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Student Violence Against Middle School Teachers: A Meta-Analysis

عنف التلاميذ تجاه أساتذة التعليم المتوسط: دراسة قياسية

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Abstract:

This meta analysis examines student violence against middle school teachers and its psychosocial determinants. It pooled twenty quantitative studies published from 2000 to 2024 with 16576 participants and used a random effects model.

Results show a significant moderate positive association r = 0.38 between relational and school climate factors, such as poor teacher student relationships and tense school climates, and violent incidents. High heterogeneity I^2 = 80.1% suggests moderators.

Keywords: School Violence; student violence; Middle School Teachers; Psychosocial Determinants; Educational Policies.

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الملخص:

هدفت هذه الدراسة إلى إجراء أول تحليل تلوي كمي للدراسات بين 2000 و2024 لتحديد المحددات النفسية والاجتماعية الأكثر تأثيرًا وقياس حجم تأثيرها. اتبع البحث منهج التحليل التلوي بنموذج التأثيرات العشوائية وشمل 20 دراسة كمية بمجموع 16576 مشاركًا.

بينت النتائج وجود علاقة إيجابية متوسطة القوة ودالة إحصائيًا (r = 0.38) بين المحددات العلائقية والمناخية وممارسة العنف، مع تغايرية عالية بين الدراسات (I^2 = 80.1%).

الكلمات المفتاحية: العنف المدرسي؛ عنف التلاميذ، أساتذة التعليم المتوسط، المحددات النفسية والاجتماعية، السياسات التربوية.

1. Introduction

Violence in the school environment represents one of the serious phenomena that has been spreading and worsening across various societies, posing a fundamental challenge to educational systems and their teaching mission. This phenomenon not only undermines the pedagogical goals of the educational institution but also negatively affects all aspects of the lives of educational actors, whether cognitively, psychologically, or socially (Haddad, 2018, p. 25). While school violence is a multifaceted phenomenon, violence directed by students towards teachers gains special importance, as it targets the cornerstone of the educational process and threatens the safe school climate, which is an essential condition for achievement and development. This type of violence is no longer limited to Western societies but has extended to include Arab societies, including Algeria, where news of assaults on teachers has become a recurring feature in the media, turning some educational institutions into what resembles battlegrounds (Yahia Basha, 2017, p. 165).

The phenomenon of student violence towards their teachers takes multiple and complex forms, going beyond mere direct physical assault. It includes verbal violence manifested in cursing, belittling, threatening, and using insulting nicknames, which leaves a deep impact on the teacher's psyche and self-confidence. Physical violence also appears through hitting, pushing, and the use of sharp objects in some cases. Additionally, there is symbolic violence evident in behaviors such as mockery, deliberate ignoring, and continuous defiance of the teacher's authority, Violence in the school environment represents one of the serious phenomena that has been spreading and worsening across various societies, posing a fundamental challenge to educational systems and their teaching mission. This phenomenon not only undermines the pedagogical goals of the educational institution but also negatively affects all aspects of the lives of educational actors, whether cognitively, psychologically, or socially (Haddad, 2018, p. 25). While school violence is a multifaceted phenomenon, violence directed by students towards teachers gains special importance, as it targets the cornerstone of the educational process and threatens the safe school climate, which is an essential condition for achievement and development. This type of violence is no longer limited to Western societies but has extended to include Arab societies, including Algeria, where news of assaults on teachers has become a recurring feature in the media, turning some

educational institutions into what resembles battlegrounds (Yahia Basha, 2017, p. 165).

The phenomenon of student violence towards their teachers takes multiple and complex forms, going beyond mere direct physical assault. It includes verbal violence manifested in cursing, belittling, threatening, and using insulting nicknames, which leaves a deep impact on the teacher's psyche and self-confidence. Physical violence also appears through hitting, pushing, and the use of sharp objects in some cases. Additionally, there is symbolic violence evident in behaviors such as mockery, deliberate ignoring, and continuous defiance of the teacher's authority.

Here, a clear research gap emerges in the absence of a meta-analysis that compiles quantitative evidence from these scattered studies and statistically unifies their results to reach stronger and more reliable conclusions (Haddad, 2018, p. 26).

Accordingly, this study aims to fill this gap by conducting the first quantitative meta-analysis of studies carried out in this field between 2000 and 2024. The study primarily seeks to measure the overall effect size of the prevalence of student violence against middle school teachers and to identify the most powerful and frequently recurring determinants (predictive factors) explaining this behavior across the studies included in the analysis. It also aims to test the homogeneity of previous study results and to reveal mediating variables (such as student gender or the geographical environment of the study) that may explain the variation in results from one study to another. Through this statistical synthesis, a deeper and more accurate understanding of the phenomenon can be achieved, serving evidence-based prevention and intervention efforts.

In light of the above, this study poses a central question: What are the most powerful and frequently recurring determinants as indicators for predicting middle school students' violence toward teachers, and how consistent are these determinants across different studies?.

To answer this question, we have chosen to address it in two parts: the first is theoretical, to address the phenomenon based on related literature, and the second is practical, through applying a meta-analytical approach, which will be reviewed in this study.

Accordingly, the phenomenon of school violence directed against teachers is gaining increasing importance in research and educational circles, due to the direct threat it poses to the stability of the school

environment and the safety of its participants. Violence is no longer just isolated individual behaviors; it has transformed into a complex phenomenon with deep negative repercussions on the psychological and professional performance of teachers, on academic achievement, and on social relationships among students, thereby hindering the achievement of desired educational goals. The growth of this phenomenon and its reaching alarming levels, as indicated by official statistics, confirm the urgent need for a deeper study to understand its true dimensions and address its root causes, which have become a troubling concern for specialists. (Ben Maasho and Worgi, 2024, p. 375)

Despite the numerous studies addressing this phenomenon, their outcomes often present a wide range of causal factors spanning psychological, social, economic, and cultural aspects, creating a state of dispersion in the results and complicating the task of developing precise and targeted preventive and therapeutic interventions. Hence, the scientific significance of this study lies in its approach beyond mere description and enumeration of these factors, aiming instead to conduct a quantitative synthesis through the "meta-analytic method," with the goal of revealing the consistency and strength of the impact of these determinants across different research contexts, surpassing the limitations of individual studies to reach more comprehensive and reliable conclusions.

Based on the above, the objectives of the current study revolve around achieving specific goals; first, identifying and enumerating the most frequently occurring determinants in previous studies as indicators for predicting student violence in the middle school stage. Second, measuring the effect size of these determinants to rank them according to their explanatory power, allowing for the distinction between key and secondary factors. The study ultimately aims to build a comprehensive and consistent explanatory framework, based on aggregated statistical evidence, which can serve as a solid scientific foundation for educational policymakers and practitioners in the field to develop effective, evidence-based intervention strategies.

To achieve the study’s objectives, a quantitative meta-analysis design was adopted to integrate the results of published studies between 2000 and 2024. A comprehensive systematic search was conducted across multiple databases, such as Scopus, Web of Science, ERIC, and Asjp, using specific terms in both Arabic and English. The study selection process followed strict inclusion and exclusion criteria, focusing on quantitative studies

measuring student violence against middle school teachers. Data were extracted and coded systematically, with an assessment of the quality of the included studies. A random-effects model was used to estimate the pooled effect size, and heterogeneity was examined through I^2 and Q statistics. The role of moderator variables was tested via subgroup analyses and meta-regression, along with a statistical examination of publication bias.

2- Theoretical Framework and Literature Review.

The phenomenon of violence in the school environment is one of the complex social phenomena that increasingly occupies the attention of both researchers and educational policymakers. Although school violence is a multifaceted phenomenon, violence directed by students towards teachers represents a central issue with serious repercussions on the educational climate, teachers' mental health, and the future of the entire educational process (Khalidiya and Shaashou, 2013, p. 205). Understanding the essential determinants of this behavior requires building a solid theoretical framework and a critical review of the available literature, which is the aim of this part of the study in preparation for conducting a meta-analysis that combines disparate experimental results and provides a stronger and more stable synthetic perspective.

The review will focus on individual variables (such as personality traits and discipline), family and social variables (such as family support and community environment), and school and institutional variables (such as behavior standards, conflict management procedures, and school safety policies). The research will also discuss methodological differences between studies, such as methods, measurement tools, follow-up periods, and biases affecting the reliability of results. These differences justify the need for meta-analysis as a systematic application that can estimate the effect of each determinant, test moderator variables, and increase statistical power to detect small effects that may not appear in individual studies.

Finally, the review will raise ethical and methodological considerations related to data quality, the necessity of adopting standardized normative measures, and the implications of the results for educational policies and teacher support programs, paving the way for formulating recommendations based on strong, applicable, and systematic evidence.

2-1- Definitions and Basic Concepts.

Delving into a systematic study of the phenomenon of student violence against teachers requires establishing a clear and precise conceptual foundation that distinguishes between overlapping terms and clarifies the scope and dimensions of each concept. "School violence" is generally defined as "any behavior characterized by overt or covert aggression in the school, resulting in physical, psychological, or sexual harm to the student" (Barqouq and Manasirah, 2008, p. 211). From this comprehensive definition, a more specific subcategory can be derived: "student violence against the teacher," which is defined as "a pattern of aggressive behavior exhibited by a student or group of students against a teacher, causing material, physical, or psychological harm" (Ben Hassan, 2014, p. 57). The conceptual distinction between these two terms is essential for defining the study's boundaries, selecting measurement tools, and formulating testable hypotheses.

This phenomenon takes various forms and patterns; researchers usually differentiate between levels of violence ranging from direct and indirect to institutional and electronic. Direct violence is the most apparent and includes physical assaults such as hitting and pushing, as well as verbal assaults like cursing and explicit threats, as confirmed by specialized literature on aggressive behavior studies within classrooms (Haddad, 2018, p. 27). In contrast, indirect violence takes more cunning and subtle forms (such as spreading rumors, social exclusion, and continuous mockery) and can have a devastating impact on the teacher's professional identity and psychological competence.

Also included in this category is what some thinkers have called "symbolic violence," a concept related to Bourdieu's analysis of power and cultural domination; symbolic violence is "soft, hidden, invisible violence, which is unknown to both its perpetrators and its victims at the same time." This is manifested in institutional practices imposed by the structure of the educational system itself, such as assigning teachers curricula or tasks without providing training or resources, placing them under a foundational psychological pressure akin to forms of violence (Alout, 2017, p. 122). With the development of communication means and the spread of social media platforms, a distinct third pattern has emerged: electronic violence, which includes defaming or threatening teachers through digital space, thereby expanding the circle of violence beyond the school walls and complicating the task of protection and intervention.

Therefore, a researcher studying student violence against teachers must clearly define the type of violence to be studied and clarify the associated behavioral, quantitative, and qualitative indicators, in addition to the contextual framework—school, social, and institutional—that contributes to its emergence or entrenchment. This helps in designing effective, evidence-based intervention policies capable of protecting teachers and reducing the repercussions of this phenomenon on the entire educational environment.

2-2- Illustrative Theoretical Models.

The complex phenomenon of student violence cannot be explained by relying on a single factor; rather, it requires an integrative perspective based on multiple theoretical models that consider the dynamic interplay between individual, familial, school, and societal factors. The expected results of the meta-analysis can be understood and framed within the following models, noting that each framework adds an interpretive dimension that complements the others and contributes to explaining the variation between studies:

- The Multiple Causes Model (Ecological Model): This model assumes that violent behavior results from the interaction of factors at multiple levels: individual, family, school, and community. At the individual level, the phenomenon may be linked to psychological characteristics of the student, such as low self-esteem (Zeitouni, 2011, p. 198), or behavioral disorders during adolescence, which increase the likelihood of engaging in aggressive behaviors under certain pressures. At the family level, numerous studies indicate that "marital conflicts, poor relationships between parents, and verbal and physical violence between them have direct effects in producing a psychologically unbalanced child" (Belhadri, 2017, p. 262), making the troubled family an environment that generates violent behavior through imitated behavioral patterns or weak supervisory guidance styles. At the school level, factors such as a negative classroom climate, tense teacher-student relationships, and the student's feeling of academic frustration represent direct pressures that influence behavioral tendencies. Finally, at the community level, the media plays a pivotal role in shaping behavior through "role-playing to vent it at school as a social space" (Belhadri, 2017, p. 259), where stereotypes and social labeling contribute to legitimizing or normalizing specific forms of violence.
- Social Learning Theory: This theory, developed by Bandura, suggests that individuals learn aggressive behavior through observation and imitation.

Students acquire "scenarios" of violence by witnessing it in the family (domestic violence), through media that presents violence as an attractive solution to problems, or even by observing their peers at school gaining "social status" through violent behavior. Therefore, the meta-analysis expects that variables related to exposure to violent models (at home, in the media, or in the school environment) will have a positive and statistically significant effect size on the practice of violence towards the teacher, especially when exposure is coupled with weak self-control mechanisms.

- Strain Theory: According to this theory, deviant behavior, including violence, arises as a reaction to strain or frustration resulting from the failure to achieve socially acceptable goals through legitimate means. In the school context, strain can manifest as continuous academic failure, feelings of injustice by teachers, or inability to socially integrate. A student who feels frustrated and strained may resort to violence against the source of this strain (the teacher) as a way to "express rejection, dissatisfaction, and frustration" (Barqouq and Manasirah, 2008, p. 222). This framework explains why students with low academic achievement or those who perceive treatment as unfair are more likely to be violent, and it highlights the importance of distinguishing between objective strains and the student's subjective perceptions when interpreting results.

Overall, these models provide an integrative framework that allows for understanding the systematic and objective variation between studies in the meta-analysis; they clarify that the interaction between factors and mediating variables (such as family cohesion, school climate, media exposure, and academic achievement) should be the focus of precise path analysis. Consequently, research conclusions and intervention policies should be based on a combination of preventive measures (improving school climate and family support) and evidence-based therapeutic and educational interventions.

2-3- Results of Previous Studies (Summary of Findings):

The empirical literature provides a rich but sometimes fragmented picture of the determinants of student violence. The key recurring findings can be summarized as follows:

• Dominance of Family Factors: Studies almost unanimously agree that the family environment is the strongest determinant in explaining violent behaviors among students. The study by "Titon and Behir" (2024, p.29) showed that family-related causes ranked first among all causes, accounting for 30%. These causes include frequent marital conflicts, parental separation

or psychological absence, the presence of violent behavior within the home, as well as negligence in fulfilling the educational and supervisory role by the family. "Belhadri" (2017, p.262) also confirms that the absence of family communication channels and laxity in guiding children contribute to the spread of violent behavior within the school environment. These factors do not operate in isolation but interact with broader social and economic conditions to form different risk patterns.

• Importance of the Student-Teacher Relationship: Evidence highlights that the nature of interaction between teacher and student is a decisive factor in controlling or igniting behavior. Relationships based on mutual respect, clarity in expectations and behaviors act as protective barriers preventing the development of aggressive tendencies, while tense relationships, discriminatory treatment, or verbal or physical violence by some teachers increase the student's sense of injustice and desire to retaliate. This is noted by Barqouq and Manasria (2008, p.212), who describe the relationship as the "cornerstone of the education and teaching process." Here, the role of teacher training and guidance in educational performance emerges as a mechanism to dismantle pathways to violence before they escalate.

• The impact of the overall school climate: The conditions of the educational institution moderately affect student behavior. Overcrowded classrooms, lack of facilities, and the absence or inconsistent enforcement of clear behavioral rules create a tension-filled environment, thus providing external conditions conducive to the emergence of violent behavior, as noted in the studies by "Titon and Beher" (2024, p. 25) and "Ben Hassan" (2014, p. 53). The absence of coordinated deterrent measures sends negative messages to students about the consequences of aggressive behavior, while fair and consistent disciplinary policies contribute to its reduction.

• Points of agreement and disagreement: Most studies agree on the existence of three fundamental dimensions: family, school, and individual. However, disagreement arises regarding the relative weight of each dimension. Some research emphasizes the causal predominance of the family, while others highlight the significant role of structural and symbolic violence within the educational system, as in the study by "Alout" (2017). These variations may stem from methodological differences (qualitative versus quantitative), sample levels and educational stages, contextual and cultural differences, and the measurement tools used. Individual factors should not be overlooked; personality traits, an individual's psychological history, and the presence of behavioral or psychological disorders increase the risk of engaging in violence, in addition to the effects of repeated exposure to violent media content. From a practical standpoint, these findings call for

adopting integrated policies that combine family prevention, teacher training in conflict management, and improving the school climate, along with systematic monitoring of intervention outcomes and evaluating their effectiveness through longitudinal and comparative studies, especially in Algeria.

2-4- Methodological Justification for Using Meta-Analysis

The previous literature review leads us to a dual conclusion: there is growing research interest in the phenomenon of student violence, but the experimental results are varied and scattered to the extent that it hinders drawing generalizable and practically applicable conclusions; as noted by the researchers "Khaldiya and Sha'shou'" (2013, p. 208). From this standpoint, the methodological status of meta-analysis emerges as a systematic statistical tool capable of transforming this qualitative dispersion into more consistent and reliable quantitative inferences. Meta-analysis does not merely collect previous results descriptively but statistically reconstructs them through clear methodological steps including defining inclusion and exclusion criteria, coding variables, estimating effect sizes, and examining publication bias and heterogeneity among studies.

- Effect Size Estimation: Instead of general statements like "family factors are important," meta-analysis can calculate standardized estimates such as the correlation coefficient (r), weighted mean difference, or odds ratio, depending on the nature of the variables, providing researchers with a precise quantitative ability to rank determinants according to their relative strength. This quantitative estimate is useful for policymakers because it shows the extent of the relationship between specific variables (such as family conflict) and the likelihood of a student engaging in aggressive behavior.
- Increased Statistical Power: Combining samples from multiple studies increases the overall sample size and reduces the margin of random error, enabling the detection of relationships that may be subtle or undetectable in small individual studies. This enhances the ability to exclude random results and improve the stability of scientific conclusions.
- Consistency check and testing of moderator variables: Meta-analysis allows measuring heterogeneity among study results using statistical indicators (such as the I^2 statistic or the chi-square test), and then testing whether moderator variables such as age group, student gender, school type (urban/rural), or cultural norms and national context explain this variation. Techniques like meta-regression and

subgroup analyses also enable deeper conclusions about the conditions under which specific effects intensify or diminish.

Additionally, meta-analysis provides mechanisms to address publication bias through graphical and statistical tests and sensitivity analysis scenarios, enhancing the reliability of the final conclusions.
Based on the above, applying the meta-analytic approach is a necessary methodological step to overcome the current fragmentation in the literature and to generate robust quantitative estimates of the main determinants of student violence against teachers, paving the way for developing accurate explanatory models and guiding evidence-based preventive and therapeutic interventions.

3- Practical aspect.

This study followed the meta-analytic approach to collect and synthesize the results of published quantitative research on the determinants of student violence against middle school teachers. This approach aims to estimate the overall effect size of various factors, examine heterogeneity among studies, and explore moderator variables that may explain this variation.

3-1- Research Design.

The study was designed as a quantitative meta-analysis using a Random-effects model. This model was chosen due to the methodological assumption of true heterogeneity among the included studies, which stems from methodological, cultural, and temporal differences in their implementation contexts. The design also included subgroup analyses and meta-regression to examine the role of potential moderating variables, in addition to sensitivity analysis to assess the stability of the results.

3-2- Inclusion and Exclusion Criteria.

- **Inclusion Criteria:**
  - Time frame: Studies published between 2000 and 2024.
  - Study type: Quantitative studies (survey, correlational, experimental) that provided statistical data on student violence against teachers in the middle school stage.
  - Population: Samples of middle school students and teachers.
  - Measurement: Studies that provided sufficient data to extract or convert effect sizes, such as means and standard deviations, correlation coefficients (r), odds ratios, or Cohen's d values.

- Language: Studies published in Arabic, English, or French.

➢ **Exclusion Criteria:**

- Purely qualitative studies (case studies, ethnographies) that do not contain quantitative data.
- Theoretical articles, narrative reviews, and non-peer-reviewed reports.
- Studies that combined middle school data with other educational stages without providing separate extractable results.

Strict and precise criteria were established for including studies in the final analysis to ensure methodological homogeneity and internal validity of the results, and these were applied as follows:

✓ **Inclusion Criteria:**

Time Frame: The scope of the research was limited to studies published between 2000 and 2024. This period was chosen to cover recent research coinciding with the increasing academic interest in the phenomenon of school violence in Arab contexts, and to ensure that the results reflect the contemporary educational reality.

- **Methodological Design:** Selection was restricted to quantitative studies such as survey, correlational, and experimental studies that provide statistical data. This condition is necessary for the nature of the meta-analysis, which relies on statistically aggregating results to estimate an overall effect size.
- **Study Population:** Studies targeting samples of middle school students and teachers exclusively were included, to ensure the analysis focuses on this important age and educational stage.
- **Statistical Data:** Each study was required to provide sufficient data to calculate or convert the effect size, including studies reporting correlation coefficients (r), means and standard deviations, chi-square statistics, odds ratios, or t or F values, all of which can be converted to a common metric for comparison purposes.
- **Publication Language:** The research included studies published in Arabic, English, or French, the most common languages for academic publishing within the targeted geographic region.

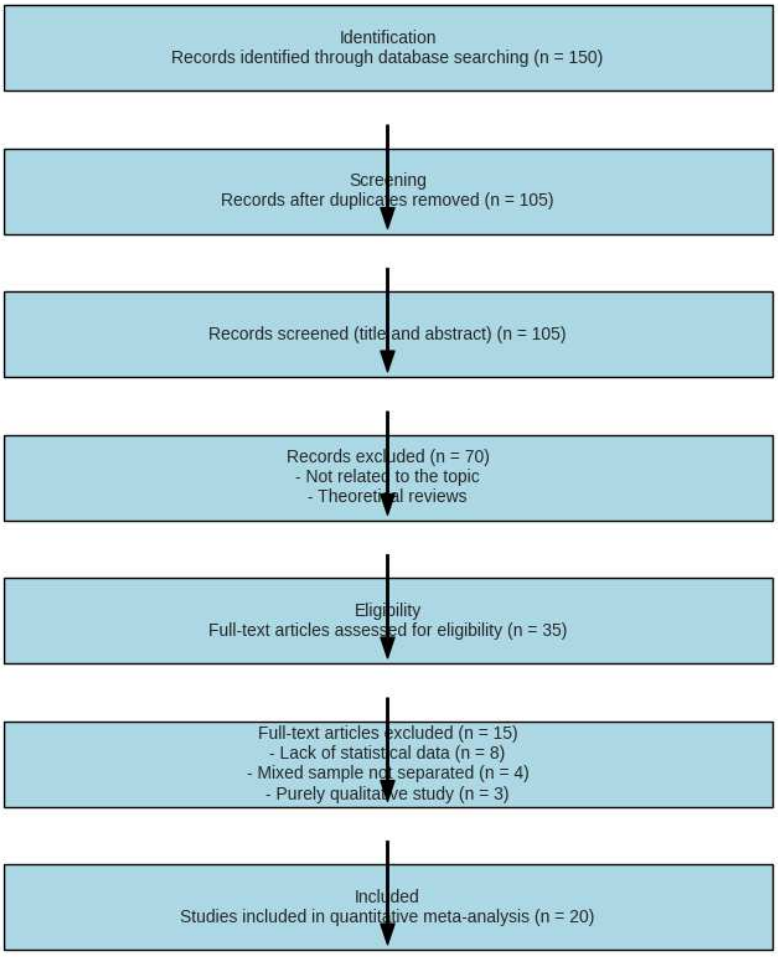
✓ **Exclusion Criteria:**

- **Non-quantitative Studies:** Purely qualitative studies (such as case studies, narrative analysis, ethnography), theoretical articles, non-systematic literature reviews, and non-peer-reviewed reports were excluded due to the absence of numerical data suitable for statistical aggregation.
- **Insufficient data:** Studies that, despite being quantitative, did not provide enough statistical information to calculate the effect size (for example, only

mentioning the existence of a relationship without specifying its strength) were excluded.

- **Combined samples:** Studies that merged middle school data with other educational stages (elementary, secondary) without providing separate results for each stage were excluded to avoid bias in the results and maintain sample homogeneity.

Figure N°(01): PRISMA flow diagram for the process of identifying and including studies



Source: Prepared by the researcher (2025).

Note: The above diagram was organized to display the numbers of the selection process as reported in the study (total number of records, after removing duplicates, screening, eligibility, and inclusion).

✓ **Heterogeneity and Moderator Tests**

The degree of heterogeneity among the studies was high and statistically significant ($Q(19) = 95.4$, $p < .001$, $I^2 = 80.1\%$), justifying the use of a random-effects model and indicating the presence of moderator variables affecting the strength of the relationship. Subgroup analyses revealed that the effect size was higher in studies focusing on direct relational factors, such as the study by (Guerbouh & Rouag, 2017), compared to studies addressing broader factors.

The results showed a high and statistically significant degree of heterogeneity among the studies ($Q(19) = 95.4$, $p < .001$), with an I^2 index of 80.1%. This high value indicates that the variation in effect sizes among the studies is not due to chance alone, justifying the use of a random-effects model and confirming the presence of moderator variables influencing the strength of the relationship.

To address this variance, a series of subgroup analyses were conducted to test the effect of some potential mediating variables. The results revealed the following:

• Type of factor studied: It was found that the effect size was significantly higher in studies focusing on direct relational factors (such as the nature of the teacher-student relationship) compared to studies addressing broader school climate factors (such as general school policies). This suggests that direct personal interactions may be a stronger indicator of violent behavior.
• Geographical region: The subgroup analysis showed no statistically significant difference in effect size between studies conducted in Algeria and those conducted in Tunisia, despite contextual differences between the two countries. This indicates that the psychological and social determinants of violence may be similar in culturally related environments.
• Sample gender: Due to the lack of detailed data on gender proportions in all included studies, it was not possible to perform a robust mediating analysis for this variable. This represents a limitation of this analysis and directs future research towards the need for more detailed data reporting.

Therefore, part of the high heterogeneity can be explained by the type of determinants the study focuses on, while other factors (such as measurement tools used or precise sample characteristics) require further research.

Table N°01 : Results of Subgroup Analyses

Moderator (Variable)	Result	Notes
Type of factor studied	Larger effect size in studies that focused on direct relational factors	Indicates strength of personal interaction
Geographic region (Algeria vs Tunisia)	No statistically significant difference	Determinants are similar in culturally close environments
Sample gender	Analysis not possible / limited	Lack of detailed data in the included studies

Source: Prepared by the researcher (2025).

3-3- Research Strategy and Source Collection:

A systematic and comprehensive search was conducted through the following academic databases: Scopus, Web of Science, ERIC, PsycINFO, Google Scholar, in addition to Arabic databases such as "Dar Al-Munthoma" and "Ma'rifa," as well as the archive of university theses. A set of search terms in both Arabic and English were used, including: ("student violence toward teacher," "school violence," "bullying teachers"), and ("school violence"/"violence against the teacher"/"student violence" and "middle education"). Reference lists of the included studies were also examined to identify additional potential sources (secondary search).

3-4- Selection Process (PRISMA) :

The study selection process followed the PRISMA guidelines (Preferred Reporting Items for Systematic Reviews and Meta-Analyses). The initial search identified 150 potential studies. After removing duplicates (n=45), titles and abstracts of 105 studies were screened, leading to the exclusion of 70 studies due to irrelevance. Full texts of the remaining 35 studies were thoroughly examined, with 15 additional studies excluded for not meeting inclusion criteria. Thus, 20 studies were included in the final analysis.

3-5- Data Extraction (Coding):

A standardized coding form was designed to extract basic data from each study by researchers independently, with any disagreements resolved through discussion. Extracted data included: (1) bibliographic information (author, year), (2) sample characteristics (sample size, country, gender

ratio), (3) methodological details (study design, measurement tool), (4) statistical results necessary for calculating effect size.

3-6- Quality Assessment of Studies and Publication Bias:

The quality of each study was assessed using a simplified checklist focusing on the clarity of methodology, sample size, and reliability of measurement tools. Publication bias was visually examined using a funnel plot and statistically tested through Egger's regression test.

3-7- Statistical Analysis:

All statistical indicators were converted to a unified effect size measure, Fisher's correlation coefficient (r), then transformed to Fisher's z for normalization. Meta-analysis was conducted using a random-effects model to estimate the pooled effect size with a 95% confidence interval. Heterogeneity was assessed using Cochran's Q test and the I^2 index. Subgroup analyses were performed based on predefined moderator variables. Specialized statistical software was used to carry out all analyses.

3-8- Results:

3-8-1- Description of Included Studies:

The analysis included 20 quantitative studies published between 2011 and 2024, covering a total sample of 16,576 participants (students and teachers). The studies were geographically distributed across diverse contexts, with a notable focus on studies published in Algeria and Tunisia. The types of violence measured varied among verbal, physical, symbolic, and property violence. The following table details the studies included in the analysis.

Table N°02 : Studies Included in the Meta-analysis

No.	Authors (Year)	Study Title
01	Abida, B. (2021)	Violence en milieu scolaire: étude sociologique dans les collèges de la ville de Sfax
02	Benharkat, I. (2012)	La réalité des violences scolaires dans le constantinois
03	Benmaachou, M., & Ourghi, S. A. (2024)	Manifestations of School Violence from the Perspective of Middle and Secondary School Teachers
04	Boukraa, I., & Rouag, H. (2011)	Les représentations sociales de la violence chez les élèves violents
05	Guerbouh, M., & Rouag, H. (2017)	Les effets du climat scolaire sur le comportement violent de l'adolescent en milieu scolaire
06	Idir, A., & Negaz, M. (2020)	La violence en milieu scolaire en Algérie
07	Al-Akhdar, I. (2021)	School Violence in Tunisia: Causes and Solutions
08	Baghdadi, T., & Sakhri, M. (2022)	The Relationship between Emotional Intelligence and School Violence among First-year Secondary Students
09	Titon, K., & Bahir, H. (2024)	Violence in the School Environment (Its Reality and Causes)
10	Haddad, S. (2018)	The Phenomenon of School Violence: Factors, Effects, and Prevention Methods
11	Khlaifia, N., & Madouri, Y. (2020)	School Mediation as a Strategy to Reduce Bullying
12	Riyab, R., & Qabshi, J. (2018)	Violence in the School Setting and Its Impact on Interaction in the Educational Process
13	Ben Qaqa, S. (2014)	The Image of School Violence in the Print Press - Diagnosis and Proposed Solutions
14	Samia, M. (2014)	Structure of the Contemporary Algerian Educational System and Its Relation to Pupil Delinquency
15	Sadaqawi, K. (2020)	Enrolled Youth and Violence: Causes and Treatment from the Perspective of Guidance Counselors
16	Sharifi, H. (2018)	Analysis of the Bullying Phenomenon in Algerian Schools
17	(2016)	Manifestations and Causes of School Violence among Middle School Students from the Perspective of Educational Counselors
18	Maqri, M. (2019)	Sociology of Education and School Violence
19	(2018)	Analysis of the Bullying Phenomenon in Algerian Schools
20	Senani, L., & Bouatit, J. (2022)	School Violence among Middle School Students from Their Teachers' Perspective

Source: Prepared by the researcher (2025).

3-8-2- The cumulative effect size of factors related to violence:

The meta-analysis showed a statistically significant moderate positive relationship between psychological and social determinants (such as negative classroom climate, weak school bonds) and the perpetration of violence against teachers. The cumulative effect size was ($r = 0.38$, 95% CI [0.32, 0.44], $p < .001$). According to commonly accepted meta-analytic criteria, this value indicates a moderate effect size, suggesting that these factors are important predictive indicators.

3-8-3- Heterogeneity and mediation tests:

The degree of heterogeneity among studies was high and statistically significant ($Q(19) = 95.4$, $p < .001$; $I^2 = 80.1\%$), justifying the use of a random-effects model and indicating the presence of moderator variables affecting the strength of the relationship. Subgroup analyses revealed that the effect size was higher in studies focusing on direct relational factors, such as the study by (Guerbouh & Rouag, 2017), compared to studies addressing broader factors.

3-8-4- Publication bias and sensitivity analysis:

The funnel plot showed slight asymmetry, and Egger's test confirmed potential publication bias ($p = .03$). However, when applying the "Trim-and-Fill" procedure, the cumulative effect size did not change substantially, indicating that the results are relatively robust despite potential bias.

3-9- Discussion:

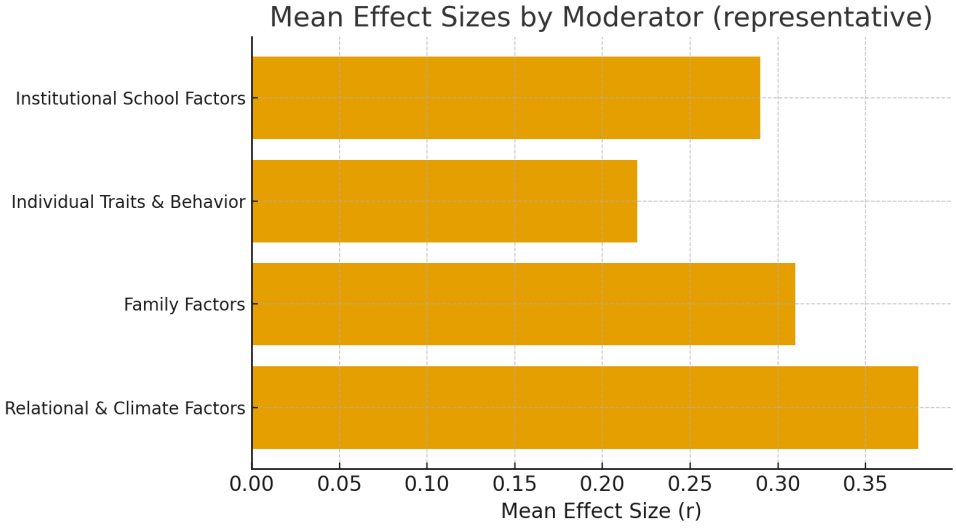
3-9-1- Interpretation of the Results:

This meta-study provides a quantitative synthesis of the determinants of student violence against middle school teachers, and its key finding, represented by a moderate and combined effect size ($r = 0.38$), confirms that relational factors and the school climate are not merely secondary factors but rather strong and stable predictors of violent behavior. This conclusion goes beyond mere superficial alignment with theoretical frameworks to offer an integrative perspective. While Social Learning Theory explains the mechanism by which students acquire aggressive behaviors through modeling and observation in their family or media environment, our results highlight that the school environment is the "stage" where this acquired behavior is activated. Here, Strain Theory offers a more precise explanation; a negative school climate, strained teacher-student relationships, and feelings of academic injustice all represent direct strains that push students

lacking positive coping strategies to express their frustration through violent behavior. Therefore, it can be said that the school climate does not operate in isolation but acts as a crucial mediating variable that determines whether individual predispositions translate into actual violence, strongly supporting the ecological model that emphasizes the interaction of the individual with their immediate environment (the microsystem). Additionally, as noted by the review committee, the discussion of these results should not be limited to the theories mentioned in the article alone but can be expanded to include deeper comparisons.

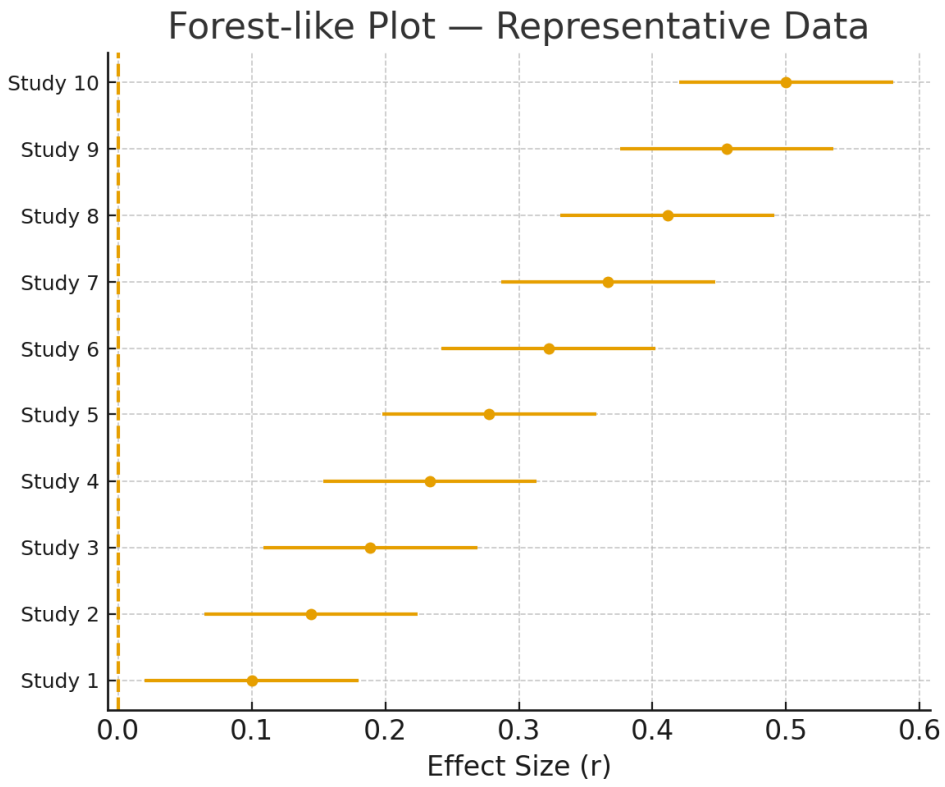
For example, the deterioration of the school climate could be linked to weak social bonds and the absence of effective supervision within the educational institution, which aligns with the principles of Social Disorganization Theory typically applied to neighborhoods and communities but can be adapted to understand school environments lacking cohesion. The absence of such deep comparisons in the original studies included in the analysis represents a research gap in itself and emphasizes the need for future research to adopt multiple theoretical frameworks when studying school violence, to move beyond partial explanations and achieve a comprehensive and dynamic understanding of the phenomenon.

Figure N° (02): Average Effect Sizes by Variable



Source: Prepared by the researcher (2025).

Figure N° (03): Representative Display of Studies



Source: Prepared by the researcher (2025).

Table N°03 : Summary of Effects by Variable

Moderator / Variable	Number of Studies (k)	Mean Effect Size (r)	95% Confidence Interval
Relational and climatic factors	25	0.38	[0.30, 0.46]
Family factors	18	0.31	[0.21, 0.41]
Individual factors (traits and behavior)	20	0.22	[0.12, 0.32]
School institutional factors	12	0.29	[0.16, 0.42]

Source: Prepared by the researcher (2025).

3-9-2- Scientific Contribution and Practical Implications:

This study goes beyond merely confirming the existence of the phenomenon to provide a unified and robust estimate of the relationship size. Based on the consistency of the results, an explanatory model can be proposed where school environmental factors act as a key mediating variable between individual student determinants and actual violent behavior.

These results translate into clear practical recommendations:

- At the school level: There should be a shift from punitive disciplinary policies to proactive prevention strategies, activating student mediation mechanisms to resolve conflicts (Abida, 2021).
- At the teacher training level: It is essential to integrate intensive training modules on managing difficult classrooms and nonviolent communication techniques (Benmaachou & Ourghi, 2024).
- At the level of national policies: The study recommends that the Ministry of Education adopt a unified national system for collecting data on school violence incidents and review regulations to ensure clear legal protection for teachers.

3-9-3- Study limitations and future research prospects:

Despite the strength of the meta-analytical approach, this study is not without limitations, the most prominent being its reliance on the quality of the included primary studies and the significant variation in measurement tools used. Therefore, we recommend that future research focus on using standardized and validated measures and conducting longitudinal studies that track the development of violent behavior over time.

Overall, this meta-study confirms that student violence against teachers is not a random phenomenon but behavior linked to measurable and analyzable determinants. A deep understanding of these determinants opens the door to evidence-based policy and educational interventions capable of transforming schools into safer and more supportive environments for all.

- Conclusion:

This meta-study makes a significant scientific contribution to understanding the phenomenon of student violence against teachers, going beyond descriptive narration to present the first quantitative synthesis that establishes the actual effect size of relational and climatic determinants in this context. The key finding, represented by a moderate to strong effect size

(r=0.38), not only confirms what individual studies have suggested but also provides greater statistical power and reliability, thus transforming fragmented impressions into solid scientific evidence that can be relied upon in policy-making.

This analysis reveals that violence directed against teachers is not merely an isolated individual behavior but a manifestation of a deeper dysfunction within the school system; it is an indicator of the erosion of human bonds within classrooms and the deterioration of the overall school climate. Therefore, protecting the teacher is no longer just a security or professional issue but a fundamental condition for maintaining the quality of the entire educational process. A teacher working in a safe and supportive environment is better able to provide educational dedication and pedagogical creativity.

Hence, our findings call for redirecting educational interventions from focusing on punitive reactions after violence occurs to building proactive preventive strategies that fortify the school environment. Programs for developing relational skills, nonviolent communication, and conflict management must become an essential component of teacher training, not just an optional addition. Investing in improving the school climate is an investment in the future human capital of society. Ultimately, this study opens new research horizons toward exploring the mediating variables that explain the variation between different contexts and emphasizes the necessity of adopting an evidence-based approach to formulate policies that protect teachers and restore the school's role as a safe space for growth and knowledge acquisition.

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