has become a normative part of youth sexual development, entailing positive emotions and effects; and Valkenburg and Peter (2011) had earlier argued that sexting in form of online dating can be convenient, helping to make the first steps toward romantic or sexual contact, as some adolescents find communicating online easier than in real life. On the other end, the risk that private sexually explicit images may be shared with (potentially many) persons who were not meant to see it alone may become a source of unending distress in young person's engaging in sexting. Also Dake, Prize, Maziarz and Ward (2012) have stated that the invasion of privacy experienced by adolescents engaging in sexting and the consequent embarrassment may have devastating effects in terms of self-esteem and feelings of depression, shame, and guilt or even suicidal thoughts. More recent studies also, have found associations between sexting and the risk of non-consensual sex (e.g. Choi, Wong & Fong, 2016) as well as increased risk of SRBs (Beymer *et al.*, 2014).

The trends in sexting have been made much easier by the advent and accessibility to the internet and smartphones (Beymer *et al.*, 2014). Excessive access to the internet and smartphones especially in young persons may be a direct product of parental involvement (PI) or parenting styles. Most research on PI has centred on involvement with education and academics. However, the influences of PI may best be understood if PI is explored as a multifaceted concept. In addition to socio-demographic family characteristics, research on sexual risk behaviour in adolescence has focused on aspects of parenting as a risk/protective factor (Savioja, Helminen, Fröjd, Marttunen & Kaltiala-Heino, 2017). Low level of parental monitoring is connected to early sexual activity, more sexual partners, and less condom use, while conversely higher levels of parental monitoring are a protective factor (Markham *et al.*, 2010; Wight *et al.*, 2006). The present study probes how general PI and its dimensions may have influences in development of sexuality in adolescents. Using Xu's (2017) categorisation of PI, the present study conceptualises PI to include four domains of parental discipline (PD), parental monitoring (PM),

parental school participation (SP) and parental home discussion (HD).

Method

Participants and procedure

Participants were 330 (50% females, $M_{age} = 16$, $SD = .92$) undergraduate students of Benue State University, Makurdi randomly sampled from the Makurdi Campus of the University. They were approached during a sexual awareness campaign and told to participate in a study about sexuality and health. Those who indicated interest were administered the questionnaire. Questionnaires were retrieved on the spot and a 100% return rate was observed.

Measurement

Parental Involvement. Parental involvement was measured using the Multi-dimensional Parental Involvement Scale (MPIS) developed by Xu (2017). The MPIS is conceptualised to contain four dimensions of parental involvement which were included in this study. Following the pattern laid out by Xu (2017), parental discipline (PD) was measured with three items. The respondents were asked to report, "How often their parents or guardians did the following: (1) limit privileges due to misbehaviour (the initial scale by Xu (2017) used poor grade instead of misbehaviour); (2) limit TV watching or video games; and (3) limit time with friends?" The respondents reported this frequency using a scale ranging from one to four, and included "often", "sometimes", "rarely", and "never". Parental monitoring (PM) included five items. Respondents were asked to indicate "since the beginning of the school year, how often their parents or guardians tried to find: (1) who their friends are; (2) where they go at night; (3) how they spend money; (4) what they do with free time; and (5) where they are after school?" Response categories ranged from one to four, and included "not at all", "just a little", "some", and "a lot". Parental participation in school (SP) was determined using three items. Respondents were asked, "Since the beginning of the school year, has either or both of your parents or guardians done the following: (1) attended a school meeting; (2) attended a school event; and (3) acted as a volunteer at school?" The respondents reported "never", "once or twice", or "more than twice" to each item.

Parental Home discussion (HD) was measured by three items; “Since the beginning of the school year, how often have you discussed the following with either or both of your parents or guardians: (1) school courses; (2) school activities; and (3) things studied in class?” Respondents reported this frequency on a scale of 1-3, where “1” indicates not at all; “2” indicates once or twice; and “3” indicates three or more times. Xu (2017) reported acceptable reliability and validity for the MPIS with the following Cronbach’s alphas, PD, 0.68; PM, 0.83; SP, 0.69; and HD, 0.77. For the present study, a Cronbach’s alpha for the total scale was .96, and PD, .67; PM, .79; SP, .81; and HD, .87 for the subscales. Confirmatory factor analysis to ascertain the fit of the MPIS for the present study yielded the following indexes; *CFI*= .93; *TLI*= .91 and *RMSEA*=.06.

Sexting. To measure sexting behaviour of adolescents, we used a modified version of the Sexting Behaviours Scale (SBS) developed by Dir (2012). The original version of the scale was composed of 11 items investigating only receiving, sending or posting provocative or suggestive text messages and pictures (not considering videos). However, Morelli, Bianchi, Baiocco, Pezzuti and Chirumbolo (2016) noted that the SBS did not evaluate other important details about the content of the sexts: for example, it was not investigated who was the subject of the pictures. The modified version of the SBS (Morelli *et al.*, 2016) therefore contains additional 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 behaviours were defined as “sending or receiving sexually suggestive or provocative messages/photos/videos via mobile phone and/or Facebook or other internet social networking sites,” and participants were asked to rate each sexting behaviour (from item 1 to item 29) on a 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). Morelli *et al.* (2016) reported a Cronbach’s alpha of .93 for the total SBS. The subscales of receiving, sending and posting yielded alphas of .86, .85 and .92 respectively. 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). Morelli *et al.* (2016) added five more items which were not included in the present study. Confirmatory factor analysis to ascertain the fit of the SBS for the present study yielded the following indexes; *CFI*= .97; *TLI*= .94 and *RMSEA*=.05.

Sexual risk behaviour. Sexual risk behaviour was assessed using the Sexual Risk Survey (SRS) developed by Turchiske and Garske (2008). The SRS assesses the frequency of sexual risk behaviours within the past six months of participants’ life. It is a 23-item survey measuring a broad range of sexual behaviours. Prompting questions to help participants remember their sexual experiences over the period of six months were also included to help enhance accurate recall. Participants were instructed to read the items and record the number that is true for them over the past 6 months for each question on the blank. They were also asked to try estimating the number of times a particular behaviour took place if they did not know for sure how many times it had taken place. Following the pattern laid down by Turchiske and Garske (2008), the following additional instructions were also given; “Thinking about the average number of times the behaviour happened per week or per month might make it easier to estimate an accurate number, especially if the behaviour happened fairly regularly. If you’ve had multiple partners, try to think about how long you were with each partner, the number of sexual encounters you had with each, and try to get an accurate estimate of the total number of each behaviour. If the question does not apply to you or you have never engaged in the behaviour in the question, tick the box containing “0”. Please do not leave items blank (unanswered). Remember that in the following questions “sex” includes oral, anal, and vaginal sex and that “sexual behaviour” includes passionate kissing, making out, fondling, petting, oral-to-anal stimulation, and hand-to-genital stimulation. Refer to the list of words at the back of the questionnaire for any words you are not sure about. Please consider only the last 6 months when answering and please be honest.” Participants simply noted the frequency the behaviour occurred on a “0 times” to “5 or more” scale with each item receiving a score of 0–5. Sample survey items include; sex with untested partners, sex under influence of substances, etc. Turchiske and Garske

(2008) reported a Cronbach’s alpha of .88 for the composite scale, and .88, .80, .78, .89 and .61 for Sexual Risk Taking with Uncommitted Partners, Risky Sex Acts, Impulsive Sexual Behaviours, intent to Engage in Risky Sexual Behaviours and Risky Anal Sex Acts, respectively. These subscales however, were not used in the present study but the SRS total was utilised to obtain a sexual risk behaviour sum. A Cronbach’s alpha of .87 was obtained for the composite scale. Confirmatory factor analysis to ascertain the fit of the SRS for the present study yielded the following indexes; *CFI*= .97; *TLI*= .93 and *RMSEA*= .04.

Data analysis

In order to test our hypothesis, correlation analysis using Pearson Moment correlation was first

Results

Table 1: Means, standard deviations and inter-correlations between variables

Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10
1.Sexual Risk Behaviour	30.42	8.67	-									
2.Gender	.50	.50	-.28**	-								
3.Age	16.17	.92	-.19**	-.14*	-							
4.PD	4.80	.67	.11*	-.33**	.19**	-						
5.PM	1.55	1.0	-.17*	.11	-.13*	-.16**	-					
6.SP	24.05	3.50	-.29*	.02	-.09	-.12*	.10	-				
7.HD	33.69	6.90	-.24**	.02	-.21**	-.06	-.16**	.06	-			
8.Sexting (R)	31.08	5.47	.22**	-.14*	-.25**	-.12*	-.18**	.18**	.73**	-		
9.Sexting (S)	23.26	5.13	.26**	-.37**	-.17**	.25**	-.02	-.37**	-.30**	-.34**	-	
10.Sexting (P)	35.72	5.84	.30**	.21**	-.32**	.01	-.09	.06	.50**	.53**	.03	-

Note: PD= Parental discipline; PM= Parental monitoring; PSP= Parental School Support; PHD= Parental Home Discussion; R, S and P in brackets stand for receiving, sending and posting. Gender was coded 0= female; 1=male. * *p*<.05, ** *p*<.01, *** *p*<.001

Results from Table 1 show that SRB of adolescents had significant correlations with gender; suggesting that female participants engaged more in SRBs than their male counterparts. SRB also had significant negative correlations with age suggesting that younger participants engaged more in sexual risk behaviour than their older counterparts. Parental discipline had significant positive correlation with SRB while parental monitoring, school

participation and home discussion had negative relationships. The three dimensions of sexting (receiving, sending and posting) had significant positive correlations with SRB.

performed to see the pattern and direction of associations between the study variables. Thereafter, we performed hierarchical multiple regression analysis to check for the individual effects of the dimensions of parental involvement and sexting on sexual risk behaviour of young persons. Then we summed up the scores for the dimensions of parental involvement and the dimensions of sexting to obtain a total sexting score as well as a unitary parental involvement score. We then performed moderation analysis (to investigate the interaction between sexting and parental involvement in predicting sexual risk behaviour) using the Hayes PROCESS macro in SPSS. Results are shown and discussed in the proceeding sessions.

Table 2: Hierarchical multiple regression showing the predictive effects of demographics, parental involvement and sexting on sexual risk behaviour of adolescents

Variable	Step 1 B	Step 2 β	Step 3 β
<i>Controls</i>			
Gender	-.30***	-.18**	-.19**
Age	-.27***	-.21***	-.22***
<i>Predictors</i>			
Parental discipline		.08	.07
Parental monitoring		-.41***	-.41***
School participation		-.32***	-.31***
Home discussion		-.23**	-.22**
Sexting (R)			.18**
Sexting (S)			.19**
Sexting (P)			.25**
Adjusted R^2	.15***	.29***	.39***
ΔR^2	.15***	.17***	.22***
ΔF	17.51***	12.88***	10.56***

Note: R, S and P in brackets stand for receiving, sending and posting

The result of the hierarchical multiple regression in Table 2 in which sexual risk behaviour was the criterion variable indicated that the demographic variables (i.e., gender and age), entered in Step 1 of the equation as controls, collectively accounted for 15% variance in sexual risk behaviour. Gender and age significantly predicted sexual risk behaviour. Gender significantly and negatively predicted sexual risk behaviour suggesting that female respondents were more associated with sexual risk behaviour than their male counterparts. Age predicted sexual risk behaviour in the negative direction as well. This means that the younger the respondents were, the higher the levels of sexual risk behaviour; and that for every one unit increase in age, sexual risk behaviour decreased by .27. The four domains of parental involvement entered in step 2 of the equation collectively accounted for an additional 17% variance in sexual risk behaviour among adolescents. However, parental discipline

did not significantly predict sexual risk behaviour. The remaining parental involvement dimensions however negatively predicted sexual risk behaviour. Parental monitoring, school participation and home discussion negatively and significantly predicted sexual risk behaviour. This means that for every one-unit rise in parental monitoring, school participation and home discussion, sexual risk behaviour decreased by .41, .32 and .23 respectively. The three dimensions of sexting; receiving, sending and posting entered in Step 3 of the equation collectively accounted for a significant 22% increase in the variation observed in sexual risk behaviour of adolescents. Receiving, sending and posting sexts messages increased the likelihood of sexting by .18, .19 and .25 respectively.

Table 3: Hayes process macro results for sexting predicting sexual risk behaviour with parental involvement as moderator

Variable	Sexual risk behaviour			
	B	T	p-level	95% CI
Parental Involvement (PI)	-.54	-2.10	.041	[.02, 1.06]
Sexting (S)	1.92	3.95	.000	[.96, .29]
PI X S	.16	3.04	.003	[.06, .32]

The interaction of parental involvement and sexting was significant ($B = .16, p = .003$), indicating that parental involvement moderated the relationship between sexting and sexual risk behaviour among adolescents. Slope of the interaction (see figure 1) indicated that sexting was significantly associated with sexual risk behaviour among adolescents with low parental involvement ($B = 2.29, p = .000$) but

the effects on sexual risk behaviour became lessened among adolescents with moderate ($B = 1.93, p = .000$) and high parental involvement ($B = 1.56, p = .000$). The model explained about 22% of the variance in sexual risk behaviour of adolescence, $R^2 = .22, F(3, 136) = 14.28, p = .000$.

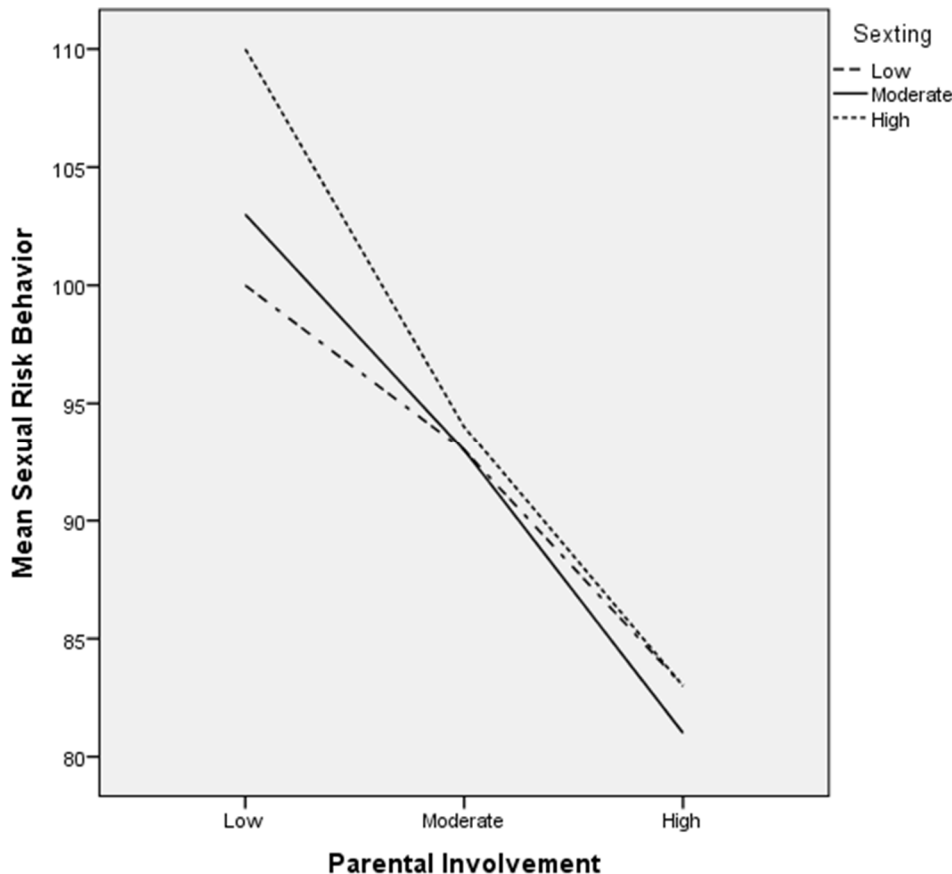


Figure 1: Interaction slope showing the interaction between sexting and parental involvement in predicting sexual risk behaviour of adolescents

Discussion

We investigated the associations between sexting, parental involvement (PI) and SRB among young persons. We hypothesised that the dimensions of sexting would significantly predict SRB; the dimensions of PI would significantly predict SRB and that the composite measure for sexting and that of PI would significantly interact to predict SRB. All hypotheses but one (the parental discipline dimension of PI) were confirmed. Thus, parental

discipline did not predict SRB and the hypothesis stating that it would was rejected.

With regards to the association between sexting and gender, our findings support in part those of De Graaf *et al.* (2018) who observed from their findings that there were no gender differences in sexting behaviour in general, but that there were some for specific sexting items. More boys than girls showed intimate body parts or sexual behaviour during a video chat, and more boys than girls experienced personal nude pictures or sex

videos shared with others. We observed in general that boys, much more than their female counterparts were likely to have sent, received or posted sexually explicit content of themselves and others. Cultural values of sexuality may also be influencing these particular findings. For instance, Bordini and Sperb (2013) explained that cultural aspects and expectations regarding sexual behaviours may differ between boys and girls. For example, a double standard may prevail, attaching different values to boys' and girls' sexual activity especially in a predominantly patriarchal culture as observed in Nigeria which indirectly approves boys' sexual activity, but at the same time, viewing girls' sexual activity with disapproval.

As has always been the case with research on sexual risk behaviour, i.e. mixed findings evolving with each new results, our findings regarding age do not entirely support previous findings. De Graaf *et al.* (2018) found age differences with regard to all sexting behaviours, with a higher prevalence among emerging adults than among adolescents. However, we found out that younger respondents reported being more engaged in sexting than older respondents. This is likely due to the fact that younger persons may be more inexperienced and more willing to explore sexting than those more advanced in age. Information on the risks associated with sexting may at the moment be far from their reach and awareness on the counter-effects of sexting may not have reached them. Besides, being younger may predispose them to being vulnerable, being more willing to respond to peers and fear of victimisation in whatever forms may cause them to respond more positively to sexting than older persons. As regards actual SRBs, gender and age negatively predicted SRBs among young persons in the current study. This means that younger persons and more females than males are likely to engage in SRBs.

We also found out that respondents who had been involved in sexting were more likely than those who had not to engage in SRBs. This likelihood was strongest ($\beta = .25$) for those involved in posting either sexually explicit content of themselves or others than for those who either received from or sent to individual persons. These findings agree with previous studies. For instance, Houck *et al.* (2014) reported that sexting of any kind, with or without pictures, was associated with greater likelihood of engaging in a variety of sexual

behaviours, including touching genitals, having a "friend with benefits," oral sex, or vaginal sex.

We found significant influence of parental involvement (PM, SD and HD) in SRB among young persons, such that higher levels of PI predicted lower levels of SRB. This finding corresponds with that of Savioja *et al.* (2017) who reported that among sexually active girls, reporting five or more partners for intercourse was more common in the average parental involvement group than in the high parental involvement group, and most common in the low parental involvement group. This was seen in all age groups. Savioja *et al.* (2017) also found out that among sexually active boys, the proportion of those reporting five or more partners for intercourse was higher in the group with low parental involvement than among those reporting high parental involvement, but no such systematic differences were seen between high and average parental involvement group. Our study adds to the existing body of research on SRB by showing that the associations between parental involvement and young persons' SRB still stands, even when age and gender are controlled; and that independent of sexting, PI individually predicts SRB such that higher levels of PI are responsible for lower levels of SRB. Other studies have also found similar links between parenting and SRB. Coley, Votruba-Dzral and Schindler (2009) reported that adolescents whose parents know their friends and whereabouts are less likely to have engaged in risky sexual behaviours.

It is worthy to note also that this association was not significant for parental discipline. Reasons for this may lie one part in the nature and kind of discipline, and on the other part, the consistency of the discipline. However, these were not measured in the present study. Research has shown that discipline that is not structured in a way that helps the child fit into the real world happily and effectively (Canadian Paediatric Society, 2004), most times yields less desired results or no results at all (Huebner & Howel, 2003; Newman, Harrison, Dashiff & Davies, 2008; Nnadozie, Iorfa & Ifebigh, 2018). This reason alone, if true among our respondents, could have led to the null association between parental discipline and SRB.

Implications for intervention

We found out that there is a greater likelihood for girls to engage in sexting than boys. Although this

finding contradicted previous ones, it calls for efforts at interventions to be targeted among girls much more than boys, especially in cases where resources for intervention may be limited. Already, Tanenbaum (2015) had reported that for girls, a leaked nude photo might elicit more (perceived) negative reactions from others, in which they are also blamed for what happened i.e., “slut-shaming” and in the same vein, Venema and Lobinger (2017) showed that this may lead to feelings of shame and guilt and a decrease in their (girls) social status. Coupled with the already existing vulnerabilities of the girl child in Africa and Nigeria specifically, it may be important to educate girls and boys alike on the adverse effects of sexting and other sexual risk behaviours.

Better parental practices that encourage more involvement, school participation and home discussion should be encouraged and those that dwell on unstructured and irregular forms of discipline should be discouraged as our study found no significant association between parental discipline and SRB. Besides, studies abound to prove that positive aspects of parenting, such as parental involvement, appropriate monitoring and care together with sound interpersonal relations in a family are more beneficial for an adolescent’s mental health (see Burnett-Zeigler *et al.*, 2012; Yu, Clemens, Yang, Li & Stanton, 2006) and prove more effective in discouraging wrong behaviour. Parents should imbibe parenting practices that have been proven to be effective in child upbringing.

In summary, our findings along with many others suggest that sexting co-occurs with sexual behaviours and may represent an indicator of SRBs. Specifically, studies have found out that sexting was directly linked to same sex behaviours, unprotected sex (Rice *et al.*, 2012), shame, guilt, earlier sexual behaviour, bullying, incarceration, substance abuse, depression and even suicide (Ahern, & Mechling, 2013). Sexting may also have implications for the rising levels of rape (Cornwell, 2013; Rentschler, 2014) witnessed in the country. We recommend therefore, that as early as possible, attention should be paid to young persons’ electronic communication. Limiting their access to the internet except when extremely necessary may be a good way of monitoring their online activities. Also, messages regarding the consequences of sexting and sexual risk behaviours could be

incorporated into the curricula for sexual health education for young persons.

Limitations of the study

Cross-sectional research has always posed a limitation to generalising findings across temporal frames. Data in this study was collected at a cross-section of respondents’ life and may not reflect a longitudinal perspective to the variables studies. The use of self-reports, with their high possibility for social desirability could also be seen as a limitation in the present study.

Conclusion

Sexual standards are shifting and falling all across the globe. While this looked like a farfetched phenomenon, more common in Western countries and alien to African countries, the narratives have changed and there is a striking rise in sexual risk behaviours among young persons in Africa. Our findings confirmed this and further highlighted that parental involvement may be instrumental in checking this shift/fall in sexual standards. Specifically, we found that while sexting increased the likelihood of young person’s engaging in sexual risk behaviours, parental involvement served as a protective factor against this association. Our implications were drawn across policies of parenting, parenting styles and gender specific intervention strategies.

References

- Adeboyejo, T. A. & Onyeonuru, I. P. (2005) Aspects of home environment and adolescent sexual behaviour in Southwestern Nigeria. *African Population Studies*, 20(1): 45-52.
- Ahern, N. R. & Mechling, B. (2013) Sexting: serious problems for youth. *Journal of Psychosocial Nursing and Mental Health Services*, 51(7): 22–30. <https://doi.org/10.3928/02793695-20130503-02>.
- Aquinas, T., Regan, R. J. & Baumgarth, W. P. (2003) *On law, morality, and politics*. Indianapolis: Hackett Publishing.
- Baumgartner, S. E., Sumter, S. R., Peter, J., Valkenburg, P. M. (2012) Identifying teens at risk: Developmental pathways of online and offline sexual risk behavior. *Pediatrics* 130(6): e1489–96. doi:10.1542/peds.2012-0842.
- Beymer, M. R., Weiss, R. E., Bolan, R. K., Rudy, E. T., Bourque, L. B., Rodriguez, J. P. *et al.* (2014) Sex on demand: geosocial networking phone apps and risk of sexually transmitted infections among a

- cross-sectional sample of men who have sex with men in Los Angeles county. *Sexually Transmitted Infections*, 90: 567–72. doi:10.1136/sextrans-2013-051494.
- Beyrer, C. (2014) Pushback: The current wave of anti-homosexuality laws and impacts on health. *PLoS Med*, 11(6): e1001658.
- Bolatito, L. A. (2012) The natural law theory of morality and the homosexuality debate in an African culture. *Ogirisi: A New Journal Of African Studies*, 9: 182-214.
- Bordini, G. S. & Sperb, T. M. (2013) Sexual double standard: A review of the literature between 2001 and 2010. *Sexuality & Culture*, 17(4): 686–704. doi: 10.1007/s12119-012-9163-0.
- Burnett-Zeigler, I., Walton, M., Ilgen, M., Barry, K. L., Chermack, S. T., Zucker, R., Blow, F. (2012) Prevalence and correlates of mental health problems and treatment among adolescents seen in primary care. *The Journal of Adolescent Health*, 50: 559–564. doi: 10.1016/j.jadohealth.2011.10.005.
- Can, B. (2018) The gender roles attributed to women in new religious movements: Is it a chance of empowerment or a case of marginalization? *Journal of international social research*, 11(56): 290-296.
- Canadian Paediatric Society (2004) Effective discipline for children. *Paediatrics & child health*, 9(1), 37–50. <https://doi.org/10.1093/pch/9.1.37>.
- Choi, E. P. H., Wong, J. Y. H. & Fong, D. Y. T. (2016) An emerging risk factor of sexual abuse: The use of smartphone dating applications. *Sex Abuse*, 1–24. doi:10.1177/1079063216672168.
- Coley, R., Votruba-Drzal, E. & Schindler, H. (2009) Fathers' and mothers' parenting predicting and responding to adolescent sexual risk behaviours. *Child Development*, 80: 808–827. doi: 10.1111/j.1467-8624.2009.01299.x.
- Cornwell, J. K. (2013) Sexting: 21st-century statutory rape. *SMU Law Review*, 66(1): 111-145.
- Coyle, K. K., Guinosso, S. A., Glassman, J. R., Anderson, P. M. & Wilson, H. W. (2017) Exposure to violence and sexual risk among early adolescents in urban middle schools. *Journal of Early Adolescent*, 37(7): 889–909. doi:10.1177/0272431616642324.
- Dake, J. A., Price, J. H., Maziarz, L. & Ward, B. (2012) Prevalence and correlates of sexting behavior in adolescents. *American Journal of Sex Education*, 7(1): 1–15. doi:10.1080/15546128.2012.650959.
- De Graaf, H., Vanwesenbeeck, I., Meijer, S., Woertman, L. & Meeus, W. (2009) Sexual trajectories during adolescence: Relation to demographic characteristics and sexual risk. *Archives of Sexual Behavior*, 38(2): 276–82. doi:10.1007/s10508-007-9281-1.
- De Graaf, H., Verbeek, M., Van den Borne, M. & Meijer, S. (2018) Offline and online sexual risk behavior among youth in the Netherlands: Findings from “Sex under the Age of 25”. *Frontiers in Public Health*. doi.org/10.3389/fpubh.2018.00072.
- Diamond, L. M. & Huebner, D. M. (2012) Is good sex good for you? Rethinking sexuality and health. *Social and Personality Psychology Compass*, 6(1): 54-69.
- Dir, A. L. (2012) *Understanding sexting behaviours, sexting expectancies, and the role of sensation seeking in sexting behaviours*. Masters thesis. Purdue University. Retrieved from <https://scholarworks.iupui.edu/bitstream/handle/1805/3358/defensemanuscriptformattedfinal.pdf?sequence=3>.
- Döring, N. (2014) Consensual sexting among adolescents: risk prevention through abstinence education or safer sexting? *Cyberpsychology*, 8(1). doi:10.5817/CP2014-1-9.
- Friedman, H. L. (1992) Changing patterns of adolescent sexual behaviour: Consequences for health and development. *The Journal of Adolescent Health: Official Publication of the Society for Adolescent Medicine*, 13(5): 345–350. <https://doi.org/10.1016/1054>.
- Gates, G. J. & Sonenstein, F. L. (2000) Heterosexual genital sexual activity among adolescent males: 1988 and 1995. *Family Planning Perspectives*, 32(6): 295-297
- Haesler, E., Bauer, M. & Fetherstonhaugh, D. (2016) Sexuality, sexual health and older people: A systematic review of research on the knowledge and attitudes of health professionals. *Nurse Education Today*, 40: 57-71.
- Houck, C. D., Barker, D., Rizzo, C., Hancock, E., Norton, A. & Brown, L. K. (2014) Sexting and sexual behavior in at-risk adolescents. *Pediatrics*, 133(2): e276–e282. <https://doi.org/10.1542/peds.2013-1157>.
- Huebner, A. J. & Howel, L. W. (2003) Examining the relationship between adolescent sexual risk-taking and perceptions of monitoring, communication, and parenting styles. *Journal of Adolescent Health*, 33: 71–78. doi:10.1016/S1054-139X(03) 00141-1.
- Kar, S. K., Choudhury, A., & Singh, A. P. (2015) Understanding normal development of adolescent sexuality: A bumpy ride. *Journal of human reproductive sciences*, 8(2): 70.
- Lindau, S. T., Schumm, L. P., Laumann, E. O., Levinson, W., O'Muircheartaigh, C. A. & Waite, L. J. (2007) A study of sexuality and health among older adults in the United States. *New England Journal of Medicine*, 357(8): 762-774.

- Little, W. (2016) Introduction to Sociology: 2nd Canadian Edition. Retrieved from <https://opentextbc.ca/introductiontos>.
- Livingstone, S., Haddon, L., Görzig, A. & Ólafsson, K. (2011) *Risks and Safety on the Internet: The Perspective of European Children*. London: LSE.
- Lotke, P. S. (2015) Increasing use of long-acting reversible contraception to decrease unplanned pregnancy. *ObstetGynecolClin North Am* 42(4): 557–67. doi:10.1016/j.ogc.2015.07.008.
- Markham, C. M., Lormand, D., Gloppen, K. M., Peskin, M. F., Flores, B., Low, B. & House, L. D. (2010) Connectedness as a predictor of sexual and reproductive health outcomes for youth. *The Journal of Adolescent Health*, 46(3): S23–S41. doi: 10.1016/j.jadohealth.2009.11.214.
- Newman, K., Harrison, L., Dashiff, C. & Davies, S. (2008) Relationships between parenting styles and risk behaviors in adolescent health: an integrative literature review. *Revista Latino-Americana de Enfermagem*, 16(1): 142-150. <https://dx.doi.org/10.1590/S0104-11692008000100022>.
- Nnadozie, E. E., Iorfa, S. K. & Ifebigh, O. O. (2018) Parenting style and religiosity as predictors of antisocial behavior among Nigerian undergraduates. *Journal of Social Service Research*, 44(5): 624-631. <https://doi.org/10.1080/01488376.2018.1476297>.
- Noar, S. M., Cole, C. & Carlyle, K. (2006) Condom use measurement in 56 studies of sexual risk behavior: Review and recommendations. *Archives of Sexual Behavior*, 35(3): 327–45. doi:10.1007/s10508-006-9028-4.
- Noroozi, M., Taleghani, F., Merghati-Khoei, E. S., Tavakoli, M. & Gholami, A. (2014) Premarital sexual relationships: Explanation of the actions and functions of family. *Iranian journal of nursing and midwifery research*, 19(4): 424–431.
- Remez, L. (2000) Oral sex among adolescents: Is it sex or is it abstinence? *Family Planning Perspectives*, 32(6): 298-304.
- Rentschler, C. A. (2014) Rape culture and the feminist politics of social media. *Girlhood studies*, 7(1): 65-82.
- Rice, E., Rhoades, H., Winetrobe, H., Sanchez, M., Montoya, J., Plant, A. & Kordic, T. (2012) Sexually explicit cell phone messaging associated with sexual risk among adolescents. *Pediatrics*, 130(4): 667-673.
- Ringrose, J., Harvey, L., Gill, R., Livingstone, S. (2013) Teen girls, sexual double standards and ‘sexting’: gendered value in digital image exchange. *Feminist Theory*, 14(3): 305–23. doi:10.1177/1464700113499853.
- Sarigianides, S. T. (2014) Rampant teen sex: Teen sexuality and the promise of happiness as obstacles to re-thinking adolescence. *Journal of Youth Studies*, 17(8): 1061-1076.
- Savioja, H., Helminen, M., Fröjd, S., Marttunen, M. & Kaltiala-Heino, R. (2017) Parental involvement, depression, and sexual experiences across adolescence: A cross-sectional survey among adolescents of different ages. *Health Psychology and Behavioral Medicine*, 5(1): 258-275. doi.org/10.1080/21642850.2017.1322908.
- Schuster, M. A., Bell, R. M. & Kanouse, D. E. (1996) The sexual practices of adolescent virgins: genital sexual activities of high school students who have never had vaginal intercourse, *American Journal of Public Health*, 86(11): 1570-1576.
- Stein, E. (2001) *The mismeasure of desire: The science, theory, and ethics of sexual orientation*. Oxford: Oxford University Press.
- Tanenbaum, L. (2015) *I am Not a Slut: Slut-Shaming in the Age of the Internet*. New York: HarperCollins.
- Techasrivichien, T., Darawuttimaprakorn, N., Punpuing, S., Musumari, P. M., Lukhele, B. W., El-Saaidi, C., ... Kihara, M. (2016) Changes in Sexual Behavior and Attitudes Across Generations and Gender Among a Population-Based Probability Sample From an Urbanizing Province in Thailand. *Archives of sexual behavior*, 45(2): 367–382. <https://doi.org/10.1007/s10508-014-0429-5>.
- Valkenburg, P. M. & Peter, J. (2011) Online communication among adolescents: An integrated model of its attraction, opportunities, and risks. *Journal of Adolescent Health*, 48(2): 121–7. doi:10.1016/j.jadohealth.2010.08.020.
- Van Klinken, A. S. (2012) Gay rights, the devil and the end times: public religion and the enchantment of the homosexuality debate in Zambia. *Religion*, 43, 4, 519-540.
- Venema, R. & Lobinger, K. (2017) “And somehow it ends up on the Internet”: Agency, trust and risks in photo-sharing among friends and romantic partners. *First Monday*, 22(7). doi:10.5210/fm.v22i7.7860.
- Wight, D., Williamson, L. & Henderson, M. (2006) Parental influences on young people’s sexual behaviour: A longitudinal analysis. *Journal of Adolescence*, 29: 473–494. doi: 10.1016/j.adolescence.2005.08.007.
- Worthington, R. L. (2004) Sexual identity, sexual orientation, religious identity, and change: Is it possible to depolarize the debate? *The Counseling Psychologist*, 32(5): 741-749.
- Xu, J. (2017) The multidimensional factor structure of parental involvement with adolescent children.

Psychology Research, 7(12): 605-619. doi:10.17265/2159-5542/2017.12.001.

Yu, S., Clemens, R., Yang, H., Li, X. & Stanton, B. (2006) Youth and parental perceptions of parental monitoring and parent-adolescent communication, youth depression, and youth risk behaviours. *Social Behavior and Personality: an International Journal*, 34: 1297–1310. doi: 10.2224/sbp.2006.34.10.1297.