

Research Article

A Cross-Sectional Study of the Burden, Pattern and Self-Reported Health Effects of Cyberbullying Among Undergraduates of a Public University in Ekiti State, Nigeria

Paul Oladapo Ajayi^{1,*} , Mojinyinola Oyindamola Adeosun¹ ,
Victor Mayowa Adeleye² 

¹Department of Community Medicine, Ekiti State University, Ado-Ekiti, Nigeria

²Department of Community Medicine, Ekiti State University Teaching Hospital, Ado-Ekiti, Nigeria

Abstract

Cyberbullying is persistent deliberate harm, inflicted within a power imbalance between victim and perpetrator, with the hostility conveyed through electronic media. It is a serious global public health issue, exacerbated by advancing technologies and the expanding digital environment. This study determined the prevalence, pattern and self-reported health effects of cyberbullying among university students of Ekiti State University, Ado-Ekiti, Nigeria. A cross-sectional study was conducted among 384 university students of Ekiti State University, Ado-Ekiti, using an adapted, pretested, semi-structured, interviewer-administered questionnaire to collect the data. Multistage sampling methods was used to select the participants. All data collected were analyzed using Statistical package for social science software version 25. Data were summarised using descriptive statistics, and 95% confidence intervals (CI) were calculated for prevalence estimates. In the preceding three months, 9.6% (95% CI 7.1-13.0) of respondents had perpetrated and 28.9% (95% CI 24.6-33.6) had experienced cyberbullying. The commonest forms among perpetrators (n=37) and victims (n=111) were hurtful or insulting remarks (59.5% and 64.9%) and exclusion from an online group (51.4% and 61.3%); relationship-related abuse or sexual solicitation was reported by 52.3% of victims but only 10.8% of perpetrators. Perpetrators most often used chat platforms such as WhatsApp and Snapchat (73.0%) and phone calls (43.2%), whereas victims most often reported text messages and chat platforms (46.8% each). Among victims, the most frequently reported symptoms were feeling tense, anxious or nervous (38.7%), feeling sad (36.9%) and little appetite (33.3%); stomach ache (18.0%) was least reported. In conclusion, almost three in ten undergraduates reported being cyberbullied, and about one in ten reported perpetrating cyberbullying, in the preceding three months. Hurtful remarks and online exclusion predominated, mostly through chat platforms, text messages and phone calls. Victims commonly reported tension or anxiety, sadness and loss of appetite, although causality cannot be inferred from this cross-sectional design. Campus-based awareness and health promotion programmes, institutional reporting policies and counselling support targeted at these forms and media are recommended.

Keywords

Patterns, Health Effect, Cyberbully Perpetrators and Victims, Youth

*Correspondence: Paul Oladapo Ajayi (paulajayi123@gmail.com)

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1. Introduction

The increasing technological development and advancements in the past few years have led to massive development in the digital world and increased social interactions and communication that have had negative consequences on the health of users. [1-3] Cyberbullying is one such consequence and a serious public health challenge worldwide, worsen by the use of recent advancing technologies and the increasing use of electronic and cyber environment. [4-6].

An estimated 6 billion people, about three-quarters of the global population, now use the internet. Young people are the most connected: 82% of those aged 15-24 years use the internet, compared with 72% of the other age groups, and the relative gap is widest in low-income countries. [7, 8] Cyberbullying is a rapidly changing and developing public health problem with increasing global burden, especially in the low- and middle-income countries, as access to online facilities expands. [9].

Traditionally, bullying is defined as deliberate hostile behaviour, carried out continuously over time among equal aged companions and characterised by unequal power in relationships, and was historically confined to physical spaces. [4] Cyberbullying is repeated, intentional harm inflicted within an unequal power in relationships between victim and perpetrator, with hostility conveyed through electronic communication. [4, 10] It can manifest in different ways (flaming, cyberstalking, online harassment, outing and exclusion) and be delivered through almost any means of electronic communication, such as digital devices, social media, online forums, chats or gaming rooms. [9, 10].

The World Health Organization depicts bullying experienced in childhood as a significant public health issue. It has grave educational, physical, social and psychological health consequences, both in childhood and adolescence. [7] Minors who are subjected to any form of bullying have increase likelihood of missing school, while their performance in school and other activities may drop and they can further experience symptoms such as anxiety, fear and emotional distress, sleeplessness, and psychosomatic pain. They have been several cases of minors with history of bullying having increased likelihood of suicide among children and youth. [7] Studies also show broad range impacts extending into adulthood, such as increasing burden of depression and unemployment. [7].

Although cyberbullying among Nigerian adolescents and students has been documented, [10, 14] data on its pattern and associated health effects among university students in Ekiti State remain limited. This study therefore aimed to determine the prevalence of cyberbullying perpetration and victimisation, to describe the forms and media of cyberbullying reported by perpetrators and victims, and to describe the self-reported health effects experienced by victims among undergraduates of Ekiti State University, Ado-Ekiti, Ekiti State, Nigeria.

2. Materials and Methods

2.1. Study Area

The study was conducted at Ekiti State University Ado-Ekiti, Ekiti State, Nigeria; a public owned tertiary institution with a student population of about 25,000 students. [11].

2.2. Study Design

An institutional based, cross-sectional design was used.

2.3. Study Population

The study population included all the Ekiti state university undergraduate students who are young adult aged ≥ 15 years who own or have had access to an electronic media (mobile phone, laptop, smart watches) in the last 6 months and who have internet access for at least 1 hour per week in the last 6 months. Student with acute health condition were excluded.

2.4. Sample Size Determination

The sample size was computed using the Leslie Fisher's formula for calculation of single proportions for a population larger than 10,000 [12].

Z_{α} is the standard normal deviate for 95% confidence interval = 1.96.

p is the prevalence of cyberbullying from previous study done [13] = 67% = 0.67.

q is the complementary probability = $1-p = 1-0.67=0.33$.

d is the margin of error = 5% = 0.05, Therefore, $Z = 1.96$, $p = 0.67$, $q = 0.33$, $d = 0.05$.

$n=340$ approximately to the nearest units.

Using a non-response rate of 10% [12], $10/100 \times 340=34$.

n (sample size) = $340+34=374$, however, 400 samples were taken.

2.5. Sampling Technique

Multistage (3-staged) sampling methods was used to choose the eligible participants. In stage one, from the list of all the faculties obtained, 4 of the 11 faculties were chosen using the simple random sampling technique by balloting. In the second stage, a list of the department in the selected faculties was obtained and 2 departments from each faculty were selected using simple random sampling method (a total of 8 department were selected). In the third stage, all the levels in each chosen departments were selected, finally the respondents from the selected department were selected using the systematic sampling method. Questionnaires were distributed equally across the selected levels. The list of students in each

level served as the sample frame. The sample interval was obtained by dividing the total number of students in each level (sample frame) by the number of questionnaires that was allocated to that level (sample size). Using the sample interval that was obtained, the first participant was selected using simple random technique by balloting. Thereafter, subsequent respondents were selected using the pre-determined sampling interval till the sample size was attained.

2.6. Data Collection Instrument and Method

The data collection was carried out using a pretested, semi-structured, interview-administered questionnaire, which was adapted from the Centers for Disease Control and Prevention (CDC) cyberbullying questionnaire and other literatures. [14, 15] The reliability and validity were found to be good across countries and nationalities (Cronbach's alpha of 0.87). The prototype questionnaire contained 22 items made up of 6 items on socio-demographic characteristics, 8 questions on prevalence and pattern of cyberbullying assessment, and 8 items on the effect of cyberbullying. Data was collected during school hours by eight trained research assistant and 2 supervisors.

2.7. Data Analysis

The questionnaires were sorted, coded and checked for errors and completeness. All data collected were analyzed using SPSS software version 25.0. Data were summarised using frequencies and percentages. Prevalence estimates are presented with 95% confidence intervals (Wilson score method). Forms, media and symptoms were multiple-response items, so percentages do not sum to 100%.

2.8. Ethical Consideration

Research permission and approval (Protocol number: Ekiti State University Teaching Hospital (EK-SUTH)/A67/2024/05/005) to conduct the study was obtained from Research and Ethics Committee of Ekiti State University Teaching Hospital, Ado-Ekiti, while permission was obtained from the Deans of the selected faculties and the Head of Departments of the selected departments. Participation in the study was solely voluntary and participants were assured of their confidentiality. A written informed consent was obtained from each respondent. Data were stored in utmost confidentiality and were accessible only to the researchers.

3. Result

Response rate: A total of 400 questionnaires were administered, out of which 384 were recovered; representing a response rate of 96% with non-response rate of 4%.

The socio-demographic factors of the respondents, shows that just over half of the respondents were aged above 20 years

193 (50.3%), while 191 (49.7%) were ≤ 20 , the mean age of the respondents is 21 ± 2 . More than half of the respondent were male 250 (65.1%) and the others were female 134 (34.9%). Majority of the respondents were Christians 351 (91.4%), some were Muslims 32 (8.3%) and just 1 (0.3%) was a traditionalist. Most of the respondents were of Yoruba ethnicity 372 (96.9%). The respondents were evenly spread across the departments, Agriculture Science 98 (25.5%), Basic Medical Sciences 88 (22.9%), Sciences 109 (28.4%) and Social Sciences 89 (23.2%). In the same vein, the respondents were evenly spread across the levels 100L 94 (25.5%), 200L 91 (23.7%), 300L 108 (28.1%) and 400L 91 (23.7%).

Table 1. Prevalence of cyberbullying among Youth in Ekiti State University, Ado Ekiti, Ekiti State.

Variable (n=384)	Frequency	Percent
Cyberbully perpetrator in the last 3 months		
No	347	90.4
Yes	37	9.6
Cyberbully victim in the last 3 months		
No	273	71.1
Yes	111	28.9

Table 1 shows the prevalence of cyberbullying among youth in Ekiti State University, Ado Ekiti, Ekiti State. It shows the number of Cyberbully perpetrators in the last three months was 37 (9.6%; at a confidence interval of 7.1-13%), and the number of Cyberbully victims in the last three month was 111 (28.9%; at a confidence interval 24.6-33.6%).

Table 2. Forms of cyberbullying by perpetrators in the last three months (multiple response).

Variable (n=37)	Frequency	Percent
I said harsh and hurtful things, made fun of and call someone a hurtful name		
Yes	22	59.5
No	15	40.5
I completely ignored or excluded someone from an online group		
Yes	19	51.4
No	18	48.6
I sent relationship-related abuse or insult or solicited sex		
Yes	4	10.8

Variable (n=37)	Frequency	Percent
No	33	89.2
I spread false rumors or rumors with sexual content about someone		
Yes	4	10.8
No	33	89.2
I disclosed secrets or embarrassing information about someone to others		
Yes	15	40.5
No	22	59.5
I pretended to be some else online		
Yes	7	18.9
No	30	81.1
I hacked into another person email box and posted embarrassing or harassing messages		
Yes	3	8.1
No	34	91.9
I circulated sexually explicit picture or video clip of someone to him/her/others		
Yes	3	8.1
No	34	91.9
I threatened someone of harm or intimidation		
Yes	6	16.2
No	31	83.8
I circulated embarrassing or harassing picture or video clip of someone to him/her/others		
Yes	4	10.8
No	33	89.2

The above Table 2 shows the forms of cyberbullying by perpetrators in the last three months. The three most common form of cyberbullying are people that were told harsh and hurtful things, made fun of and called a hurtful name 22 (59.5%), those who completely ignored or excluded someone from an online group 19 (51.4%) and those that disclosed secret or embarrassing information about someone to others 15 (40.5%). The least of them all were those who hacked another person's email boxes and posted embarrassing messages 3 (8.1%).

Table 3. Medium of Cyberbullying by perpetrators in the last three months (multiple response).

Variable (n=37)	Frequency	Percent
Text message		
Yes	4	10.8
No	33	89.2
Phone call		
Yes	16	43.2
No	21	56.8
Chatroom (WhatsApp, Snapchat)		
Yes	27	73
No	10	27
Website (Internet)		
Yes	7	18.9
No	30	81.1
Email		
Yes	2	5.4
No	35	94.6
Picture / Online video clips		
Yes	6	16.2
No	31	83.8

Table 3 the above table shows the medium of cyberbullying by perpetrators in the last three months. The three most common media used by perpetrators are; Chat rooms e.g., WhatsApp, Snapchat 27 (73%), phone calls 16 (43.2%) and via websites 7 (18.9%). The least occurring medium used by perpetrators is via E-mail messages 2 (5.4%).

Table 4. Form of cyberbullying experienced by cybervictims in the last three months. (multiple response).

Variable (n=111)	Frequency	Percent
Someone said harsh and hurtful things, made fun of and call me a hurtful name		
Yes	72	64.9
No	39	35.1
Someone completely ignored or excluded me from an online group		
Yes	68	61.3
No	43	38.7
Someone sent relationship-related		

Variable (n=111)	Frequency	Percent
abuse or insult to me or solicited for sexual intercourse		
Yes	58	52.3
No	53	47.7
Someone spread false rumours or rumours with sexual content about me		
Yes	25	22.5
No	86	77.5
Someone disclosed secrets or embarrassing information about me to others		
Yes	17	15.3
No	94	84.7
Someone pretended to be me online		
Yes	20	18
No	91	82
Someone hacked into my email box and posted embarrassing or harassing messages		
Yes	12	10.8
No	99	89.2
Someone circulated sexually explicit picture or video clip of mine to other(s)		
Yes	15	13.5
No	96	86.5
Someone threatened me of harm or intimidated me		
Yes	27	24.3
No	84	75.7
Someone circulated an embarrassing or harassing picture or video clip of mine to others (s)		
Yes	28	25.2
No	83	74.8

The Table 4 above shows the different forms of cyberbullying experienced by cyber-victims in the last 3 months. The three most common experiences reported by the cyber-victims were; Someone said harsh and hurtful things, made fun of and called them hurtful names 72 (64.9%), Someone completely ignored or excluded them from an online group 68 (61.3%), Someone sent relationship related abuse or solicited for sexual intercourse 58 (52.3%). The least form that occurred was; Someone hacked into my e-mail and posted embarrassing messages 12 (10.8%).

Table 5. Medium of cyberbullying experiences by cyber-victims in the last three months (multiple response).

Variable (n=111)	Frequency	Percent
Text message		
Yes	52	46.8
No	59	53.2
Phone call		
Yes	36	32.4
No	75	67.6
Chatroom (WhatsApp, Snapchat)		
Yes	52	46.8
No	59	53.2
Website (Internet)		
Yes	28	25.2
No	83	74.8
Email		
Yes	25	22.5
No	86	77.5
Picture / Online video clips		
Yes	32	28.8
No	79	71.2

Table 5 shows the media of cyber-bullying experiences by cyber victims in the last three months. The most common media are; Via text message 52 (46.8%), chatrooms 52 (46.8%), Phone calls 36 (32.4%). The least common is E-mail 25 (22.5%).

Table 6. Health Effects of Cyberbullying on the Health of the Students who have you been bullied by someone through mobile phone or internet in the last three months.

Variable (n=111)	Frequency	Percent
Difficulty concentrating		
No	89	80.2
Yes	22	19.8
Difficulty sleeping		
No	87	78.4
Yes	24	21.6
Headaches		
No	87	78.4

Variable (n=111)	Frequency	Percent
Yes	24	21.6
Stomach aches		
No	91	82
Yes	20	18
Felt tense (anxious and nervous)		
No	68	61.3
Yes	43	38.7
Had little appetite		
No	74	66.7
Yes	37	33.3
Felt sad		
No	70	63.1
Yes	41	36.9
Felt giddy (dizziness)		
No	88	79.3
Yes	23	20.7

This table shows the health effect of cyberbullying on the health of students who have been bullied by someone through the internet. Of all the effects reported by the victims; symptoms of anxiety 43 (38.7%), feeling of sadness 41 (36.9%), reduced appetite 37 (33.3%) had the highest incidence, while stomach ache 20 (18%) was the least reported effect of cyberbullying.

4. Discussion

The study report that the prevalence of cyberbully victims (28.9%), and cyberbully perpetrators (9.6%) respectively. Similarly, a study showed the prevalence of Cyberbully victims and perpetrators, to be 30.2% were cybervictims, and 15.5% were cyberaggressors, respectively showing huge similarity. [16] The similarity may be accounted for because the study were both among youth, and they used similar sample size however this study was done in an institution, and in a developing country like Nigeria when compared to the other study which was a community based study, in a developed country like Spain. In contract to this study it was revealed that the prevalence of cyberbullying victim and perpetrators was much lower in another study in Italy (9% and 5% respectively), [17] while another study in Spain revealed cybervictims prevalence of 41.3% which was higher than the present study. [18] However the reason for the difference in prevalence may be attributed different study population, difference in sample size, different level of development of the different countries.

In this study concerning the pattern of the cyberbullying

among perpetrators the three most common form of cyberbullying were; being told harsh and hurtful things, (59.5%), and being completely ignored or excluded someone from an online group (51.4%) and disclosing secret or embarrassing information about someone to others (40.5%). Also the three most common media used by perpetrators were; Chat rooms (73%), phone calls (43.2%) and via websites (18.9%). Similarly, instgram, chat room, phone call and text messages were the most common medium of cyberbully by perpetrator in a study in India. [19].

The three most common experiences reported by the cybervictims were; Someone saying harsh and hurtful things (64.9%), Someone completely ignored or excluded them from an online group (61.3%), Someone sent relationship related abuse or solicited for sexual intercourse (53.2%). The most common media are; via text message (46.8%), chatrooms (46.8%), Phone calls (32.4%). Similarly in a study in the United States of American [20] the commonest experiences among the victims were to make fun of you, called you names, or insulted you, in a hurtful way, spreading rumors about you or tried to make others not like you, threatened or insulting you through text messaging, while the medium of expressing this include text messages, chat room and internet post. [20] The experiences and medium of cyberbullying in a developed country like USA and Nigeria are very similar this might be accounted for because the world is a global village using internet and cyberspace, behaviours and cultural adaption are more rapid resulting into similar pattern of experiences of cyberbully. However the study experiences from USA reveals a larger sample size, than this study. In contract to this study a study in India and Indonesia revealed among male adolescents, cyberbullying preferred medium as massive multiplayer games (for example warcraft, guild of war), Instagram, Twitter, and Facebook. [2, 19].

The three most common effects or consequences of cyberbullying reported by the victims; symptoms of anxiety (38.7%), feeling of sadness (36.9%), reduced appetite (33.3%) had the highest occurrence among the victim, this is similar to a study in Indonesia where significant impact on mental health/ depressed, feelings of fear or increased anxiety, loss of self-confidence, decreased academic/professional performance, [21] furthermore, in another cyberbullying has been associated and strongly linked with anxiety, depression, emotional deregulation, and lowered self-esteem. [2, 22] Such vulnerability may be linked to emotional fragility and increased sensitivity to negative and hurtful words, exclusion rejection, may also be potentially rooted in early parental absence or loss [19] Also, a study in India equally indicates that more youth who experienced cyberbullying victimization are more likely to have depressive symptoms which is similar to this present study findings which has high number of cyberbully victim youths with depression and anorexia which are classical depressive symptoms'. [22] Other study revealed that lower satisfaction with family life and school experience where found among the cyberbully victims [23] Study limitation include that the study did not directly assess repetition, intent, and

power imbalance between the perpetrator and victim, recall bias were reduced by limit the time of recall to 3 months.

5. Conclusions

In conclusion about a tenth are cyberbullying perpetrators while about a third are cyberbullying victims, the identified pattern of cyberbullying among perpetrators and victim and the media used are similar, the effect of cyberbullying includes symptoms of anxiety, feeling of sadness, and reduced appetite. Laws, regulations, health promotion and other targeted intervention toward the identified pattern and media of cyberbullying can be used in prevention and control of cyberbullying among the youth.

Abbreviations

CDC	Centers for Disease Control and Prevention
EKSUTH	Ekiti State University Teaching Hospital
SPSS	Statistical Package for Social Sciences

Author Contributions

Paul Oladapo Ajayi: Conceptualization, Data curation, Formal Analysis, Funding acquisition, Investigation, Methodology, Project administration, Resources, Software, Supervision, Validation, Visualization, Writing – original draft, Writing – review & editing

Mojoyinola Oyindamola Adeosun: Data curation, Formal Analysis, Funding acquisition, Investigation, Methodology, Project administration, Resources, Software, Supervision, Validation, Visualization, Writing – original draft, Writing – review & editing

Victor Mayowa Adeleye: Conceptualization, Data curation, Formal Analysis, Funding acquisition, Investigation, Methodology, Project administration, Resources, Software, Supervision, Validation, Visualization, Writing – original draft, Writing – review & editing

Conflicts of Interest

The authors declare no conflicts of interest.

References

- [1] Maurya C, Muhammad T, Dhillon P and Maurya P et al. BMC Psychiatry, 2022; 22: 599. <https://doi.org/10.1186/s12888-022-04238-x>
- [2] Akbar AA, Fuad M, Mohammed S. Cyberbullying Patterns Psychological Impacts and Coping Strategies on Social Media among Adolescents. Journal of Smart Education and Emerging Technology (JSEET), 2025; 1(1), 1-7. <https://doi.org/10.66314/jseet.v1i1.158>
- [3] López-Meneses E, Vázquez-Cano E, González-Zamar M and milio Abad-Segura E, Int. J. Socioeconomic Effects in Cyberbullying: Global Research Trends in the Educational Context. Environ. Res. Public Health 2020, 17, 4369; <https://doi.org/10.3390/ijerph17124369>
- [4] Dennehy R, Meaney S, Cronina M, Arensman E. The psychosocial impacts of cybervictimisation and barriers to seeking social support: Young people's perspectives Children and Youth Services Review 111 (2020) 104872. <https://doi.org/10.1016/j.childyouth.2020.104872>
- [5] Mi-Kyoung Choi, Miyoung Kim and Gisoo Shin Effects of Cyberbullying Experience and Cyberbullying Tendency on School Violence in Early Adolescence The Open Nursing Journal, 2017, 11, 98-107. <https://doi.org/10.2174/1874434601711010098>
- [6] Office of the High commission Human right. Cyberbullying of children, 27 September 2023 <https://www.ohchr.org/en/statements-and-speeches/2023/09/cyberbullying-children> (Assessed on the 12th June, 2026).
- [7] World health organization. Violence Against Children Online What health systems and health care providers can do. <https://cdn.who.int/media/docs/default-source/documents/child-maltreatment/online-violence-final.pdf> (assessed on the 12 June 2026).
- [8] ITU Facts and figures; Youth Internet use; Internet use remains highest among youth, yet the generational gap is shrinking. <https://www.itu.int/itu-d/reports/statistics/2025/10/15/ff25-youth-internet-use/>
- [9] UNICEF Cyberbullying: What is it and how to stop it. What teens want to know about cyberbullying. <https://www.unicef.org/stories/how-to-stop-cyberbullying>
- [10] Ajayi PO, Amu EO, Solomon OO, Ipinimo TN, Adeosun MO Cyberbullying perpetration among Youths in a Nigerian Public University Cyberbullying among Youths Babcock Univ. Med. J. 2025 8(1): 53-64. <https://doi.org/10.38029/babcockuniv.med.j.v8i1.538>
- [11] Ekiti State University - Home. Ekiti State University - Home; <https://eksu.edu.ng/> [Accessed Sept 2022].
- [12] Jekel JF, Katz DL, Elmore JG. Sample size, randomization, and probability theory. Maddox S, Schmitt W (eds) Epidemiology, Biostatistics and Preventive medicine. 2nd Ed Philadelphia: Saunders Elsevier; 2001: 194-199.
- [13] Sumera S, Naurin FK, Saad Z. Prevalence of Cyberbullying victimization among Pakistani youths. Technology in Society 2021; 65: 101577. numberS0160791X2100052X <https://doi.org/10.1016/j.techsoc.2021.101577> [Accessed 7 September 2022].
- [14] Owoade IA, Adeomi AA, Akinyemi PA, Owoade AF. Prevalence and Determinants of Cyberbullying Perpetration among Adolescents in Rural and Urban Secondary Schools in Osun State South-Western Nigeria. Journal of Community Medicine and Primary Health Care. 2023; 35 (1) 24-39. <https://dx.doi.org/10.4314/jcmphc.v35i1.3>

- [15] Hamburger ME, Basile KC, Vivolo AM. Measuring Bullying Victimization, Perpetration, and Bystander Experiences: A Compendium of Assessment Tools. Atlanta, GA: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control, 2011.
<https://www.cdc.gov/violenceprevention/pdf/bullycompendium-a.pdf> (Accessed 7 Sept 2022).
- [16] Garaigordobil, M. (2015). Cyberbullying in adolescents and youth in the Basque Country: prevalence of cybervictims, cyberaggressors, and cyberobservers. *Journal of Youth Studies*, 18(5), 569-582.
<https://doi.org/10.1080/13676261.2014.992324>
- [17] Mannocci1, T. Iona2, V. Merolle3, A. Nicoletti4, C. Loconsole1, G. La Torre5, D. Masala2, 3 “Fare male farsi male” project - Are cyberbullying and cyber victimisation associated with physical activity levels? a cross sectional study in a sample of Italian adolescents *A. Clin Ter* 2023; 174 (3): 296-302.
<https://doi.org/10.7417/CT.2023.2537>
- [18] Joaquín González-Cabrera, Adoración Díaz-López, Vanessa Caba-Machado, Jessica Ortega-Barón, Ainara Echezarraga, Liria Fernández-González, Juan M. Machimbarrena Epidemiology of peer cybervictimization and its relationship with health-related quality of life in adolescents: A prospective study. *Journal of Adolescence*, 2022 April 2023; 93(3): 468-478.
<https://doi.org/10.1002/jad.12128>
- [19] Aditi Dubey and Susmita Halder The pattern of Cyberbullying among adolescents in India: An Exploratory study; *IJNRD*, 2022; 7(9), 1003-1008.
<https://ijnrd.org/papers/IJNRD2209117.pdf>
- [20] Mindrila, Diana. "Patterns of Cyberbullying Victimization in US Adolescents: A Latent Class Analysis," *Georgia Educational Researcher*, 2020; 17(2): 1.
<https://doi.org/10.20429/ger.2020.170201>
- [21] Liu L, Zhang B, Song M, FanY, Mo M and Peng B. Cyberbullying and cybervictimization patterns among left-behind and non-left behind adolescents in China: a latent profile analysis. *BMC Psychology* (2025) 13: 1157.
<https://doi.org/10.1186/s40359-025-03493-3>
- [22] Ranjith PJ, Vrandana MN, Kishore MT. Predictors, prevalence, and patterns of cyberbullying among school-going children and adolescents. *Indian J Psychiatry*. 2023; 65(7): 720-728.
https://doi.org/10.4103/indianjpsychiatry.indianjpsychiatry_313
- [23] Preston Mwiinga, Crynie Siakachoma, Ruth Lupyani, Sylvester Chisebe Understanding Cyberbullying: Patterns, Psychological Impacts, and Preventive Strategies in Online Communities. *SSRN Electronic journal* 2025.
<https://doi.org/102139/ssrn>