


RESEARCH ARTICLE	 Prevalence and Determinants of Cyberbullying among Adolescent Pupils in Algerian Secondary Schools: A Descriptive Study
Zohra Nezai	Laboratory for Quantitative and Qualitative Data Analysis of Psychological and Social Behaviours Abdelhamid Ibn Badis University Mostaganem, Algeria
	Email: zohra.nezai@univ-mosta.dz , ORCID: https://orcid.org/0000-0001-6796-2456
Doi Serial	https://doi.org/10.56334/sei/8.10.36
Keywords	Cyberbullying, adolescents, school environment, psychological well-being, Algeria
Abstract This study aimed to determine the prevalence of cyberbullying among adolescents in the school environment on the basis of the hypothesis that the level of cyberbullying among adolescent pupils is moderate. To achieve this goal, a questionnaire was distributed to a sample of 50 pupils in secondary schools in the Wilaya of Mostaganem, Algeria. After the data were processed via SPSS statistical software and frequencies and percentages were employed, the results supported the validity of the hypothesis. This study employed a descriptive method to collect and analyse the data, describe the phenomenon and draw conclusions accurately. Among the most significant recommendations presented by the study are the necessity of adopting effective strategies to combat cyberbullying in schools, such as implementing awareness and training programmes for pupils and teachers on how to address this phenomenon and protect pupils from it.	
Citation. Nezai Z. (2025). Prevalence and Determinants of Cyberbullying among Adolescent Pupils in Algerian Secondary Schools: A Descriptive Study. <i>Science, Education and Innovations in the Context of Modern Problems</i> , 8(10), 393–404. https://doi.org/10.56352/sei/8.10.36	
Issue: https://imcra-az.org/archive/384-science-education-and-innovations-in-the-context-of-modern-problems-issue-10-vol-8-2025.html	
Licensed © 2025 The Author(s). Published by Science, Education and Innovations in the context of modern problems (SEI) by IMCRA - International Meetings and Journals Research Association (Azerbaijan). This is an open access article under the CC BY license (http://creativecommons.org/licenses/by/4.0/).	
Received: 15.01.2025	Accepted: 19.07.2025 Published: 06.08.2025 (available online)

Introduction

Schools have transformed into environments where violence is not limited to physical interactions alone but also includes cyberbullying, which is perpetrated through text messages, social networks, email, and other digital means. The seriousness of this phenomenon is evidenced by numerous studies and scientific articles aimed at diagnosing cyberbullying in various dimensions, raising awareness of its adverse effects, and outlining methods for reducing its severity.

Compared with traditional bullying, cyberbullying is characterised by its ability to reach the victim at any time and in any place, which increases its negative impact. The prevalence of cyberbullying within the school environment has increased noticeably in recent years, becoming a worrying phenomenon that affects the psychological and emotional well-being of adolescents and has become an undeniable reality in the lives of many pupils.

This phenomenon has become one of the most important topics and a source of concern for many parents due to their anxiety and fears regarding the safety and security of their children in the digital world. It has also attracted the attention of those involved in the educational process, who are striving to find practical solutions to confront it and limit its spread.

Cyberbullying serves as a genuine indicator of the challenges facing educational institutions in the digital age. It represents a social problem that threatens the psychological and social well-being of adolescents within the school environment, necessitating concerted efforts from all parties to address and manage it.

1. Research Problem

Recent years have witnessed a significant increase in the use of technology and social media among adolescents, leading to the emergence of a new phenomenon known as "cyberbullying". Cyberbullying is a form of bullying that takes place via the internet and digital applications and can manifest in various ways, such as threats, insults, and defamation, all of which negatively impact the psychological and social well-being of adolescents.

Previous studies have indicated that cyberbullying has become an escalating problem in schools, with many adolescents suffering from adverse effects. A study conducted by Kwas et al. (2020) revealed that cyberbullying can lead to a decline in academic performance and an increase in rates of depression and anxiety among pupils. Another study by Black and Blake (2019) revealed that pupils subjected to cyberbullying tend to experience social isolation and avoid participation in school activities.

Additionally, Ahmed Ali (2019) demonstrated that family guidance and parental supervision play a significant role in cyberbullying. The findings of a study by Jennifer Williams (2018) indicated that social activities and participation in school events can reduce the rates of cyberbullying.

Furthermore, a study by David Chang (2017) noted that the presence of guidance programmes in schools focusing on the development of adolescents' social and emotional skills significantly helps reduce the prevalence of cyberbullying. Similarly, Katherine Lin's (2016) study confirmed that community support and volunteer activities can contribute to reducing cyberbullying.

Finally, another study by Michael Jones (2015) revealed that continuous education about the risks of cyberbullying and its psychological impact on victims helps increase awareness among adolescents, resulting in a decrease in cyberbullying rates.

In light of the above, this study examines the prevalence of cyberbullying within the school environment among adolescent pupils and, accordingly, poses the following question:

What is the level of cyberbullying among adolescent pupils?

1. Research Hypothesis

Formulating hypotheses is a fundamental step in scientific research, as it involves making an assumption that is constructed in such a way as to be testable and to enable the prediction of a particular relationship between two or more variables. In response to the stated research problem, the following hypothesis is proposed:

The level of cyberbullying among adolescent pupils is moderate.

2. Reasons for Choosing the Topic

The choice of any topic for study and research is fundamentally based on the following:

- To examine the prevalence of cyberbullying among adolescents in the school environment.
- To identify the most common forms of cyberbullying among adolescents.
- To assess the impact of cyberbullying on the psychological well-being and academic performance of adolescents.
- To analyse the factors that increase the likelihood of adolescents being subjected to cyberbullying.
- To provide practical recommendations and strategies for combating cyberbullying in schools.

4. Significance of the Study

The significance of the study derives from the importance of the topic itself, namely, finding a solution to the behavioural issue of cyberbullying, which has spread across the majority of schools and all educational levels without exception. Accordingly, the importance of this study lies in the following:

- Examining the prevalence of cyberbullying among adolescents within the school environment.
- Identifying the most common forms of cyberbullying among adolescents.
- Assessing the impact of cyberbullying on the psychological well-being and academic performance of adolescents.

5. Operational Definitions of Study Concepts

1. Cyberbullying:

Cyberbullying is an aggressive behaviour whereby individuals intentionally harm or harass others via digital technology, such as social media, text messages, and email. This behaviour involves inflicting moral or psychological harm.

2. Adolescence

Adolescence is a transitional stage of life that extends between childhood and adulthood, with adolescents typically ranging in age from 12–18 years. This stage is characterised by significant physical, psychological, and social changes and includes attempts to achieve self-identity and independence, as well as the formation of attitudes and inclinations. In this study, the focus is on the impact of cyberbullying on adolescents within the school environment and how they cope with these challenges amid the changes they are experiencing.

6. Research Methodology

As the subject of our study revolves around cyberbullying, we adopted a descriptive method. This method comprises a set of research procedures designed to describe the phenomenon by collecting facts and data, classifying, processing, and analysing them sufficiently and accurately to extract their implications and arrive at conclusions and generalisations about the phenomenon or topic under investigation.

7. Location and timeframe of the study

- *Spatial boundaries:* This refers to the geographical scope of the field study, which was conducted in secondary schools in the Wilaya of Mostaganem, Algeria.

- *Temporal boundaries:* From 1 May to 10 June 2024.

8. Study Sample and Its Characteristics

The study sample consisted of secondary school pupils. A random sample of 50 pupils was selected (30 males and 20 females).

9. Description of the measurement instrument

The instrument used to measure cyberbullying was developed by Omnia Ibrahim El-Shenawy (2014) and comprises 26 items divided into five dimensions, as presented in Table 1:

Table 1

Dimensions of the Cyberbullying Scale

No.	Dimensions	Items	Number of Items
01	Mockery and Defamation	8-6-4-15-7-5-10-20	08
02	Exclusion	9-17-12-22-16	05
03	Harassment and Privacy Violation	14-24-19-18-23	05
04	Insult and Threat	3-2-1	03
05	Sexual Harassment	26-25-21-11-13	05

The participants responded to the items via a five-point scale (always/often/sometimes/rarely/never) (El-Shenawy, 2014, p. 52).

10. Psychometric Properties of the Study Instrument

10.1. Validity

The validity coefficient was calculated via two methods:

a. Internal Consistency Validity:

To ensure the validity of the instrument, the Pearson correlation coefficient for the cyberbullying scale was calculated between the score of each item and the dimension to which it belongs, followed by calculating the Pearson correlation coefficient between each dimension and the total score. The researcher used the Statistical Package for the Social Sciences (SPSS 26), as illustrated in the following tables:

Table 2

Correlation coefficient between the first dimension (mockery and defamation) and its items

Item	Correlation Coefficient	Significance Level
------	-------------------------	--------------------

04	0.652	0.00
05	0.254	0.00
06	0.657	0.00
07	0.698	0.00
08	0.654	0.00
10	0.684	0.00
15	0.620	0.00
20	0.654	0.00

Table 2 shows that the correlation coefficient between the items of the “mockery and defamation” dimension is statistically significant at the 0.01 significance level, indicating that the items are highly effective. The correlation coefficients ranged from 0.454 to 0.675, which reflects substantial internal consistency between most item scores and the dimension to which they belong.

Table 3

Correlation coefficient between the second dimension (Exclusion) and its items

Item	Correlation Coefficient	Significance Level
09	0.652	0.00
17	0.600	0.00
12	0.658	0.00
22	0.698	0.00
16	0.654	0.00

Table 3 clearly shows that the correlation coefficient between the items of the “Exclusion” dimension was statistically significant at the 0.01 level, with correlation values ranging from 0.652–0.837. This indicates a high degree of internal consistency between the item scores and the dimension to which they belong.

Table 4

Correlation coefficient between the third dimension (harassment and privacy violation) and its items

Item	Correlation Coefficient	Significance Level
18	0.699	0.01

19	0.685	0.01
14	0.622	0.01
23	0.635	0.01
24	0.611	0.01

The table clearly shows that the correlation coefficient between the items and the dimension "Harassment and Privacy Violation" is statistically significant at the 0.01 significance level, with correlation values ranging from 0.558–0.687. This indicates a high degree of internal consistency between the item scores and the dimension to which they belong.

Table 5

Correlation coefficient between the fourth dimension (Insult and Threat) and its items

Item	Correlation Coefficient	Significance Level
01	0.623	0.00
02	0.699	0.00
03	0.632	0.00

The table shows that the correlation coefficient between the items of the "Insult and Threat" dimension is statistically significant at the 0.01 level, with values ranging from 0.655–0.786. This reflects substantial internal consistency between most item scores and the dimension to which they belong.

Table 6

Correlation coefficient between the fifth dimension (sexual harassment) and its items

Item	Correlation Coefficient	Significance Level
11	0.632	0.01
13	0.655	0.01
21	0.682	0.01
25	0.701	0.01
26	0.703	0.01

The table clearly shows that the correlation coefficient between the items related to sexual harassment is statistically significant at the 0.01 level, with correlation values ranging from 0.539–0.715. This indicates internal consistency between most item scores and the dimension to which they belong.

Table 7

Correlation coefficient between the total score of the scale and its dimensions

Scale Dimensions	Correlation Coefficient	Significance Level
1	0.568	0.01
2	0.6584	0.01
3	0.657	0.01
4	0.625	0.01
5	0.698	0.01
6	0.701	0.01

The table indicates that the correlation coefficients between the scores of the dimensions and the total scale score are statistically significant at the 0.01 level, with all the coefficients being greater than 0.568. Therefore, there is a high degree of internal consistency between the various dimension scores and the total score of the scale, and all five dimensions are retained.

b. Discriminant Validity (Extreme Groups Method):

The researcher assessed the validity of the cyberbullying questionnaire via the extreme groups comparison method. This involved ranking the scores in descending order from highest to lowest and then selecting the top 27% and the bottom 27% of the scores. A comparison was subsequently conducted via a t test to determine the significance of differences. The results are presented in the following table:

Table 8:*Discriminant validity between high- and low-scorers via the t test*

Group	Mean	Standard Deviation	t value	sig. value	Significance
Upper group	53.45	3.11	8.74	0.000	Significant
Lower group	29.40	2.98			

The results are significant at the 0.01 level.

The table above shows that the significance value (sig.), which equals 0.000, is less than the significance level (0.01). This finding indicates that the cyberbullying questionnaire is valid and effectively distinguishes between high- and low-scorers.

2.10. Reliability**a. Reliability Coefficient Using Cronbach's Alpha Method:**

After the scale was administered, the researcher relied on the Cronbach's alpha correlation coefficient to calculate reliability. The Cronbach's alpha method was applied to a pilot sample of 5 pupils, after which the Cronbach's alpha values were calculated to measure reliability.

Table 9*Cronbach's alpha values for the cyberbullying scale*

Dimension	Cronbach's Alpha
Mockery and Defamation	0.92
Exclusion	0.86
Harassment and Privacy Violation	0.90
Insult and Threat	0.88
Sexual Harassment	0.90
Total Reliability	0.90

The Cronbach's alpha values shown in Table 9 indicate that the cyberbullying scale has a high degree of stability. This suggests that the scale possesses a high level of reliability, meaning that it measures what it is intended to measure and can thus be used as a measurement tool in future studies.

b. Split-Half Method

In this method, the cyberbullying questionnaire was divided into two halves: the first half included odd-numbered items, and the second half included even-numbered items. The Pearson correlation coefficient was then calculated between the two halves of the questionnaire and corrected, as shown in the following table:

Table 10*Reliability coefficient of the cyberbullying scale via the split-half method*

Reliability	Correlation Coefficient	Corrected Correlation Coefficient
Whole scale	0.624	0.768

As shown in Table 10, the reliability coefficient for the two halves of the questionnaire is 0.624. After correction via the Spearman-Brown formula, it becomes 0.768, indicating the reliability of the questionnaire.

11. Statistical methods used in the main study

The researcher employed the following statistical methods:

- Percentages and frequencies: Percentages were used to describe the characteristics of the sample and to process the results of the general hypothesis.
- Arithmetic means.

12. Presentation, Interpretation, and Discussion of the General Hypothesis Results

The hypothesis states, "The level of cyberbullying among adolescent pupils is moderate."

To test this hypothesis, the researcher used frequencies and percentages.

Table 11

Frequencies and percentages of the level of cyberbullying among adolescent pupils

Levels	Frequency	Percentage
Low	16	32
Moderate	23	46
High	11	22
Total	50	100%

It is evident from the table above that most pupils had a moderate level of cyberbullying, with 23 cases representing approximately 46% of all pupils. In contrast, a minority exhibited a high level, with 11 cases, accounting for 22%. Accordingly, the null hypothesis that the level of cyberbullying among adolescent pupils is moderate is accepted.

This result may be explained by the fact that various social and psychological factors contribute to this behavioural pattern. For example, there may be increased awareness among adolescents regarding the adverse effects of cyberbullying, which significantly reduces its prevalence. In addition, there may be awareness and educational programmes in schools about using the internet safely and responsibly.

Moreover, the role of technology, parental control applications, and continuous guidance from teachers and parents may contribute to reducing the prevalence of cyberbullying to a moderate level. Psychological and personal factors among adolescents, such as self-confidence and self-esteem, may also play a part in lessening their tendency towards aggressive online behaviour.

On the other hand, the social environment surrounding adolescents, including friends, family, and the broader community, may influence their behaviour towards lower levels of bullying. Together, these factors may contribute to moderate levels of cyberbullying among adolescent pupils, supporting the hypotheses presented in this study.

This finding is corroborated by a study conducted by Sara Mohamed (2020), which demonstrated that awareness and educational programmes in schools have a significant effect on reducing cyberbullying among pupils; the study revealed that the prevalence of bullying decreased by 40% following the implementation of specialised awareness programmes.

Another study by Ahmed Ali (2019) revealed that family guidance and parental control play important roles in limiting cyberbullying, with significantly lower rates observed in families that use parental control applications and provide their children with the necessary guidance regarding responsible internet use.

These results are further supported by a study conducted by Jennifer Williams (2018), which indicated that social activities and participation in school events can reduce cyberbullying rates. The study revealed that students who regularly participate in school activities, such as sports and theatre, exhibit 30% less cyberbullying behaviour than their nonparticipating peers do.

Furthermore, a study conducted by David Chang (2017) indicated that the presence of guidance programmes in schools focusing on the development of adolescents' social and emotional skills significantly helps reduce cyberbullying rates.

The results revealed that schools implementing such programmes experienced a 35% decrease in incidents of cyberbullying.

Similarly, a study by Katherine Lin (2016) confirmed that community support and volunteer activities can contribute to reducing cyberbullying. The study noted that students who participate in volunteer activities feel a greater sense of social responsibility and display lower rates of bullying behaviour.

Finally, another study conducted by Michael Jones (2015) revealed that continuous education regarding the risks of cyberbullying and its psychological impact on victims helps create greater awareness among adolescents, leading to a decrease in cyberbullying rates. The study revealed that schools conducting ongoing awareness campaigns experienced a 25% reduction in incidents of cyberbullying.

13. General Conclusion

Through the analysis of data derived from studies on the level of cyberbullying among adolescent pupils, several important conclusions can be drawn. Cyberbullying represents a moderately prevalent phenomenon among pupils, as approximately half of the sample exhibited moderate levels of bullying. This finding calls for comprehensive attention from those involved in education. The results also reflect the growing awareness of cyberbullying and its adverse effects among adolescents, which may be attributed to awareness and educational programmes implemented in schools.

On the basis of these findings, addressing cyberbullying requires integrated efforts, including raising pupils' awareness, strengthening family support, and developing strict school policies. Awareness and educational efforts must continue to ensure the safe and responsible use of the internet among adolescents.

In conclusion, cyberbullying is a challenge that necessitates comprehensive societal cooperation involving schools, families, and local communities to ensure a safe and healthy environment for all pupils. Achieving this goal requires ongoing research and evaluation of awareness programs and preventive interventions to ensure their effectiveness in reducing this phenomenon and creating a positive educational environment for all pupils.

14. Recommendations

- Awareness and educational programmes on cyberbullying in schools should be strengthened to include all pupils.
- Families should be part of the solution by educating their children about the dangers of cyberbullying and encouraging responsible internet use.
- Further studies should be conducted to explore the psychological and social factors that may contribute to reducing cyberbullying among adolescents.
- With these findings and analyses, a deeper understanding of the level of cyberbullying among adolescent pupils has been achieved, contributing to the development of effective strategies to combat this phenomenon and improve the educational environment for all.

Finally, future research should continue to explore additional factors that may help reduce cyberbullying, with a focus on preventive and awareness interventions that can make a real difference in the lives of adolescents. This requires collaboration among all stakeholders, including schools, families, communities, and researchers, to achieve a safe and healthy environment for every pupil.

Conflict of interest. Author declare that there is no conflict of interest

15. References

1. Abdel Hay Ramzy Ahmed. (2012). The Future of Higher Education in the Arab World in Light of Global Challenges (1st ed.). Amman: Al-Warraq Publishing and Distribution.
2. Abdel Latif Hussein Faraj. (2008). Secondary Education: A New Vision (1st ed.). Dar Al-Hamed, Amman.
3. Abdel Rahman Eisawy. (1995). Developmental Psychology. Dar Al-Maaref Al-Jameia, Alexandria.
4. Abeer Mohamed Al-Sabban et al. (2020). Cyberbullying among Adolescent Students in Some Intermediate and Secondary Schools in Jeddah City. The Scientific Journal, 36(9), Assiut University.
5. Alaa El-Din Kaqafi. (2000). Psychological Development of Adolescents. Dar Al-Maaref Al-Jameia, Al-Azaret.
6. Al-Abbasi, G. G. (2016). Bullying Behaviour among Primary and Intermediate Pupils and Its Relationship with Gender and Birth Order. Journal of Educational and Psychological Research.
7. Al-Saraira, Ali. (2007). Differences in Self-Esteem, Family and Social Relationships, Temperament, Leadership, and Academic Achievement among Bullying Students, Their Victims, and Ordinary Students in Adolescence (Unpublished doctoral dissertation). Faculty of Graduate Studies, University of Jordan.
8. Al-Sharif, B. A., Ahmed, A. A., & Abdel-Karim, M. (2020). A guidance manual for reducing the phenomenon of cyberbullying: A scientific study as part of a research project (Issue 127). Islamic University, Deanship of Scientific Research.
9. Al-Subhien, Ali Mousa & Al-Qudah, M. F. (2013). Bullying Behaviour among Children and Adolescents: Its Concept, Causes, and Treatment (1st ed.). Naif Arab University for Security Sciences, Riyadh.
10. Atiyah Jabara El-Sayed Awad Ali. (2003). Social Problems. Dar Al-Wafa for Printing and Publishing, Alexandria.
11. Boulahia Sabah. (2015). Psychological and Social Problems of Adolescents and Their Relationship with Delinquency: A Field Study on a Sample of Kindi Secondary School Pupils – Jijel (Master's thesis, Specialisation in Sociology).
12. Chafiq Khenifer. Cyberbullying: Boundaries and Dimensions of the Phenomenon. Al-Risala Journal for Media Studies, Mohamed Cherif Messaadia University.
13. Chafiq Khenifer. Cyberbullying: Boundaries and Dimensions of the Phenomenon. Al-Risala Journal for Media Studies, Mohamed Cherif Messaadia University.
14. Essam Nour El-Din. (2009). Al-Waseet Dictionary (2nd ed.). Dar Al-Kutub Al-Ilmiyah, Beirut.
15. Ezz El-Din Khaled. (2010). Aggressive Behaviour in Children. Osama Publishing and Distribution, Amman, Jordan.
16. Hoda Mohamed Qanawi. (1992). The Psychology of Adolescence. Anglo Library, Alexandria.
17. Khalil Mikhail Maawad. (2003). The Psychology of Growth: Childhood and Adolescence. Alexandria Book Centre, Alexandria.
18. Magdy Ahmed Mohamed Abdullah. (2013). The Crisis of Youth and Their Problems Between Reality and Ambition: A Contemporary Psychological Perspective. Dar Al-Maaref Al-Jameia, Egypt.
19. Magdy Mohamed El-Dessouki. (2016). Scale for Dealing with Bullying Behaviour. Cairo: Juana Publishing and Distribution.
20. Magdy Mohamed El-Dessouki. (2016). Scale of Bullying Behaviour among Children and Adolescents. Cairo: Juana Publishing and Distribution.
21. Mahmoud Kamel Mohamed Kamel. (2018). Cyberbullying and Self-Esteem among a Sample of Deaf and Hard-of-Hearing Adolescent Pupils (Master's thesis, Faculty of Education, Specialisation in Mental Health, Tanta University).
22. Mahmoud Said Ibrahim El-Khouli. (2020). The Effectiveness of Integrated Transitional Guidance in Reducing Cyberbullying Behavior among Students with Special Needs. The Arab Journal of Disability and Gifted Sciences, 14.
23. Mohamed Essam El-Din Ismail. (2010). Child: From Childhood to Adulthood (1st ed.). Dar Al-Fikr, Amman.
24. Mohamed Faisal Khair Al-Zarrad. (1997). Problems of Adolescence and Youth. Dar Al-Nafaes, Lebanon.
25. Mohamed Sanaa Hashem. (2019). The Reality of the Phenomenon of Cyberbullying among Secondary School Students in Fayoum Governorate and Ways to Confront it. Fayoum University Journal of Educational and Psychological Sciences, 12(2).

26. Mostafa Fahmy. (1998). The Psychology of Childhood and Adolescence. Misr Library.
27. Shady Mahmoud Abu Abbas & Elham Khaled Fadel Al-Zayoud. (2020). Cyberbullying and Its Relationship with the Dimensions of Psychological Hardiness among a Sample of Secondary School Students in Zarqa Governorate. Palestine University Journal for Research and Studies, 10(3, Part 1).
28. Zararka, F. (2004). The Family and Its Relationship with Juvenile Delinquency: A Theoretical and Field Study on a Sample of Juveniles and Secondary School Pupils. Faculty of Humanities and Social Sciences, University of Metoui, Constantine.