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EMBARRASSABILITY AS A MODERATOR OF THE RELATIONSHIP BETWEEN PERMISSIVE PARENTING, MORAL DISENGAGEMENT, AND ATTITUDES TOWARD CYBERCRIME AMONG NIGERIAN UNDERGRADUATES

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Abstract

This study examined the moderating role of embarrassability in the relationship between permissive parenting, moral disengagement and attitude towards cybercrime among undergraduates. The participants in this study were 387 undergraduates selected using multi stage sampling method. Their ages ranged from 18 to 25 years, with a mean age of 22.2, and standard deviation of 1.8. Four instruments were used for data collection: the Attitude towards Cybercrime (ATC) Scale, the Permissive parental Sub-Scale of Parental Authority Questionnaire (PAQ), Moral Disengagement Scale (MDS), and the Susceptibility to Embarrassment Scale. Moderated regression statistic was adopted for data analysis to test the five postulated hypotheses. The first hypothesis was accepted at β=.71, t=5.471, p<.01; indicating that there was a relationship between permissive parenting and attitude towards cybercrime. The second hypothesis was also accepted at β=.13, t=2.231, p<.05; showing that there was a relationship between moral disengagement and attitude towards cybercrime. The third hypothesis was as well accepted at β = -.52, t= -4.324, p<.01; showing that a negative relationship existed between embarrassability and attitude towards cybercrime. Furthermore, hypotheses numbers four, and five were accepted at β= -.23, t= -2.441, p<.05, and β= -.26, t= -2.623, p<.05 respectively; showing that embarrassability moderated the relationship between both permissive parenting style and moral disengagement and attitude

towards cybercrime. Based on these findings, the researcher recommended that forensic psychologists should consider screening for permissive parenting style, moral disengagement and embarrassability when investigating issues of cybercrime among undergraduates.

Keywords: Permissive parenting, Moral disengagement, embarrassability. Cyber Attitude, Undergraduates

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Introduction

People's attitude towards a stimulus determines to a large extent how they respond to it, and how they perceive people who engage in, or with the stimulus. Recently, cybercrime is perceived by some criminally minded Nigerian youths as evidence of smartness; despite the impact of such behaviour on both the victims and the society (Okeke et al., 2024). To address this irrational attitude, and consequent behaviour against cyberspace uses, Okafor et al., (2024) and Okeke et al. (2024) examined possible predisposing factors that engender cybercrime among undergraduates such as parenting style, and moral disengagement, and this study focuses on examining the role of embarrassability in attenuating the relationship between permissive parenting, moral disengagement and attitude towards cybercrime among undergraduates.

Attitude according to Eagly and Chaiken (2007) is the psychological likelihood that is expressed by assessing a particular thing either as pleasing or displeasing. It is a steady and persistent value conclusion of a thing or situation that can either be positive or negative; and can influence an individual's behaviour toward an object or situation (Kersh, 2011). Attitude towards cybercrime means an individual's perception of, or disposition towards crime perpetuated on cyberspace; as such, could impact the individuals' behaviour either positively or negatively towards cybercrime. Cybercrime however, is the act of exhibiting harmful deed on other cyberspace user with the aim of making them lose their personal data, money, or integrity (Adesina, 2017). It is any form of detrimental, or socially unwanted behaviours done using internet enabled device, and on the cyberspace (Zevbuwa & Ngwoke, 2022). Cybercrime could have negative impacts on interpersonal, and socioeconomic state of the society as most legitimate online businesses and cyberspace users are at risk of loss. Notably, some factors could be responsible for the perceived

high rate of cybercrime among undergraduates in Nigerian; factors such as, bad educational system, bad parenting, corrupt government, as well as loss of societal values (Okeke, et al. 2024; Okafor et al., 2024). This could negatively impact the moral development of some undergraduates, serving as elements for moral disengagement by aiding the justification of their criminality.

Permissive parenting as one of the variables of interest in this study refers to a pattern of parenting where parents allow their children to freely navigate through life situations with minimum directions, expectations, and rules (Tobih et al., 2024). This lack of stipulated rules and expectations frequently result to poor disciplinary actions from parents (Sanvictores, 2022). Permissive parents often plays the role of friends other than the traditional authority-parent figures (Sanvictores, 2022). According to Langer (2014), the excessive freedom enjoyed by the children of such parents is usually associated with maladaptive behaviour. Though they can be high on self-esteem and social skills, but are mostly selfish, impulsive, and highly demanding (Piotrowski, 2013). Thus, could result to poor interpersonal relationship, covetous tendency, and fraudulency.

Onuoha (2025) opined that the importance of parenting on the formation of children's behaviours cannot be over emphasized, which is due to the fact that mode of parenting impacts children's behaviour. In the view of Okeke et al. (2024), different approach to parenting shape children's behaviour differently. Hence, parenting is an integral factor in personality formation. Children trained by parents that are easily discouraged are mostly at risk of developing maladaptive behaviours; such as, smoking, nervousness, as well as severe psychiatric related issues (Prime et al., 2020). More so, parenting could influence a child's moral disengagement through imitation of parental abnormal behaviours.

Moral disengagement according to Okafor et al. (2024) is a process in which a person or group of people detach from the social norms or normal ethical standards, and start practicing unethical and socially unacceptable lifestyle. Knoll et al. (2016) opined that, for someone to deviate from appropriate social standard, they must go through following stages: moral justification, mental reduction of their role in such unethical behaviour, denying the implications of their actions or inactions on their victim, and changing the way they see their victim. These four stages of moral disengagement explicitly explain how undergraduates that are involved in cybercrime justifies their criminality as well as the cognitive dissonance associated with their unethical behaviour. In the view of Bandura (2016), individuals that are criminally minded use moral disengagement to keep a positive self-image of themselves, despite their criminal mindedness, and their unethical conducts. DeSmet et al. (2016) opined that people who commit cybercrime remove their victims from their mind once they have achieved their ill goals in other not to feel embarrassed or experience negative emotions associated with the knowledge of how miserable their behaviour made their victims feel.

Embarrassiability according to Onuoha et al. (2025) is an individual's tendency to feel self-conscious or anxious in social situations. It is often accompanied by some forms of self-deprecating humor and mostly goes with anxious laughter, timidity or shyness. Emekpo et al. (2024) opined that people experience embarrassment differently, and in different situations. As such, what causes embarrassment for one individual, might not be embarrassing for another. Also, an individual's level of embarrassability is dependent on several factors such as their personality, self-esteem, and their level of emotional intelligence (Emekpo et al., 2024). Hence,

embarrassability could be seen as an individual's inclination to experience embarrassment, and has been observed to be a vital aspect of personality.

Paulus et al. (2013) conceptualized embarrassability using two types; which are: vicarious and empathic embarrassability. Vicarious embarrassment refer to a situations where an observer experience embarrassment even in absence of the observed situations or event. While empathic embarrassment is solely associated with an affective experience shared by, and observed by others (Paulus et al., 2013). Emekpo et al. (2024) opined that embarrassibility is a multifaceted phenomenon involving worries about one's physical appearance and unfavourable social perceptions. Thus, could have varying impact on one's behavioural or emotional reactions. Despite increasing empirical attention to cybercrime, the role of embarrassability as a personality based moderator that may decrease the risk of cybercrime among undergraduates is yet to be properly researched on, and documented. Hence, the need for this study that examined embarrassability as a moderator of the relationship between permissive parenting, moral disengagement and attitude towards cybercrime among undergraduates of Nnamdi Azikiwe University, Awka.

Theoretical Framework/Empirical Review

This study was anchored on Social Responsibility and Role Integration Theory by Obi-Nwosu et al. (2025) which holds that the degree at which social responsibilities are executed in a given society by each players of social responsibility (government, community, family, and individual) determines the extent to which things would turn out well in such society. This theory implies that social responsibility involves collective efforts from all the players of such responsibility, and when each level plays their role well, there would be peace, security, and economic stability. By

implication, parental social responsibility and community social responsibility would encourage undergraduates' social responsibility which would tantamount to increases embarrassability among undergraduate; thus, reducing the likelihood of cybercrime. Within this theoretical framework, permissive parenting reflects laissez-faire enforcement of parental social responsibility while moral disengagement represent undergraduates' cognitive withdrawal from responsibility.

Empirically, some scholars had examined these study variables, with cutting-edge findings; such as, Nonum and Nwankwo (2020) that investigated the effect of parenting style on children's involvement in cybercrime, and found that children from permissive parenting home, have more propensity to be involved in cyber criminality. Zhang, et al. (2021) in their study that examined parenting style and cyber-aggression in Chinese youth; as well as the role of moral disengagement, and moral identity. They found that over-protective parenting was positively related to cyber-aggression. They also found that parenting style was related to cyber-aggressive behavior through moral disengagement. Sari et al. (2022) explored the correlation between parental communication pattern, self-esteem, and moral disengagement with cyberbullying behavior in early adolescents, and found a significant relationship between cyberbullying and moral disengagement. Okeke et al. (2024) examined the predictive role of parental styles and moral disengagement on attitude towards cybercrime among undergraduates. They found that permissive parental style and moral disengagement predicted attitude towards cybercrime. Okafor et al. (2024) conducted a study that investigated moral disengagement as a predictor of attitude towards cybercrime, and the moderating role of social identity. Their findings indicated that moral disengagement positively

predicted attitude towards cybercrime. Onuoha (2025) examined the predictive role of parental styles and peer influence on callous-unemotional traits and found that permissive parenting style predicts callous-unemotional traits.

More so, Obi-Nwosu et al. (2014) explored the role of embarassability, and psychoticism on tendency to engage in examination misconduct. Their findings indicated that as embarrassability increases, examination misconduct decreases. Obi-Nwosu et al. (2017) investigated the role of embarrasability on tendency to repay borrowed funds, and found that as embarrassability increases, tendency to pay back loans increases. Emekpo et al. (2024) assessed embarassability and emotional intelligence on recidivists and non-recidivist inmates in Anambra State Nigeria. Their findings revealed that recidivists showed significant lower embarrassability compared to non-recidivists.

Hypotheses

Five hypotheses were proposed to guide this study, they are:

1. There would be a positive relationship between permissive parenting and attitude towards cybercrime among undergraduates.
2. There would be a positive relationship between moral disengagement and attitude towards cybercrime among undergraduates.
3. There would be a negative relationship between permissive parenting and attitude towards cybercrime among undergraduates.
4. Embarrassability would moderate the relationship between permissive parenting and attitude towards cybercrime among undergraduates.

5. Embarrassability would moderate the relationship between moral disengagement and attitude towards cybercrime among undergraduates.

Methods

Study Design

This study is a survey study that adopted correlation research approach in examining the relationship between permissive parenting style and moral disengagement on attitude towards cybercriminality. It further investigated the role of embarrassability in moderating such relationship.

Participants

The participants for this study were 387 undergraduates drawn from four Departments (Edu-Foundation (97), Marketing (98), Sociology (97), Bio-Chemistry (95) in Nnamdi Azikiwe University Awka, Anambra State, Nigeria; using multi-stage sampling method. Their age ranged from 18 years to 25 years. With a mean age of 22.2, and standard deviation of 1.8. Among the participants, 96 (25%) were male, and 291(75%) were female. Christians among them were 353(91.2), Muslims were 22 (5.7), while the remaining 12 did not specify their religious affiliation. To be included in the study, the participant must be a student in any of the 4 departments that were selected for the study, must be willing to participate in the study by signing a consent form, and must be up to 18 years of age.

Instruments

Four instruments were used in this study for data collection; they include: Attitude towards Cybercrime (ATC) Scale, The Permissive parental Sub-Scale of Parental Authority Questionnaire (PAQ), Moral Disengagement Scale (MDS), and The Susceptibility to Embarrassment Scale.

Attitude towards Cybercrime Questionnaire

Attitude towards Cybercrime (ATC) Scale developed by Gozler and Tasci (2015) consisted of 16 items that measures attitudes towards cybercrime, including the perception of cybercrime as a serious problem, the likelihood of being a victim of cybercrime, and the responsibility of individuals and organizations for preventing cybercrime. ATC is rated on a 5-point Likert scale ranging from (1) "Strongly Agree" to (5) "Strongly disagree". A sample item of attitude towards cybercrime includes: people who commit cybercrimes are very intelligent. The authors reported a Cronbach alpha coefficient of 0.84. Okafor et al. (2024) correlated Attitudes towards Cybercrime (ATC) Scale with Ethical Behavior Scale (EBS), and reported a divergent correlation coefficient of -.65. Also, they reported a reliability coefficient of .70.

The Parental Authority Questionnaire (PAQ)

The Permissive parenting sub scale is a 10 item from Parental Authority Questionnaire (PAQ), developed by Buri (1991). It measures permissive parenting using a five-point Likert scale which ranged from strongly disagree (1) to strongly agree (5). Sample items of permissive parenting style include: "while I was growing up my parents felt that in a well-run home, the children should have their way in the family as often as the parents do". "As I was growing up, my parents seldom gave me expectations and guidelines for my behaviour". Buri (1991) reported an alpha coefficient of

0.77, and a test reliability of 0.72. Furthermore, Onuoha, Umeobi et al. (2024) reported a reliability coefficient of .76 for permissive parenting style; indicating that the instrument is reliable.

Moral Disengagement Scale

The Moral Disengagement Scale (MDS) is a short form 7-item questionnaire developed by Moore et al. (2012). It was designed to measure an individual's tendency to disengage from moral standards and ethical norms as well as assesses proneness to moral disengagement. The items are rated on a five-point Likert scale ranged (1) "Strongly Agree" to (5) "Strongly disagree". One of the sampled items in MDS include; "it is okay to spread rumors to defend those you care about". The author established internal consistency of .82 for the scale. Okafor et al. (2024) correlated Attitudes towards Cybercrime (ATC) Scale with Ethical Behavior Scale (EBS) and reported a negative correlation of -.72. They also reported a reliability coefficient of .69.

Susceptibility to Embarrassment Scale (SES)

The Susceptibility to Embarrassment Scale is a 25 item instrument developed by Kelly and Jones (1997) which uses personality trait-based statements, rather than situations, to measure a person's vulnerability to embarrassment. It is rated on a 7-point Likert scale which ranged from (1) strongly disagree to (7) strongly agree. Some of the items were scored in reverse direction to obtain consistency of scoring e.g., items number 4, 18 and 25. Sample items of SES included: "I feel unsure of myself". The score range for the susceptibility to embarrassment scale is between the ranges of 25 to 175. The mean score for college students is 92, with higher scores indicating higher degrees of embarrassability. This scale has been used among Nigerian population by Obi-Nwosu, et al. (2014). Furthermore, Emekpo et al. (2024), reported a reliability coefficient of .71.

Procedure

The researchers randomly selected 4 faculties from the 9 faculties in Nnamdi Azikiwe University, Awka Campus using simple random sampling method. From the four selected faculties, one department was selected from each of the four initially selected faculties, using simple random sampling method; they were Edu-Foundation, Marketing, Sociology, and Bio-Chemistry. After which, the researchers sort for ethical clearance for this study, through the Head of Department of Psychology of Nnamdi Azikiwe University.

After the approval was obtained, the researchers went to the office of the Head of each of the selected Departments for a formal introduction before going to the undergraduates lecture halls for data collection. Yamane's formula was used to arrive at 385 as the appropriate sample size for the study. However, 100 copies of the questionnaires were distributed in each of the four selected departments, making it 400 distributed copies, using purposive sampling method; which was based on the inclusion criteria of the study. In order to ensure that the participants responded to the questionnaires as truthful as possible, the researchers assured them of the confidentiality of their personal information. From the 400 copies of the distributed questionnaires, 396 copies were returned; while 387 properly filled copies were scanned, and coded in the SPSS for analysis.

Statistics

Moderated regression statistic was adopted as the statistical tool to analyze the moderating role of embarrassability in the relationship between permissive parenting style, moral disengagement, and attitude towards cybercrime; using Statistical Package for Social Sciences (SPSS) version 25.

Results

Table 1: Moderated regression table for the role of embarrassability in the relationship between permissive parenting, moral disengagement, and attitude towards cybercrime

Variables	R^2	Df1(df2)	F	B	SE	T	Sig	LLCI	ULCI
Model 1	.50	3(383)	42.73						
PP				.71	.21	5.471	.001	.654	2.341
E				-.52	.17	-4.324	.003	.416	1.520
PP*E				-.23	.13	-2.441	.024	.173	1.147
Model 2	.31	3(383)	3.75						
MD				.13	.11	2.231	.031	.268	1.129
MD*E				-.26	.16	-2.623	.022	.164	1.628

***Note**, PP = permissive parenting, E =Embarrassability, MD = Moral disengagement and statistical significant at p<.01 and .05*

The result from Table 1 shows that permissive parenting style predicted attitude towards cybercrime. Hence, hypothesis number one was accepted at (β=.71, t=5.471, p<.01). Thus, indicating that one unit increase in permissive parenting style, is associated with .71 unit increase in negative attitude towards cybercrime among undergraduates. It was also found from Table 1, that moral disengagement is positively and significantly correlated with attitude towards cybercrime. Hence, the second hypothesis which stated that there would be a positive relationship between moral disengagement and attitude towards cybercrime among undergraduates was confirmed at (β=.13, t=2.231, p<.05). This finding indicated that as moral disengagement increases by one unit, negative attitude towards cybercrime increases by .13 units. Also, the result from Table 1 showed that a negative correlation existed between embarrassability and attitude towards

cybercrime. Thus, the third hypothesis which stated that there would be a negative relationship between permissive parenting and attitude towards cybercrime among undergraduates was confirmed at (β = -.52, t= -4.324, p<.01); indicating an inverse relationship between embarrassability and negative attitude towards cybercrime. Thus, one unit increase in an undergraduate's embarrassability would result to .52 unit decrease in negative attitude towards cybercrime.

Furthermore, embarrassability moderated the relationship between permissive parenting style and negative attitude towards cybercrime. Again, the fourth hypothesis which stated that embarrassability would moderated the relationship between permissive parenting style and attitude towards cybercrime among undergraduates was accepted at (β= -.23, t= -2.441, p<.05). This showed that embarrassability is potent in diminishing the relationship between permissive parenting, and negative attitude towards cybercrime, among undergraduates. More so, embarrassability moderated the relationship between moral disengagement and negative attitude towards cybercrime among undergraduates. Hence, the fifth hypothesis that stated that embarrassability would moderate the relationship between moral disengagement and attitude towards cybercrime among undergraduates was accepted at (β= -.26, t= -2.623, p<.05). Indicating that as embarrassability increases, the relationship between moral disengagement and negative attitude towards cybercrime decreases.

Discussion

This study examined the moderating role of embarrassability in the relationship between permissive parenting style and moral disengagement, on attitude towards cybercrime among undergraduate. Correlational design was used in this study, and five hypothesis were postulated, and tested using moderated regression statistic. Among the research outcomes, a positive association was found between permissive parenting style and attitude towards cybercrime; indicating that the more parent uses permissive approach of parenting, the higher the children's negative attitude towards cybercrime. This findings is supported by the Social Responsibility and Role Integration Theory by Obi-Nwosu et al. (2025). According to this theory, how players of social responsibilities (government, community, family, and individuals) executed their role in a given society determines the level of peace the society will enjoy. Inferring from this theory, when parents play their social responsibility appropriately, they will cultivate functional and adaptive attitude, filled with love and empathy in their children; hence, a more positive attitude towards cyberspace users. However, when parents failed to judiciously play their role in the society, children are left to circumvent life situations on their own without guidance; thereby exposing them to lots of maladaptive behaviours such as cybercriminality. Empirically, this finding is in agreement with that of Hinnant et al., (2016), Nonum and Nwankwo (2020), Onsando et al. (2021), Sharma and Imran (2023), Okeke et al. (2024), and Onuoha (2025). Their findings reveled that children trained by permissive parents are more prone to maladaptive behaviours; cyber criminalities inclusive.

The second hypothesis of the study was as well accepted, indicating that an association existed between moral disengagement and attitude towards cybercrime among undergraduates. This

finding could also be explained, using Social Responsibility and Roles Integration Theory. Deducing from this theory, when an undergraduate fails to play relevant roles in the society, they start exhibiting opposite or antisocial behaviours; which could include all sort of criminalities. However, adequate compliance with their social responsibility, would eliminate unethical behaiour such as cybercrime. Empirically, the second finding is in line with the finding of Parlangeli et al. (2019), Fissel, et al. (2021), Sari et al. (2022), Okafor et al., (2024), Okeke et al. (2024) that found that an association existed between moral disengagement and internet crimes.

The results from this study also revealed that a negative relationship existed between embarrassability, and attitude towards cybercrime. This implies that the higher an undergraduates' embarrassability, the lower their negative attitude towards cybercrime. Hence, their tendency of involving in cyber criminality reduces. This finding is in line with that of Emekpo et al. (2024), Obi-Nwosu et al. (2017), and Obi-Nwosu et al. (2014), that found that the high one is on embarrassability, the higher their pro social behaviours

Furthermore, the results revealed that embarrassability moderated the relationship between permissive parenting style and attitude towards cybercrime, as well as the relationship between moral disengagement and attitude towards cybercrime. This implies that for undergraduate with negative attitude towards cybercrime that could increase their tendency of involvement in cyber criminality, enhancing their embarrassability could change their likelihood of involving in cybercrime. These findings are buttressed by the findings of Obi-Nwosu et al. (2014), Obi-Nwosu et al. (2017), and Emekpo et al. (2024), that found that as embarrassability increases, maladaptive behaviours decreases.

Implications of the Study

Theoretically, this study validated the theoretical framework of the study by observing that both permissive parental style and moral disengagement were associated with attitude towards cybercrime. Thus, Social Responsibility and Roles Integration Theory can be seen as a strong theoretical explanation for this relationship.

Preventive strategies for cyber criminality should utilize this knowledge; in that psychologist and counsellors that handle families and adolescents have to intervene to reduce moral disengagement and improve positive parenting.

Policy makers could also benefit from the findings by including ethical education in school curriculum from the primary school level to ensure good moral of students.

Recommendations

The recommendations are made in line with the findings of this study

1. Parents' should adopt positive parenting style filled with warmth relationship, as well as appropriate communication and enforcement while training their children.
2. Since a relationship was found between moral disengagement and negative attitude towards cybercrime, in other to reduce cybercrime, there is need for advocacy for good moral standing. Hence, media stations should depart from unnecessary applaud and recognitions accorded to individual who made their money through questionable means.

3. Forensic Psychologists should consider screening for permissive parenting style, moral disengagement and embarrassability when investigating issues of cybercrime among undergraduates
4. Counsellors, educational Psychologists, and parents should consider inculcating embarrassability in their children as a way to reduce negative attitude towards cybercrime.

Conclusion

This study examined the moderating role of embarrassability in the relationship between permissive parenting style and moral disengagement, on attitude towards cybercrime among undergraduate, a correlational design was used in this study, and five hypotheses were stipulated to guard this study. In other to test the hypotheses, moderated regression statistic was adopted as the appropriate statistics for data analyses. The result revealed that all the postulated hypotheses were accepted. However, hypotheses one, and two which are: permissive parenting style, and moral disengagement were found to be associated with negative attitude towards cybercrime. Hypothesis three (embarrassability) had a negative relationship with attitude towards cybercrime. Furthermore, hypotheses four and five were also accepted showing that embarrassability moderated the relationship between permissive parenting, and moral disengagement on attitude towards cybercrime. Hence, forensic psychologists and counsellor should enhance embarrassability as a trait in undergraduates' suspected of cybercrime; so as to reduce their likelihood of involvement in cybercrime.

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