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Review article

Prevalence of violent communication within Indian organisations- A systematic review and meta-analysis

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ABSTRACT

Background: Considering the normalisation of moderate aggression within organisations and the concern of violent occurrences being under-reported in India, violence reflected through coercive language appears to be more frequent than explicit acts of organisational violence.

Aim: To bring-forth consolidated evidence on the prevalence of violent communication within Indian organisations.

Method: 1433 articles obtained from four major databases (PubMed, Scopus, Science Direct, Web of Science and Google scholar), complemented by 4 records identified through manual searching, were screened according to the PRISMA guidelines. Thirty-four finalised cross-sectional studies (published since 2000) reporting significant findings on the prevalence of violent communication within Indian organisations, underwent a systematic review (by narrative synthesis) and meta-analysis (using the random-effects model in STATA version 17).

Results: The pooled prevalence of any type of violent communication was 41%. The prevalence of violent communication was higher among males than females (44% vs 28%). Verbal violence was more prevalent than non-verbal violence (36% vs 20%). Subgroup analysis proved prevalence estimate to remain consistent irrespective of the organisational sector, type of organisation, sample size and publication year. However, meta-regression analysis confirmed the sampling method and type of violent communication as potential variables influencing the prevalence rates reported across the studies. All the identified factors influencing the occurrence of violent communication and the corresponding detrimental consequences faced by victims within each organisational sector, endeavour scope for the development of more context-specific prevention strategies.

Conclusion: As evident from the results, the prevalence of any type of violent communication within Indian organisations is quite high. The present review informs Indian entrepreneurs about the necessity for advocating practices to protect their human resources from the experience of violent communication. Practical implications have been presented for healthcare and educational organisations.

1. Introduction

With the advent of time, emotional and cognitive aspects of organisational life have been of more focus when compared to the rational and structural aspects [1, 2]. This shift of organisational processes towards "bounded emotionality" has unfolded queries about communication and emotional displays within the organisation and how these aspects influence interpersonal relationships within the organisation [3, 4]. With advancing globalisation and liberalisation, Indian entrepreneurs have become aware of western workplace values like authenticity, autonomy, openness, collaboration, trust and healthy confrontation of conflicts [5]. But in a country like India, having a collectivistic culture with a high power-distance index score (as per the 2014 reports of the Hofstede Center), the issue of hierarchy and cultural diversity contributes to an increase in the prevalence of conflicts across the different organisational sectors [6, 7, 8]. Existing literature describes violence as a style of communication and conflict resolution [9]. Unlike the common dysfunctional conflicts between very young children at school [10] or between family members at home [11], communicating violently in an organisational setting, giving no regard to the etiquette within the particular context is a matter of concern [12].

Violent communication refers to all forms of aggressive communication (verbal abuse, verbal threats, destructive criticisms, aggressive physical gestures like staring with anger and so on) during which the

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perpetrator of violence gives no heed to the victim's needs, liberty, personal worth and/or denies compassion [13]. Violent communication can be understood as the dominant behavioural manifestation of quarrelsomeness (for example, yelling at others or negative blaming) and majorly overlaps with the milder and more passive forms of aggression [12]. The present review conceptualises violent communication as aggression manifested in communication by one member of the organisation towards another member that did not have a sexual motive (for example, passing sexual comments). This was based on the literature evidence asserting violent communication between romantic relationships and violent communication in other formal relationships to be distinct from each other [12]. Violent communication in the present review context involves the verbal (through words) and non-verbal (in terms of body language) communication of violence [13] between any members of an organisational setting.

Communication in India has a deep-rooted cultural difference from western countries [14] regarding the boundaries and privacy in human interaction, emotional expressivity, preference for the medium of communication [15] context-specific norms, and so on [16]. The multicultural workforce in India is prone to more conflicts in communication and relationships compared to organisational members with a more similar background and language dialect as in western countries [6, 17, 18]. With corroborating evidence claiming emotional aloofness to be an inevitable part of Indian culture [5], there is a need for an in-depth understanding of its manifestation in the context of professional interactions. In addition, it could be understood that due to increasing unemployment rates in a low-middle-income country like India, a considerable workforce acts blind to violation of labour laws, so as to retain their jobs [19]. Though Indian human resource practitioners conduct exit interviews to identify loopholes in the organisation's policies, job dissatisfaction and turnover intentions caused due to experiencing/witnessing violent communication seem less likely to get reported [8, 20]. Keeping in mind the normalisation of violent communication within Indian organisational sectors [8, 20], the incidents of violence reflected through coercive language appear to be more frequent than the explicit acts of organisational violence (for example, sexual abuse) [21, 22, 23, 24]. Thus, considering all the above-stated, there lies a probability for the prevalence of violent communication within Indian organisations to get underestimated.

A plethora of existing empirical evidence points out the impact of violent communication as a severe social stressor in contemporary organisational settings, having negative implications on the victims, organisational climate and society as well [25]; some of which include increased psychological distress, feelings of detachment among co-workers, increased intention to leave the organisation, decreased performance by the victim and reputation of the organisation getting damaged [26, 27]. Based on Andersson and Pearson's (1999) concept of Interpersonal Conflict Spirals, it was understood that an individual's experience of violent communication within an organisation would trigger a similar counter-response in him or her, which in turn would set forth a cycling chain of violent responses among different members of the organisation [28]. Especially in service sectors, individuals engage in hundreds of interpersonal interactions, during which they need to be extremely careful with the usage of words, voice tones and body language, thereby controlling themselves from communicating in a violent manner [13, 29]. Thus, violent communication within organisations is one of the destructive behaviours that can implicitly impair the overall organisational effectiveness and is a much narrower concept that comes as part of the broader terms (i.e., that includes both covert and overt violence) like ‘organisational violence’ or ‘aggression’.

Though numerous primary studies exist on the prevalence of organisational violence in general, it is imperative to understand specifically about violence inflicted through verbal and non-verbal communication within an organisational setting. For example, in the study conducted by Rai & Agarwal (2017) on “Workplace bullying among Indian managers: prevalence, sources and bystanders’ reactions”, the authors separately reported the prevalence rates of different forms of organisational violence, which included the prevalence of non-verbal and verbal violence in communication as well, i.e., percentage of participants who have experienced persistent criticism and percentage of participants who have experienced intimidating behaviour from others such as finger pointing, invasion of personal space, shoving or blocking of their ways, respectively [30]. Similarly, in other studies that focused mainly on the prevalence of organisational violence, prevalence estimates of either verbal violence or non-verbal communication of violence were reported [8, 31, 32, 33]. Thus, there is a lack of studies explicitly focusing on the prevalence of violent communication within Indian organisations. Therefore, the present meta-analytic review makes the first research attempt to synthesise and consolidate the findings on the prevalence of violent communication and its subtypes (verbal/non-verbal).

As there are no primary studies specifically aimed at identifying the factors associated with the prevalence of violent communication or the impact of violent communication on the victims within the organisations, this was considered a secondary objective of the present review and not a primary objective. Thus, a systematic review of the studies that reported the prevalence of violent communication within Indian organisations was conducted in the present review as an attempt to extract information, if any, about the above-mentioned secondary objective.

Previous reviews on the current topic of interest had focused broadly on organisational violence and that too within a particular organisational setting (i.e., within the healthcare setting only) [1, 34, 35]. In addition, some of those reviews included low-quality studies without conducting a sensitivity analysis, which questions the reliability of the pooled prevalence values reported by such studies. It could be seen that the previous meta-analytic reviews on violence had included studies done in the 90s reporting prevalence of violence, using which valid conclusions cannot be made about the severity of the phenomenon of violent communication in the contemporary organisational setting. The methodological rigour of the present review covers all these gaps. The pooled prevalence of violence, based on studies conducted in other organisational sectors, like the educational sector, IT sector etc., remains unexplored. Nonetheless, the present review intended to examine the pooled prevalence of violent communication within each organisational sector of India. This, in turn, helps in identifying the organisational sector that needs utmost attention concerning the problem of violent communication.

Based on the prevalence rates for different types of violent communication reported across the organisation literature, a wide variation in the prevalence of violent communication within Indian organisations, ranging from 2.8 % to 96%, can be seen [31, 36]. However, it could be understood that the sampling method (probability/non-probability), type of reported violent communication (verbal/non-verbal/combined), sample size, year of publication, assessment tool, type of organisation (public/private) etc. vary across the individual studies, which in turn might have attributed to the vast differences in prevalence values of violent communication reported by the studies. Some studies claimed violence to be more prevalent among males (both in terms of perpetration and victimisation) [20, 37, 38, 39], while certain other studies showed the prevalence of violence to be equally prevalent among males and females [40]. Similarly, contradictory findings were reported about the association between the prevalence of violence and the type of organisation (private or public organisation) [20, 41, 42, 43]. Based on the information provided by existing literature, the present meta-analytic review seeks to clarify all such inconsistencies about violent communication prevalence, within the Indian organisational context.

Unlike the twentieth-century Indian workplace norms, contemporary India enforces strict labour laws to preserve the rights of employees to work with dignity and prevent extreme acts of verbal and non-verbal violence within organisations [44]. This can be traced back to the Vishaka guidelines (1997) promulgated by the supreme court of India and various legal consequences which came into effect for the perpetrators henceforth, i.e., approximately from the year 2000 onwards [45]. In light of such solid legal developments, it was surprising to see some of

the recently conducted primary studies state that the presently prevalent form of violence in India is mainly reflected through coercive language that induces punishment, guilt, obligation, fear and/or shame on the victim [30]. Such rising apprehension about the prominence of violent communication within Indian organisational settings points out the need to identify the exact prevalence estimate of violent communication within organisations of contemporary India, which in turn, would help in checking whether the policies and actions taken by the Indian nation to prevent violence were indeed effective or not.

Therefore, it was necessary to conduct a systematic review and meta-analysis that bring-forth comprehensive evidence about the following objectives based on all possibly relevant studies in the twenty-first century time period (2000–2022):

1.1. Primary objectives

1. To analyse the pooled prevalence of violent communication within Indian organisations
2. To analyse variation (if any) in the prevalence of violent communication within Indian organisations with respect to the type of organisation, gender, organisational sector, publication year, sample size, sampling method and type of violence

1.2. Secondary objectives

To systematically review the included studies to identify:

1) Other factors (if any) associated with the occurrence of violent communication (i.e., facilitators and barriers of violent communication) within Indian organisations.
2) the impact (if any) of violent communication on the victims and organisation.

The review was an initial step to facilitate the development of more precise and effective policies, as well as interventions that help with the management of the destructive impacts of violent communication on an organisation. This, in turn, would imply an improvement in the public service provided by Indian organisations.

2. Method

The review protocol underwent registration in the International Prospective Register of Systematic Reviews (PROSPERO) and is available from https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42022311045.

2.1. Eligibility criteria

2.1.1. Population

Studies with samples consisting of individuals above nine years i.e., adolescents and adults, who are part of any Indian organisation were included, irrespective of gender (male/female), type of organisation (public/private) and organisational sector (Educational, Health, IT, Banking etc.). The reason for not including those studies where the victims and/or perpetrators were below the adolescent age (i.e., below 10 according to World Health Organization) was because the present review focused on understanding violent communication between individuals who had reached a certain level of maturity [46]; Unlike the unorganised sector, Indian institutions or workplaces under the organized sector are sanctioned by the government and therefore have an obligation to abide by the policies and laws set forth to prevent any form of violence that may take place within their respective organisation [47]. Since the present review focused on understanding the issue of violent communication taking place in environments with strict anti-violence norms, studies conducted with individuals from the unorganised sectors only as the sample were excluded. The authors kept no restrictions concerning sample size.

2.1.2. Exposure of interest

Any form of direct violent communication, of any severity, that happens between members within an organisation (Excludes-any form of direct violent communication experienced by the individual outside the organisation, for example. Domestic violence; violent communication among organisation members via online platforms, for example. Cyber-bullying; sexual violence; violent communication caused due to substance abuse; violent communication caused by psychiatric issues). Psychological abuse, for example, making a person feel lonely by isolating a person from the group or not helping a co-worker, was not considered part of violent communication.

2.1.3. Comparator

Individuals without exposure to violent communication but otherwise comparable to the individuals exposed to violent communication.

2.1.4. Outcome

Cross-sectional studies conducted on members from any Indian organisational setting, reporting the prevalence of violent communication experienced within the past 12 months, were considered for the present review. Quantitative, mixed-method studies were considered for inclusion if they had reported prevalence rates of at least one form of violent communication or provided sufficient information for calculating the prevalence of at least one form of violent communication. Studies reporting the prevalence of victimisation and/or perpetration were included.

2.1.5. Other eligibility criteria

Only empirical studies published since 2000 had got included. Studies written in languages other than English were excluded. Reviews, essays, conference abstracts, letters and commentaries wereexcluded.

2.2. Information sources

Major electronic databases, comprising of PubMed, Scopus, Science Direct, Web of Science and Google Scholar, were searched using appropriate keywords synonymous with violent communication to get maximum relevant records on the prevalence of violent communication within Indian Organisations. The authors used Boolean operators (AND, OR and NOT) to combine the search terms appropriately.

Reference lists of the selected studies and other relevant websites were also examined manually to retrieve additional empirical evidence (if any). The researchers tried to contact the authors of studies for which full texts were not accessible. Authors of studies meeting inclusion criteria were contacted to clarify ambiguities and/or to get the study's missing information (if any). Before the final analyses, searches were re-run to identify other records that could possibly be retrieved for inclusion. All the research databases were searched for the last time on 1st March 2022.

2.3. Search strategy

The authors prepared an initial working protocol before the commencement of the review. The search strategy was designed by the first author and was validated by the other two authors. Given the non-explicit ways in which the term “violent communication” is employed across the organisation literature and its relationship to the concepts like ‘bullying’, ‘workplace violence’, ‘aggression’ and ‘physical violence’, the initial search terms were kept a bit broad to ensure wide coverage of the topic. The search design in the web page of each database was different, according to which the authors had to modify the keywords to ensure maximum relevant results. Conscious efforts to exclude studies published before 2000 and non-English records were made wherever possible.

Table 1 shows the search strategies used to get records from the major databases.

2.4. Study selection and data extraction

The review was conducted following the guidelines of Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) [48]. Zotero software was used in the beginning to aid the screening process. After removing duplicates, the remaining studies underwent title and abstract screening based on the inclusion and exclusion criteria. Consequently, full texts of the selected records were examined and assessed for inclusion by the first and second authors independently, based on the eligibility criteria. The number of excluded records with reasons was noted down at every stage and validated by the third author. The disagreements and doubts about studies in each review phase (screening, eligibility and inclusion in meta-analysis) were cleared through group discussion of the authors.

Relevant data from the finalised records like study characteristics (first author's name, study design, year of publication, location and time of the study, response rate, sampling method, sample size, instruments or tools used), participant characteristics (gender, mean age/age range, organisational sector, type of organisation-private/public, perpetrators and victims in each organisational context) and outcomes (prevalence rates of different type of violent communication, factors associated with prevalence of violent communication, impact of violent communication on the individuals and organisation) were noted down by the first author in an Excel sheet. The other two authors later re-evaluated the content of the Excel sheet to check for discrepancies (if any). The prevalence rate of violent communication was the primary outcome that was prioritised during data extraction, i.e. if a particular study did not provide information regarding the associated factors or impact of violent communication, the study was still included if it had reported a reliable prevalence estimate of violent communication. Wherever possible, information regarding verbal violence and non-verbal violence was extracted exclusively.

Table 1. Search strategy.

Databases	Search strategy	No of retrieved records
Science Direct	Title, abstract, keywords: (Verbal Abuse OR Physical abuse OR Verbal violence OR physical violence OR Aggression OR Workplace violence OR Bullying) AND (Prevalence) AND (India)	33
Web of Science	((((((((((ALL=("Violent communication")) OR ALL=("physical assault")) OR ALL=("verbal assault")) OR ALL=("Aggressive communication")) OR ALL=("Verbal Abuse")) OR ALL=("Physical abuse")) OR ALL=("Verbal violence")) OR ALL=("physical violence")) OR ALL=(Aggression)) OR ALL=("Workplace violence")) OR ALL=("Bullying")) AND ALL=(Prevalence)) AND ALL=("India")	194
Scopus	TITLE-ABS-KEY (("Prevalence" OR "incidence" OR "epidemiology" OR "frequency" OR "occurrence") AND ("Violent communication" OR "physical assault" OR "verbal assault" OR "Aggressive communication" OR "Verbal Abuse" OR "Physical abuse" OR "Verbal violence" OR "physical violence" OR "aggression" OR "Workplace violence" OR "Bullying") AND ("India"))	283
PubMed	("Prevalence" OR "incidence" OR "epidemiology" OR "frequency" OR "occurrence") AND ("Violent communication" OR "physical assault" OR "verbal assault" OR "Aggressive communication" OR "Verbal Abuse" OR "Physical abuse" OR "Verbal violence" OR "physical violence" OR Aggression OR "Workplace violence" OR "Bullying") AND ("India")	893
Google Scholar	Studies on Violent conversation/Aggressive conversation/Violent expression/Aggressive expression/Violent message/Aggressive message/ Communication violence/Workplace incivility	30

2.5. Quality assessment

The 9-point scale of the Joanna Briggs Institute (JBI) Systematic Reviews Checklist for Prevalence Studies (2017) was used to critically appraise the quality of each finalised record. The checklist consisted of items assessing the quality of participant selection (appropriateness of sample frame, sampling method, adequacy of sample size, sufficiency of details regarding study subjects and study setting, sufficiency in coverage of the target sample), quality of method used by the study (validity and reliability of the methods used to identify occurrence of violent communication), quality of analysis (appropriateness of analysis used in the study, management of response rates by the authors). Each one of the checklist items was scored 0 or 1 based on the following four response options given by the quality evaluator: 1. yes (Score-1), 2. no (Score-0), 3. unclear (Score-0), 4. not applicable (Score-0). The overall score ranged from 0-9, with higher scores indicating higher validity of the study findings [49]. To avoid potential bias, the first and second authors independently appraised the quality of the studies, which the third author later revalidated.

2.6. Data analysis

Quantitative data from each study reporting the prevalence estimate of violent communication was considered for meta-analysis and the data reporting other aspects on the prevalence of violent communication, i.e., the associated factors, impact on the individuals and organisation etc., underwent narrative synthesis. Obtaining overall violent communication prevalence from the included studies was deemed the main priority of the authors. All statistical analysis was done using Stata/SE 17 Software. DerSimonian and Laird's random-effects model (95% confidence interval (CI)) was used to compute the pooled prevalence of overall violent communication within Indian organisations ('metaprop' command).

For studies that did not mention overall violent communication prevalence, the prevalence rate of the highest reported sub-type of violent communication was incorporated for analysis. When the operational definition of violence given in the study included acts of sexual violence or psychological violence, or violent communication due to substance abuse, the authors did not extract the overall prevalence estimate reported by such studies. Instead, they took the prevalence of the subtype of violent communication (if mentioned), for example, the prevalence of violence through words and/or body language given in the study. When the prevalence estimates of violent communication experienced within the organisation (victimisation) and inflicted within the organisation (perpetration) were presented separately, victimisation prevalence was considered for analysis.

When studies reported separate prevalence rates for the different types of verbal violence (threats, persistent criticism, swearing etc.), the authors took the prevalence estimate of the type having the highest number of cases. Similarly, when studies reported separate prevalence rates for the different types of non-verbal violence, the authors took the prevalence estimate of the type having the highest number of cases. Wherever sufficient data was available, the prevalence percentage was calculated using the following formula:

$$(\text{No of victims} \div \text{total number of individuals in the sample}) \times 100$$

I^2 statistic was used to interpret heterogeneity where a 75% cut-off was kept to indicate high heterogeneity [50]. Considering the sufficiency of available data, sub-group analyses by organisational sector, type of organisation, type of violent communication, gender, sample size, sampling method and publication year were conducted to investigate the potential sources of heterogeneity. Differences (if any) between different subgroups were confirmed using meta-regression analysis (STATA V.17.0 'metareg' command). For a study that did not specifically report the type of sampling technique used (i.e., whether they used simple random sampling, multi-stage cluster sampling etc.) but had sufficient description about the sampling and data collection methods used, the authors tried to

infer whether the method of sampling used in the particular study was probabilistic or non-probabilistic.

Publication bias becomes a problem in the method of article retrieval when there exists a failure to publish the results of a particularly relevant study depending upon the direction or strength of the study's findings (for example, a study is less likely to be published if the results are insignificant) [51]. Publication bias (if any) in the present meta-analysis was checked using funnel plots and Egger's linear regression test, where a p-value less than or equal to 0.05 indicated bias. Unless specified otherwise, significance levels (two-tailed) for analyses were kept at 0.05 significance level. Sensitivity analysis was conducted by removing each record sequentially to examine the stability of the prevalence estimate.

The systematic review conducted to find the 'impact of violent communication on the individuals and organisation', included the narrative synthesis of both empirically evaluated impact (using inferential statistics like regression analysis, chi-square test for association etc.) as well as scientifically relevant inferences/statements made by the respective authors majorly based on the responses of the participants to a survey or interview in that particular study.

3. Results

3.1. Study flow

The initial database search yielded 1433 records that underwent a title and abstract screening process after removing 268 duplicates. From the remaining 1165 records, 1038 records were removed for not meeting the inclusion criteria, and 127 reports were sought for retrieval. Due to the unavailability of full texts for 10 reports, only 117 reports were scrutinised for eligibility in the next stage. Subsequently, 32 articles were finalised to be included in the review after excluding 88 reports. Primary reasons for exclusion were insufficiency of data, type of article not meeting inclusion criteria (review paper, conference proceedings etc.), not being an Indian study, perceived lack of quality by the authors and the focus of the article not meeting the inclusion criteria (for example., the definition of violence in the article not matching with the operational definition of the present review, employees from unorganised sector included in the sample etc.).

Four records were identified through manual searching of websites and article citations, among which the full-text of one could not be retrieved and one turned out to be ineligible for inclusion. Thus, a total of 34 articles (32 from database search, 2 from manual search) were subjected to the quality assessment process. Figure 1 shows the PRISMA flow diagram illustrating the selection of studies.

3.2. Quality assessment & publication bias

The first and second authors completed a quality assessment as per the JBI Systematic Reviews Checklist for Prevalence Studies (2017) of 34 studies that met the inclusion criteria. The inter-judge agreement index (κ) was found to be 0.88. The studies' average quality assessment score was 7 (ranging from 4 to 9). Details of the quality assessment have been uploaded as a supplementary file ("File 1- quality assessment"). Appropriateness of sample frame, sufficiency in coverage of the target sample and management of responses by the authors, were the three primary parameters that were not met by most studies. Two studies were found to be of low quality [39, 40]. Sensitivity analysis proved the initial results' stability even with each study's sequential removal.

The 34 studies used in the analysis for finding pooled prevalence estimates of violent communication were checked for publication bias (if any). Visual inspection of the funnel plot (Figure 2.) indicated a significant publication bias for the prevalence of violent communication within Indian organisations, which got confirmed in Egger's test for small-study effects (p-value less than 0.05; illustrated in Table 2. & Figure 3). This indicates that despite the authors' efforts to retrieve different evidence regarding the prevalence of violent communication from a wide variety of sources, the distribution of prevalence estimates reported by the finalised studies of the present review seems significantly skewed.

3.3. Study characteristics

All 34 included cross-sectional studies reported the twelve-month prevalence of at least one type of violent communication (or had sufficient data for calculation). Among the 34 studies, 17 reported the overall prevalence of violent communication [9, 30, 37, 38, 39, 40, 41, 43, 52, 53, 54, 55, 56, 57, 58, 59, 60], 11 reported the prevalence of verbal and

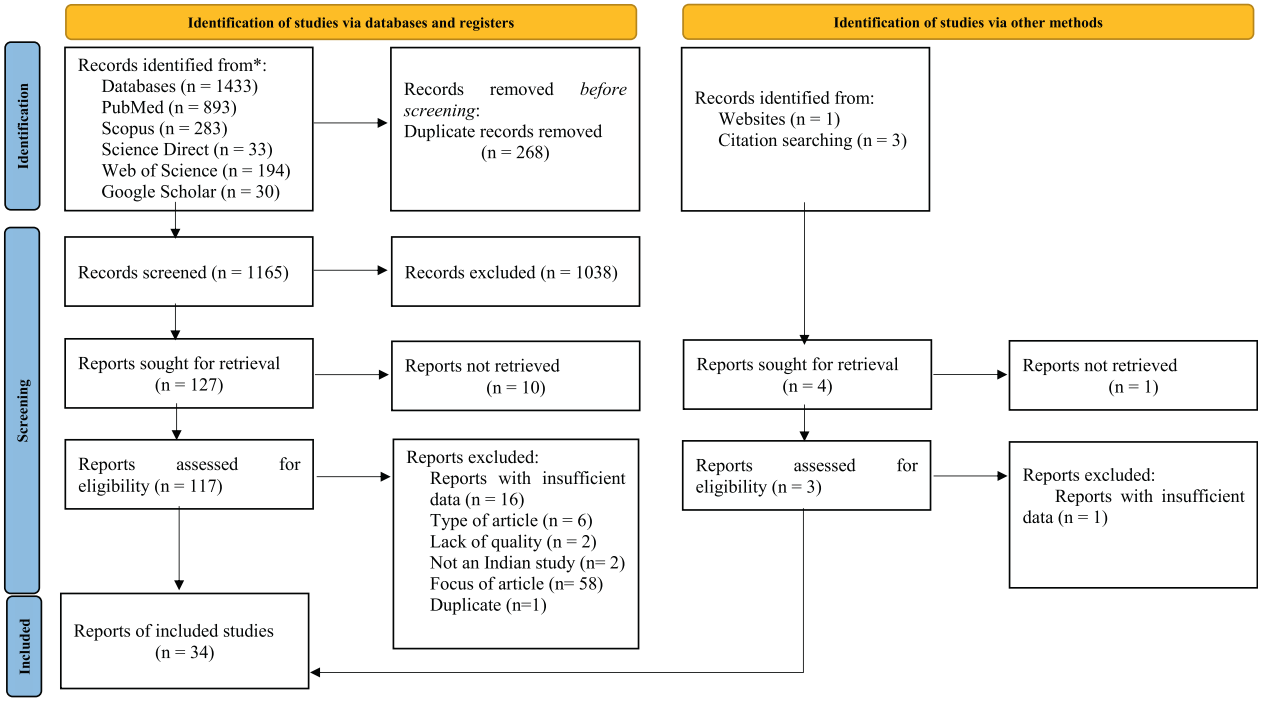
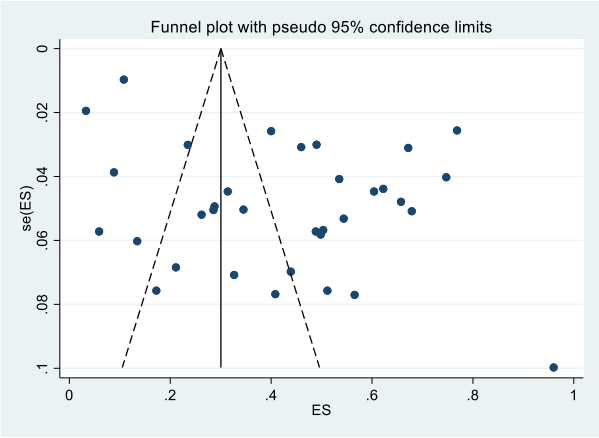


Figure 1. PRISMA flow diagram illustrating the selection of studies.



Note: *The asymmetrical distribution of the points indicates a publication bias in the prevalence of violent communication within Indian organisations*

Abbreviations- *ES: Effect Size (x-axis); se(ES): standard error of Effect Size (y-axis)*

Figure 2. Funnel plot for the prevalence of violent communication within Indian organisations.

Table 2. Egger's test for small-study effects.

Number of studies = **34** Root MSE = **6.143**

Std_Eff	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
slope	.1061909	.0645206	1.65	0.110	-.0252332	.237615
bias	6.884386	1.905205	3.61	0.001	3.003609	10.76516

Test of H0: no small-study effects P = **0.001**

Note. The egger test regresses the standard normal deviation of prevalence effect estimates against its corresponding standard error. As the p-value (0.001) indicates a statistically significant publication bias at 0.05 level (95% confidence interval), the assumption (null hypothesis H_0), which states that there exist no small-study effects, can be rejected.

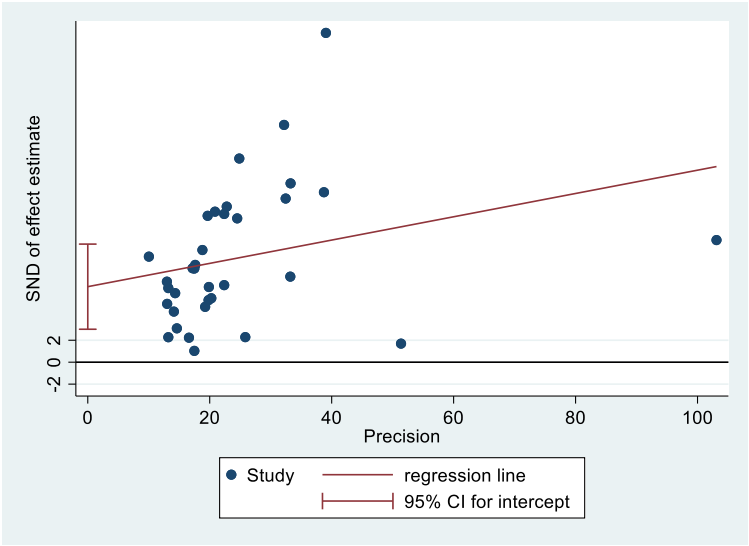
non-verbal violence separately without reporting the combined prevalence [8, 31, 36, 42, 61, 62, 63, 64, 65, 66, 67], 2 reported the prevalence of verbal violence only [32, 68], and 4 reported the prevalence of non-verbal violence only [20, 33, 69, 70]. Most studies saw verbal violence as the most common form of violent communication [31, 36, 42, 61, 62, 63, 64, 65, 66, 67]. The operational definition of violence varied across studies, with some of the studies referring to the standard definitions given by the International Labour Office (ILO) and/or World Health Organisation (WHO) [32, 41, 55, 58, 65, 68, 70], whereas few other studies had context-specific conceptualisations of violence based on the formative researches conducted by the respective authors on a similar sample prior to the assessment of prevalence [31, 56].

The finalised studies were published between 2005 and 2021(median-2018 used as a dividing point for subgroup analysis based on publication year). The studies were predominantly conducted after 2015 across different states, including Uttar Pradesh [31, 32, 61, 62, 69], Karnataka [53, 63], Tamil Nadu [20, 52, 54], Manipur [55], Chandigarh [33, 41, 64], Delhi [9, 37], Punjab [68], Maharashtra [38, 40], Kerala [56], West Bengal [70], Haryana [42], Kashmir [36, 57], Gujarat [39]. Data for 19 studies were collected from organisations in North India, and only eight collected data from South India. Two of the included studies reported collecting data from both South and North India [30, 43, 58, 59], and five studies did not specify the geographical area [60, 65, 66, 67].

The sample size of the included studies ranged from 100 to 10632 (median- 393; Interquartile Range:275–667, thus, substantiating the reason for taking 393 as the cut-off value for subgroup analysis based on sample size) and consisted of 29629 participants in total. Five studies had only females as participants [31, 54, 61, 62, 69], 1 study with only male participants [70] and from the remaining studies conducted on both male and female participants, 15 studies reported the prevalence of violent communication among each gender separately [9, 20, 37, 38, 40, 41, 42, 43, 55, 57, 59, 63, 66, 67, 68]. Among the 32 studies that reported sampling method, 24 used the probability sampling method [9, 20, 30, 31, 32, 33, 37, 38, 40, 41, 42, 53, 54, 55, 57, 58, 60, 61, 62, 63, 64, 65, 68, 69] and 8 used the non-probability sampling method [8, 36, 39, 43, 52, 59, 66, 70]. Fifteen studies were conducted in organisations under the healthcare sector [9, 31, 32, 41, 43, 52, 53, 54, 55, 58, 61, 62, 65, 68, 69], 16 were conducted in organisations under the educational sector [20, 33, 36, 37, 38, 39, 40, 42, 56, 57, 59, 63, 64, 66, 67, 70], and three studies included organisations from different service sectors combined, i.e., healthcare, educational, banking, Information technology, etc [8, 30, 60]. Out of the 14 studies for which the prevalence of violent communication based on the type of organisation could be obtained, nine studies had collected data from public (government) organisations only [9, 31, 32, 36, 37, 41, 52, 55, 65], whereas five had collected from and had reported prevalence of violent communication for both public and private organisations separately [20, 42, 43, 54, 61]. Based on the 20 finalized studies that reported response rates (or provided sufficient information for calculation) [9, 20, 30, 36, 37, 38, 40, 41, 52, 53, 54, 55, 58, 59, 61, 62, 64, 65, 67, 70], it could be understood that the average response rate among participants was 91.75% (41–100).

Two studies that had employees from organisations in different service sectors (IT, banking, manufacturing, healthcare, educational etc.) as samples, reported perpetration of violent communication in the workplace by the superiors, colleagues and subordinates of the respective employee [30, 60]. The same sources of perpetration were reported by 1 more study conducted on employees from ITES-BPO (Information Technology Enabled Services-Business Process Outsourcing) [8].

From the studies conducted in organisations under the healthcare sector, five studies reported patients to be victims of violent communication by health workers (doctors, nurses and other hospital staff) [31, 54, 61, 62, 69] and 10 studies reported healthcare workers (doctors,



Abbreviation- *SND: Standard Normal Deviate*

Note: *The SND of prevalence estimate reported by each study is regressed against the estimate's precision. It can be seen from the graph that the regression line does not run through the origin, and the intercept deviates from zero, indicating an asymmetry. Thus, it can be concluded that there exists a significant publication bias in the prevalence of violent communication within Indian organisations.*

Figure 3. Egger graph for prevalence of violent communication within Indian organisations.

nurses, emergency medical technicians and group C staff) to be victims of violent communication by co-workers at workplace (seniors, colleagues, other staff) and/or the public citizens (patients, relatives and attendants of patients) [9, 32, 41, 43, 52, 53, 55, 58, 65, 68]'.

All the studies conducted in organisations under the educational sector reported students to be victims of violent communication, from which five studies reported school staff (especially teachers) to be perpetrators [20, 33, 38, 70] while 16 studies reported the classmates and senior students to be perpetrators [37, 38, 39, 40, 42, 56, 57, 59, 63, 64, 66, 67].

Seven studies used tools suggested by WHO, ILO, International Council of Nurses (ICN) or Public Services International (PSI). Thirteen studies used self-designed pre-tested questionnaires with varying variables related to violence, and 14 studies used other established tools like Survey of Violence Experienced by Staff (SOVES-A), Negative Acts Questionnaire-Revised (NAQ-R), Work Harassment Scale (WHS), Staha project questionnaire, Illinois bully scale, Olweus Bully-Victim Questionnaire, Structured Questionnaire for Children- SQC, "School Student Survey" released by the Centre for Disease Control and Prevention, Korean–Peer Nomination Inventory, Peer Interaction in Primary School Questionnaire (PIPS), Peer Bullying Survey Questionnaire developed by Metin Pisken (2010) or California Bullying Victimization Scale (CBVS). Table 3 entails the characteristics of the 34 finalised studies.

3.4. Prevalence of violent communication within Indian organisations

Based on the random-effects meta-analysis of 34 studies (Table 4.), the pooled prevalence of violent communication within Indian organisations is found to be 41% (95% CI: 32–51%), with a significantly high level of heterogeneity across the studies (I^2-99.64%, $p = 0.00$). Figure 4 depicts the forest plot showing the pooled prevalence of violent communication within Indian organisations.

Subgroup analysis was conducted for all possible variables on which there was sufficient data available across the studies, i.e., gender (female/male), organisational sector (healthcare sector/educational sector), type of organisation (public/private), publication year (till 2018 and after 2018), sample size (less than 393/more than 393), sampling method (probability sampling/non-probability sampling) and type of violent communication (verbal violence/non-verbal violence). For all the subgroup analyses, the heterogeneity remained high.

Across gender, the pooled prevalence of violent communication was significantly higher among males (44%, 95% CI, 31%–58%) compared to females (28%, 95% CI, 18%–39%). The pooled prevalence of violent communication was more or less the same across the healthcare and educational sectors (39%, 95% CI, 23%–56% vs 42%, 95% CI, 27%–57%). The pooled prevalence of violent communication in public hospitals could be seen as slightly (though not significantly) higher when compared to that in private hospitals (43%, 95% CI, 25%–62% vs 34%, 95% CI, 13%–60%). Similarly, it could be understood from subgroup analysis that sample size and publication year could also be disregarded as possible sources of heterogeneity across the studies. The pooled prevalence of violent communication for the 17 studies with a sample size of less than 393 and the 17 studies with a sample size of more than 393 was found to be similar, i.e., 41 % and 42%, respectively (95% CI, 30%–52% vs 26%–57%). The 20 studies published before 2018 had a 43% prevalence of violent communication (95% CI, 31%–55%) and the 14 published after that had a 39% pooled prevalence of violent communication (95% CI, 25%–55%).

The pooled prevalence estimate of violent communication from the studies that reported probability sampling was significantly low compared to the pooled prevalence estimate from studies that reported non-probability sampling (36%, 95% CI, 26%–47% vs 58%, 95% CI, 30%–87%). The pooled prevalence of verbal violence (36%, 95% CI, 25%–47%) was significantly higher than that of non-verbal violence (20%, 95% CI, 12%–29%).

In contrast to the authors' presumptions about the possible sources of heterogeneity, the meta-regression analysis nullified any significant between-group difference for gender, organisational sector, type of organisation and publication year ($p \geq 0.05$). However, a significant between-group difference was found for the type of violent communi-

Table 3. Study characteristics.

No	Author/s & Publication Year	Study Location & Time	Participant characteristics	Organisation characteristic	Sample size	Prevalence	Quality score
1	Sharma et al., 2019	Uttar Pradesh; 26 May to 8th July 2015	Pregnant women patients (Majority between 20-35 age range)	Health care sector- Both public & Private hospitals	275	Verbal Violence- 13.8%; Non-verbal Violence- 7.6%	8
2	Raj et al., 2017	Uttar Pradesh; April to July 2015	Pregnant women patients with a mean age = 26.4 (17–48)	Healthcare sector- only public hospitals	2639	Verbal Violence- 3.3%; Non-verbal Violence- 2.8%	8
3	Garg et al., 2019	Tertiary super speciality care centre in India; May 2014 to August 2015	Hospital staff (majority between 20-40 age range); 134 Females, 260 Males	Health care sector- public hospital	394	Verbal violence- 34.5%; Non-verbal violence- 12.7%	8
4	Raveesh et al., 2014	Mysore; September and October 2013	Healthcare staff (Medical); mean age= 31.3 years (19–58); Both females & males	Health care sector	168	Overall- 56.5%; Verbal violence- 46.4%	7
5	Kaur et al., 2020	Healthcare facilities across India; November 2019 –April 2020	Doctors practising modern medicine; mean age= 37.9; 165 Females, 452 Males	Health care sector- Both public & Private hospitals	617	Overall- 74.7%; Verbal violence- 42.6%; Non-verbal violence- 32.1%	9
6	Bhattacharya & Ravindran, 2018	Rural Varanasi District; June–August 2015	Pregnant women; Mean age-24.7	Health care sector- Both public & Private hospitals	410	Overall- 28.8%; Verbal violence- 19.27%; Non-verbal violence- 13.41%	7
7	Vanlalduhsaki et al., 2018	Manipur; May and June 2017	Junior doctors; Mean age= 32 (24-64); 135 Females, 175 Males	Health care sector- public hospital	310	Overall- 50.3%; Verbal violence- 47.4%; Non-verbal violence- 2.9%	9
8	Grover et al., 2020	Chandigarh	resident doctors and faculty members; Mean age= 32 (24-64); 103 Females, 250 Males	Health care sector- public hospital	353	Overall- 54.6%; Verbal violence- 49.85%; Non-verbal violence- 4.49%	8
9	Anand et al., 2016	Delhi	Doctors; Mean age= 28.6 (range 24–39 years); 65 Females, 104 Males	Health care sector- public hospital	169	Overall- 40.8%; Verbal violence- 30.77%; Non-verbal violence- 4.73%	8
10	Lindquist, 2019	Gujarat, Karnataka, Tamil Nadu and Telangana; July 2017- November 2017	Emergency Medical technicians; majority between 20-34 years; 324 males, 51 females	Health care sector	386	Overall-67.9%; Verbal violence- 59.8%; Non-verbal violence- 58%	8
11	Sharma et al., 2019	Punjab; August 2017 to July 2018	Healthcare workers; 20-30 years; 207 females, 88 males	Health care sector	295	Verbal violence-50%	9
12	Sudhinaraset et al., 2016	Lucknow, Uttar Pradesh; April and May 2015	Pregnant women; 18-30 years (mean age-25.3)	Health care sector	392	Verbal violence-28.6%; Non-verbal violence-15.56%	8
13	Nawab, 2019	Uttar Pradesh; November 2016 to October 2017	Pregnant women; majority between 20-25 years	Health care sector	305	Non-verbal violence- 5.9%	8
14	Rao et al., 2018	Educational institutions from 12 states in India; between 2013 and 2014	College students; 4572 females; 5741 males	Educational sector	10632	Verbal violence- 10.8; Non-verbal violence- 4.2	6
15	Sharma et al., 2017	Delhi; July-September 2013	8th standard students; Age 11-15 years; 53 females, 121 males	Educational sector- only public organisations	174	Overall-17.24%; Non-verbal violence- 15.52%	7
16	Ramya & Kulkarni, 2011	Maharashtra	School children; Age 8-14 years; 164 females; 336 boys	Educational sector	500	Overall- 60.4%; Verbal violence- 35%; Non-verbal violence- 7.6%	7

No.	Author/s & Publication Year	Study Location & Time	Participant characteristics	Organisation characteristics	Sample size	Prevalence	Quality score
17	Kshirsagar et al., 2006	Maharashtra	School children; Ages 8-14 years; 312 females, 188 Boys	Educational sector	500	Overall - 31.4%; Verbal violence- 11.6%; Non-verbal violence- 5%	8
18	Rana et al., 2020	Chandigarh	6-10th standard school students; Mean age=13 years (12-15); 257 girls, 410 boys	Educational sector, public and private schools	667	Verbal violence- 8.84%; Nonverbal violence- 5.24%	9
19	Deb et al., 2017	Puducherry; July 2014 to June 2015	Secondary school children; Age-13-16 years; 194 females, 325 males	Educational sector, public and private schools	519	Non-verbal violence-62.2%	7
20	Chudal et al., 2021	Schools from India	School children; Mean age-13.6 (13-15); 803 females, 747 males	Educational sector	1525	Overall- 76.8%	5
21	Munni & Malhi, 2006	Chandigarh; 2001-2002 school year	8th- 11th standard school children; mean age 15 (12-20)	Educational sector	1500	Non-verbal violence- 40%	7
22	George, 2018	Trivandrum, Kerala	5-12th standard school children; 300 males, 300 females	Educational sector	600	Overall-53.5%	5
23	Singh et al., 2019	Uttarpradesh; November 2017 to January 2018	Doctors; 98 females, 207 males	Health care sector- only public hospitals	305	Verbal violence- 70.1%	5
24	Samanta et al., 2018	West Bengal; January-March 2007	Male students; Age 13-15 years	Educational sector	199	Non-verbal violence- 32.7	9
25	Chhabria et al., 2020	Bengaluru, Karnataka	8th - 12th standard school children; Age 13-18 years; 242 girls, 170 boys	Educational sector	435	Verbal violence- 67.75%; Non-verbal violence- 40.23%	8
26	Sethi et al., 2019	Urban Rohtak, Haryana	middle school children (7th and 8th standard); Age 12-15 years; 146 females, 224 males	Educational sector; both public & private schools	370	Overall-19%; Verbal violence- 26.22%; Non-verbal violence- 24.32%	8
27	Nazir, 2019	Kashmir	11th and 12th school children; 502 females, 501 males	Educational sector	1103	Overall- 25.8%	8
28	Patel et al., 2017	Gujarat; October and November of 2014	7^{th}- 9^{th}-grade school children; 455 females, 642 males	Educational sector	1106	Overall- 49%	7
29	Malhi & Bharti, 2021	Schools from a North Indian city	5th-8th grade school children; Age 10-15 years; 104 Females; 109 Males	Educational sector	213	Verbal violence-21.13%; Non-verbal violence- 12.67%	5
30	Gupta et al., 2017	Organisations in the West & North Zone of India	Employees; majority between 31-40 years; 554 Females; 499 Males	Healthcare, Educational and Banking sector	1053	Overall- 46%	8
31	Rai & Agarwal, 2017	Organisations across India	Managerial Employees; mean age=26.6; 64 females, 114 males	Different service sectors	205	Overall- 44%	6
32	D'Cruz & Rayner, 2013	Bangalore, Chennai, Delhi, Hyderabad, Mumbai and Pune	Employees working in ITES-BPO organisations; majority under 30 years	ITES-BPO Sector	1036	Verbal violence- 66.8%; Non-verbal violence- 67.2%	7

No.	Author/s & Publication Year	Study Location & Time	Participant characteristics	Organisation characteristics	Sample size	Prevalence	
33	Bairy et al., 2007	Tamil Nadu; Over four months beginning from January 2005	Trainee doctors; Age 18-50 years with the majority below 30; 72 females, 102 males	Health care sector; public hospital	174	Overall- 51.2%	4
34	Shaiju et al., 2016	Baramulla, Kashmir	7th - 9th standard school students; Age 10-14 years; 69 females, 31 males	Educational sector; public school	100	Verbal violence- 96%; Non-verbal violence- 76%	4

Note. Only the available details of each study could be included in the table; The quality score of each study reported in the table is the average value (rounded off) of the quality scores given for that particular study by the two quality evaluators (author 1 & author 2).

Abbreviations- *NR: Not reported*

Table 4. Prevalence of Violent Communication within Indian Organisations.

	No of studies	Events/Sample size	Prevalence Percentage (95% CI)	I^2 (%)	p^a	p^b b/w groups
Any type of VC	**34**	**8900/29629**	**41 (32–51)**	**99.64**	0.00*	
Gender	36	4396/21118				
Female	20	1626/11788	28(18–39)	99.22	0.00*	0.05
Male	16	2770/9330	44(31–58)	99.16	0.00*	
Organisational sector	31	7630/27336				
Healthcare sector	15	2128/7192	39(23–56)	99.51	0.00*	0.86
Educational sector	16	5502/20144	42(27–57)	99.72	0.00*	
Type of organisation	19	1915/6668				
Public	14	1548/5837	43(25–62)	99.47	0.00*	0.65
Private	5	367/831	34(13–60)	98.12	0.00*	
Publication year	34	8900/29629				
Till 2018	20	5580/22386	43(31–55)	99.65	0.00*	0.79
After 2018	14	3320/7243	39(25–55)	99.45	0.00*	
Sample Size	34	8900/29629				
Less than 393	17	1749/4393	41(30–52)	98.17	0.00*	0.78
More than 393	17	7151/25236	42(26–57)	99.80	0.00*	
Sampling method	32	8534/28816				
Probability sampling	24	4265/13427	36(26–47)	99.34	0.00*	0.03*
Non-probability sampling	8	4269/15389	58(30–84)	99.87	0.00*	
Type of VC	46	7695/44261				
Verbal Violence	22	4350/21166	36(25–47)	99.53	0.00*	0.04*
Non-verbal violence	24	3345/23095	20(12–29)	99.57	0.00*	

Note. 1) Only studies containing details regarding the concerned subgroup were included for analysis. This explains the small number of studies for certain analyses ($n < 34$); Certain studies reported results for both sub-group (for example. For both males and females) separately. This justifies the additional number of studies for some of the analyses ($n > 34$).

Abbreviations- VC: Violent Communication; CI: Confidence interval, b/w: between.

[a]p values for overall/subgroup analysis.

[b]p values for meta-regression (up to two decimal places); *$p \leq 0.05$.

cation ($p = 0.044$) and sampling method ($p = 0.039$). Thus, meta-regression results identified the type of violent communication and sampling method as potential sources of heterogeneity across the studies ($p < 0.05$). Tables and graphs detailing all the subgroup and meta-regression analyses performed as part of the present review has been uploaded as supplementary file ("File 2- meta-analysis tables and graphs")

3.5. Factors associated with the prevalence of violent communication

Two studies conducted among the employee population, consisting of individuals from different service sectors combined (i.e., healthcare, educational, banking, Information technology etc.), reported centralised decision-making, organisation hierarchy, authoritative leadership and significant supervisory control as the prime predictors for the high prevalence of violent communication experienced by the victims [8, 30].

From the studies conducted in the educational sector, it could be understood that the ignorance or lack of proper surveillance by the concerned authorities claiming such violent communication to be normal was another factor contributing to further violence in the respective organisation [59, 64, 66, 67]. Obesity, lesser number of friends [39], low academic performance [38], belonging to a nuclear family, low parental education [33, 42], introverted nature, physical weakness [38], place of residence in a hostel and the pursuing course being professional than just a degree course [66], could be inferred as some of the determining factors that made the students more likely to become victims. Assertion of social

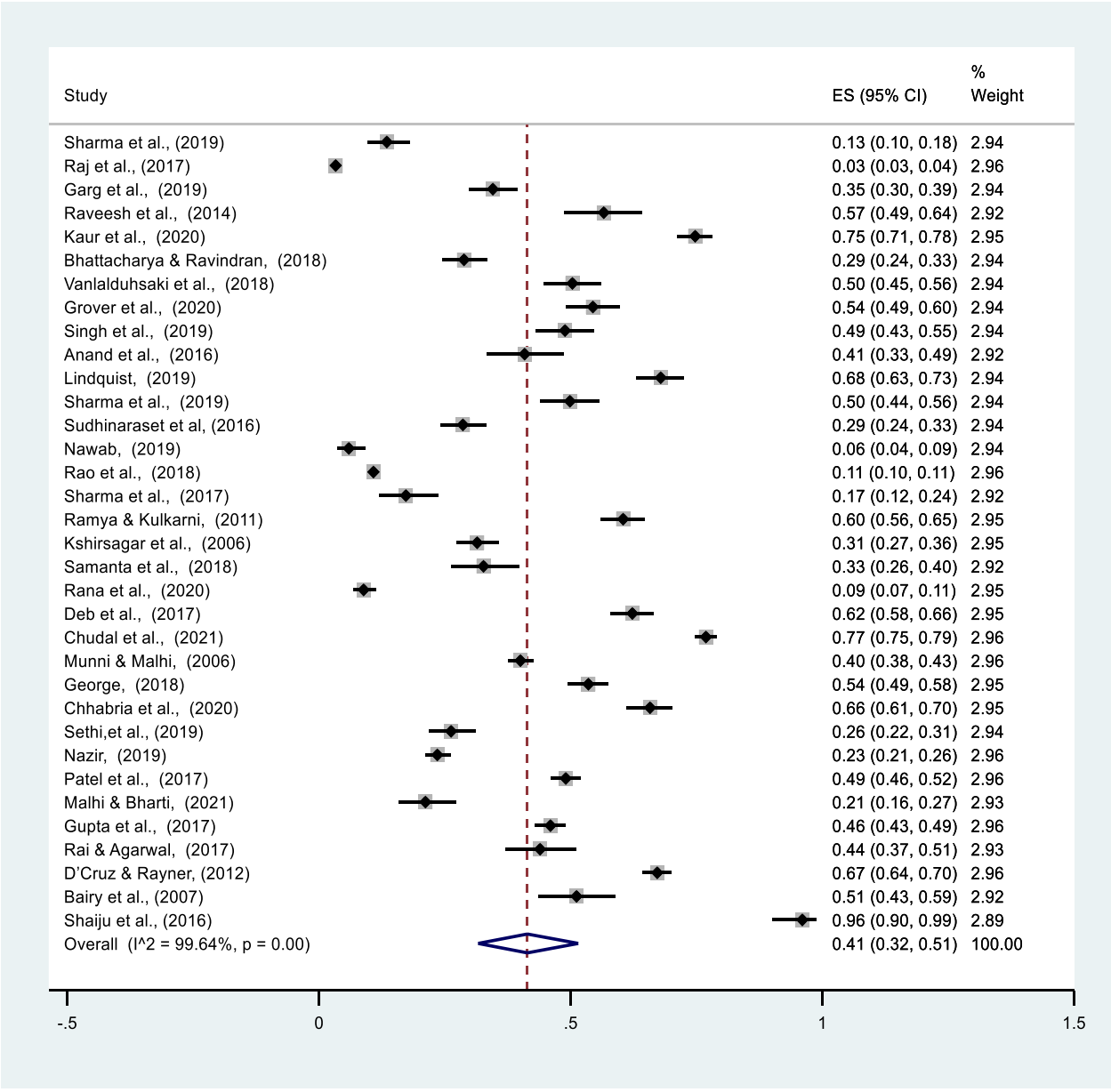


Figure 4. Forest plot showing the pooled prevalence of Violent Communication within Indian organisations.

power and prominence [66, 67], being part of families with high income [42], physical fitness [38] and high exposure to violence in mass media [33] could be understood as the predominant determining factors that made the students more vulnerable to becoming perpetrators of violent communication. Academic performance [57] and the cultural and socio-economic status of the student were seen as major factors associated with the prevalence of violent communication in the educational sector [33, 64, 67]. Kshirsagar et al. (2006) asserted the prevalence of violent communication to be more in co-ed educational organisations [40]. The study by Samanta et al. (2018) revealed the prevalence of violent communication to be more among urban students [70] compared to rural students. Male students were more likely to experience non-verbal violence and female students were more likely to experience verbal violence [38, 39].

Keeping aside the context-specific factors reported by studies conducted in the educational sector, socio-economic status, being part of a nuclear family, poor communication skills of victim/perpetrator and normalisation of violent communication by the concerned authorities were found to be the common factors contributing to the high prevalence of violent communication in both health-care and educational organisations [8, 9, 30, 31, 32, 41, 43, 61, 62].

Certain other aspects specific to the healthcare sector that led to the occurrence of violent communication included frequent shortages of medical supplies, poor working conditions/infrastructure of the health-care setting, profit mongering by the health organisation, shortage of health-care staff, over-crowding, dissatisfaction among patients concerning the services provided by the staff and extended hospital stay [9, 32, 41, 43, 53, 55, 61, 68]. Job stress and job satisfaction of the healthcare staff [9, 32, 68], the severity of patient's health condition, type of health facility (private/public) [41, 43, 61, 69], gender (male/female) [20, 37, 38, 39], age, lack of empathy [55, 61, 68] and having the personality characteristics of a bully [52] could be understood as factors associated with the prevalence of violent communication in the health-care sector. The study by Singh et al. (2019) reported the incidents of violent communication to occur more during day time [32] while two other studies reported the incidents of violent communication to occur more during night-time in hospitals [41, 68]. A statistically significant relationship between years of healthcare staff's experience and the type

of violent communication they faced could be seen. Healthcare workers with more experience were more likely to experience verbal violence, while healthcare workers with less experience were more likely to experience non-verbal violence [43, 58, 61]. A similar relationship was seen between designation and type of experienced violent communication [53, 65, 69]. The study by Sudhinaraset et al. (2016) reported that the odds of becoming a victim of violent communication perpetrated by the healthcare staff increased when the hospital setting was not decided by the patients themselves [62]. A study by Nawab (2019) stated that rural patients are more prone to becoming victims [69]. Table 5 consolidates the associated factors identified from each of the included studies.

3.6. Impact of violent communication on the individuals and organisation

As shown in Table 5., the experience of violent communication affected the victims in multiple ways. Seven studies reported the physical impact of violent communication on the victims, including headache, fatigue, sleep disturbances, body ache and other psychosomatic symptoms [9, 31, 38, 40, 52, 54, 67, 70]. Majority of the studies described the multiple impacts of violent communication on the psychological well-being of the victims like loss of self-esteem [9, 30, 53], feeling humiliated [38, 65], repeated disturbing memories of the experience [32, 55, 62], depression, anxiety, irritability, perceived loneliness, suicidal thoughts, loss of morale, feeling of insecurity and increased risk of other psychiatric and mood disorders [20, 33, 39, 41, 58, 59, 63, 67, 68]. In addition, experience/witnessing of verbal and non-verbal violence changed an individual's behaviour and attitude towards the organisation [52]; for example, many healthcare staff did not want their children to choose a job in the medical field [32]. Exposure to violent communication decreased the job satisfaction of employees working in the organisation, caused employee burnout, negatively affected the victim's performance in the organisation [30, 32, 33, 41, 52, 53, 55, 67, 68] and increased absenteeism in the organisation [38, 40, 56], thus paving the way for many to leave the organisation [41, 52, 55].

4. Discussion

Owing to the scant nature and need for concluding evidence on the prevalence of violent communication within Asia, especially India [71], the present review was the first research attempt to examine the issue of violent communication taking place within multiple organisational contexts in the Indian subcontinent. Responding with destructive remarks, scathing criticisms, and using unparliamentary language in supposedly "professional" interactions have become normal communication practices within Indian industries [19]. Verbal communication of violence in the finalised studies included the usage of aggressive words to demean, abuse, harass or bully someone within the organisation, such as passing humiliating comments, yelling offensive names at each other, and so on [8, 36, 43, 62, 69]. Non-verbal communication of violence in the present review included a wide range of derogatory gestures in body language that become abusive, harassing or bullying when used to disrespect another, such as rolling eyes, smirking, violating personal space, hands on hips, clenching of fist and so on [8, 20, 30, 60]. With violent communication becoming inevitable distress in every organisation, it is imperative to bring awareness about the severity of this issue to the researchers and HR practitioners. Thus, the present review gives a comprehensive report of the prevalence and underlying factors associated with violent communication and explores the corresponding impact of such incidents on the victims and the organisation. The review results were based on all possible standard studies from different parts of India. Therefore, the total number of 29629 participants can be considered a sufficient representation of India. The review implications present the need for timely arbitration to inhibit violent communication before it becomes detrimental to the overall productivity and well-being of the organisations. Insights from the present study probes forerunners of different countries to re-evaluate the civil behaviours within their workplaces. This, in turn, would help confirm the global relevance of violent communication.

The meta-analysis found the prevalence of any type of violent communication to be very high, i.e., 41%. This result revalidates the claims made by popular surveys and previous empirical evidence that had asserted a high prevalence of violence in Indian organisations [8, 72, 73]. This implies the lack of moral awareness and situational judgement among a relatively large group of Indians, resulting in them communicating violently with each other, giving no heed to the organisational etiquette. Hence, the present review informs the forerunners of Indian organisations to arrange programs that educate their members about healthy and compassionate resolution of conflicts. Interestingly, the prevalence of violent communication in the organisational sectors that require the utmost compassionate interactions, i.e., healthcare and educational sectors, was almost equally high. This calls for equal attention to all organisations coming under these two sectors. Howsoever, it could be understood that the pooled prevalence of violent communication in the healthcare sector is lesser than the recent meta-analysis evidence [34] on overall workplace violence in this sector (i.e., 63%). Moreover, to the author's knowledge, the present review was the first meta-analysis study that analysed the pooled prevalence of a violence-related phenomenon in the Indian educational sector.

Unlike in earlier days, the 21st-century Indian government has strengthened the laws for protection against verbal and non-verbal violence [8]. But, plausible challenges within Indian service sectors demand more effective context-specific violence management policies that mitigate the high prevalence of verbal violence, which may lead to physical violence if prolonged. This is evident from the subgroup analysis results proving verbal violence to be more prevalent than non-verbal violence. In addition, the results of subgroup analysis based on year show no significant difference in the prevalence of violent communication within Indian organisations over the past 21 years.

Though females are more prone to becoming victims of sexual violence [74], the majority of individual study results had claimed the prevalence of violent communication to be higher among males, both in terms of victimisation and perpetration [20, 37, 38, 39]. This could be seen reflected in the present review's subgroup analysis indicating a higher prevalence of violent communication among males than females. However, the meta-regression analysis showed the difference between males and females to be insignificant. This clarifies the contradicting findings across the included studies about the association between gender and violent communication [33, 39, 40]. Thus, the review result encourages more open and transparent feedback practices to identify potential victims and/or perpetrators, irrespective of gender. At the same time, the present systematic review also paves the way for more efforts to keep a check on gender stereotypes, if any, within organisations.

Systematic review of the included studies hinted that the prevalence of violent communication would vary based on whether the organisation is private or public [20, 41, 42, 43]. Though the sub-group analysis part of the present review showed the prevalence of violent communication to be higher in public organisations, the meta-regression analysis disproved this by showing no significant difference in the prevalence of violent communication between private and public organisations. This implies that the Indian nation can formulate uniform strategies for managing violent communication, irrespective of the type of organisation.

It was evident from the synthesised results that factors influencing the experience of violent communication and its likely impact on the victims vary for different organisational sectors. For example, reduced participation, decreased academic performance [33, 42, 67], school phobia [40], decreased ability to learn [56], poor adjustment at home [33] etc., were some of the impacts of violent communication on the victims within the educational sector context. This was different from the impact of violent communication in the healthcare sector. For example, the experience of violent communication while working in the emergency

Table 5. Factors associated with the prevalence of violent communication & Impact of violent communication on the individuals and organisation.

No.	Author/s & Publication Year	Associated Factors	Impact
1	Sharma et al., 2019	Timing of patient admission (during weekdays or weekends); more frequent in the public sector; caste of the victim; financial status of victim; inadequate infrastructure in an organisation; high workloads; poor communication skills; normalisation of disrespect and abuse in actual practice; victim's age; resource-constraints; shortages of health workers; limited incentives; weak mentorship and supervision; restrictive institutional policies; lack of up-to-date knowledge; socio-economic factors and unequal power dynamics between perpetrators and the victims	Nil
2	Raj et al., 2017	The normalisation of violent communication among providers and maybe patients themselves; unskilled health care providers more prone to inflicting violence	Victims experienced postpartum complications after they had left the facility
3	Garg et al., 2019	Group C is more prone to non-verbal violence, whereas doctors and nurses are more prone to verbal violence	Victims felt humiliated
4	Raveesh et al., 2014	Prior training received; job designation; disputes about payments with relatives	Nil
5	Kaur et al., 2020	Experience of violent communication decreased with age; doctors practising in urban areas were more prone to become victims; marital status; highest qualification; years of experience; gender; actual or perceived non-improvement or deterioration of the patient's condition; perception of unfair treatment given; death of the patient; real or perceived delay in treatment; unrealistic demands from patient and relatives such as issuing a false certificate, early discharge, unique preferences, etc; cost and fee-related issues; lack of communication skills; administrative failure and poor infrastructure, like long waiting time, unavailability of bed, drugs, investigations etc.	Reporting of violence was more stressful and time-consuming and also caused negative publicity; loss of self-esteem & feeling of shame; a sense of defeat while giving their best in the profession; turnover; impact on patient management and decision making by the treating doctor; Management by surgical and medical interventions and handling of emergency/critical/complicated cases decreased with an increase in the severity of violence against doctors; suggesting investigations and referrals along with consultation with other specialists increased
6	Bhattacharya & Ravindran, 2018	Type of provider; the presence of complications in patients; high prevalence of abuse in private health facilities	Post-delivery complications
7	Vanlalduhsaki et al., 2018	Aggressive patient party; gap in communication; improper infrastructure; frequency of contact with patients in the emergency department; Overcrowding; attitude of healthcare professionals	Repeated memories of the attack; avoiding thinking or talking about the attack; being watchful and on guard; absenteeism
8	Grover et al., 2020	Gender of victims; prolonged duty hours; excessive workload; long waiting periods for patients/caregivers; unrealistic expectation by the patient/relatives; poor communication skills of the doctors; inadequate training/supervision of doctors; poor infrastructure; occurrence of violent communication more in the emergency department; first-line health care workers people in night duty more prone to being victims; type of institution-public; lack of law-enforcement	Worried about the negative consequences of reporting; negative impact on psychological well-being, burnout; poor job satisfaction; increased intention to turnover (switch jobs); decision-making concerning patient care getting affected
9	Singh et al., 2019	The emergency department is the most common place of violent communication; occurrence more during the daytime; with nonavailability of medicines; less staff; miscommunication and ineffective communication between attendants and doctors; more workload; dissatisfaction with services; overcrowding in hospitals, frequent shortage of medicines; poor working conditions of doctors in hospitals.	Repeated disturbing memories, thoughts, or images of the attack; absenteeism; low morale, low job satisfaction; many doctors do not want their children to pursue career in the medical field.
10	Anand et al., 2016	Poor conflict resolution skills; Overcrowding in hospitals; frequent shortage of medicine and other supplies; poor working conditions; delayed services or dissatisfaction among the patients; understaffing; job stress; low job satisfaction	Fear, sadness, headache, frustration, anger, irritability, fatigue, depression and low self-esteem
11	Lindquist, 2019	Lack of training to manage violent communication; age; professionals in Gujarat, Karnataka and Tamil Nadu were more likely to experience non-verbal violence; individuals with higher education were more likely to experience verbal violence but were less likely to experience non-verbal violence	Worry
12	Sharma et al., 2019	Years of experience; designation; occurrence of violence more during night shift; unexpected death; unexpected complication; patient condition not explained; patient unlikely to improve; extended hospital stay; unexpected bill; doctors' rude behaviour; poor attendance of doctor; staff shortage; lack of empathy; poor hospital administration; stress about the patient condition; political links of the patient; profit mongering	Bothersome memories; stress; feelings of moderate to extreme avoidance response to talking or thinking about the incident; absenteeism; frustration, insecurity and resentment
13	Sudhinaraset et al, 2016	Being in low caste, socio-economic status (poverty); patients who actively engage with providers are perceived to receive better and faster service; low levels of engagement or experience with traditional healthcare; women are also misinformed and may have lower expectations of care because of the social and cultural norms	Nil
14	Nawab, 2019	Women with nuclear families were at odds to experience violence; public organisation; low socio-economic status of the victim; experiencing violent communication at the facility increased when the victim herself did not decide the place of delivery; normalisation of violent communication by health providers; patients in a rural area more prone to become victims	Nil
15	Rao et al., 2018	Gender; hostellers were victimised more than day scholars; hierarchy, groupism and lack of surveillance; normalising violence; students enrolled in professional courses than in degree courses face violence more	Nil

(*continued on next page*)

Table 5 (*continued*)

No.	Author/s & Publication Year	Associated Factors	Impact
16	Sharma et al., 2017	Gender- males are more prone to becoming victims as well as perpetrators	Nil
17	Ramya & Kulkarni, 2011	Prevalence of violence more among males (both as a victim and perpetrator); victims were usually the academically weak, physically weak, and quiet students; Perpetrators were usually the popular, physically strong and wealthy students	Felt sad, got angry, felt humiliated, felt lonely and afraid; a decrease in active participation, general performance; inferiority complex and irregular attendance among the victims; headache; depression; suffered from psychosomatic symptoms
18	Kshirsagar et al., 2006	Violence more prevalent in co-ed schools	Sad; preferring to stay alone; school phobia; vomiting and sleep disturbances; school absenteeism; body aches
19	Samanta et al., 2018	Prevalence more in urban adolescents	Loneliness, worry, insomnia, and suicidal thoughts
20	Rana et al., 2020	Males are more prone to becoming victims and perpetrators; studying in private schools; poor peer relations; lack of proper actions by the institution authorities; socioeconomic and cultural factors	Nil
21	Deb et al., 2017	Prevalence is higher in males and those attending public schools	Poorer school performance; poorly adjusted at home, school and with teachers; symptoms of psychological distress
22	Chudal et al., 2021	Cultural influence, school environment	Anxiety and depression
23	Munni & Malhi, 2006	Male sex as a factor for witnessing and perpetrating violence; victims were predominantly females; socio-economic status; low maternal education; belonging to nuclear families had a significant bearing on violence exposure; exposure to violence in mass media	Poor school performance and poorly adjusted at home, school and with teachers; symptoms of psychological distress
24	George, 2018	Nil	Absenteeism; threatened students' physical and emotional safety at school and negatively impacted their ability to learn
25	Chhabria et al., 2020	Male students reported engaging in non-verbal violence more than female students.	Increased risk of many psychiatric and mood disorders
26	Sethi et al., 2019	Prevalence of violence more in boys; Most of the perpetrators belonged to high-income families; fathers of perpetrators were more likely to have completed college than non-perpetrators; perpetrators more in private schools	Nil
27	Nazir, 2019	Male victimisation is slightly higher than female victimisation	Nil
28	Patel et al., 2017	Boys were more likely to be perpetrators, whereas students who had fewer friends and were overweight/obese, were more likely to be victims; association between violent behaviour and poor academic performance	The victim group had higher scores on emotional problems, hyperactivity and peer issues than the perpetrator group, which had higher scores on conduct problems, hyperactivity and lower scores on prosocial behaviour.
29	Malhi & Bharti, 2021	Boys were more likely to be victims; ignorance by the school authorities; normalising violence; the assertion of power and social prominence in the classroom status	Somatic complaints; headache, chest pain, stomach pain, weakness, and pain in arms and legs; poor mental health; poor academic performance; victims were kept at the bottom of the social hierarchy in a position of subordination
30	Gupta et al., 2017	Nil	Nil
31	Rai & Agarwal, 2017	Centralised decision-making, extensive supervisory control and authoritative leadership may be the prime reasons for the high prevalence of downward bullying	Lack of self-confidence; or a deep-felt acceptance of organisational circumstances or disengaged themselves from work
32	D'Cruz & Rayner, 2012	The organisational hierarchy is a factor that makes entry-level employee susceptible to victimisation; autocratic leadership.	Nil
33	Bairy et al., 2007	Comments by seniors on the failures to meet the standard of expected competence are felt as being bullied by junior colleagues; having personality traits of a bully	Negative impact on the overall climate and outcome of the workplace; victims show inadequate job commitment and low job satisfaction
34	Shaiju et al., 2016	Nil	Physical, social, psychological, and emotional impact; decreased academic performance; lack of interest in moving/mingling with others; feeling lonely

Note. Only the available details of each study could be included in the table.

department negatively affected the doctor's decision-making concerning treatment, decreased their skills in patient management and decreased their confidence to handle complicated cases [41, 52, 53]. Thus, it can be inferred that all the factors and the corresponding detrimental consequences faced by victims of each organisational sector, identified by the present review, endeavour scope for the development of more context-specific prevention strategies. Moreover, identifying the victims and perpetrators within each organisational sector helps to develop sensitivity to their suffering, which pave the way for developing more target-oriented interventions.

Findings from the present study point out the severe impact of violent communication on the performance of Indian organisations. Members with less organisational commitment, inadequate organisational citizenship behaviour, increased turnovers [75,76, 77] and increased burnout [78] could be seen as some of the repercussions of an organisation culture marked by high levels of violent communication. Bringing the issue of violent communication to the notice of concerned authorities was reported to be time-consuming and stressful for the victims, owing to the negative publicity or other potential adverse consequences faced by them [41, 53, 55, 68]. Most of the studies in the present review highlighted the inefficiency of the existing Indian systems in addressing the reported incidents of organisational violence, which in turn affects the organisational climate and well-being (physical and psychological) of the victims. The present review results encourage the service sectors of India to take accountability for the safety of its members by establishing proactive administrative measures to prevent and deal with incidents of violent communication. This can be achieved by advocating an organisational culture that encourages, supports and gives its members the perception of fair treatment. For example, policymakers can acknowledge the high burden of violent communication experienced by health workers by addressing the factors associated with violent communication and creating a safe organisational environment that enables healthcare professionals to serve the public's health needs without fear. Organisational psychologists can plan the working hours to balance the productivity and well-being of the employees.

The present review results establish the need for immediate actions to curb unethical practices within Indian service sectors. Indian organisations must provide their members with preliminary etiquette and soft skills training. In addition, awareness training based on insights from the present review given to the organisational members would help them recognise and report acts of violent communication experienced/witnessed within the organisation. The portrayal of proper conduct by the leaders within the organisation would allow the remaining members to understand acceptable behaviours and act accordingly. Recruitment of well-behaved employees, impeding status hierarchy, recognising and rewarding organisational members exhibiting proper conduct while advocating negative consequences for those who commit verbal/non-verbal violence etc., are ways to uproot violent communication within Indian business organisations. In doing so, both individual and organisational outcomes get improved substantially. Thereby, Indian organisations can effectively meet the service needs of their citizens.

The present review highlights the need to train employees to inculcate person-centred communication characterised by respect and recognition of the needs of co-workers and customers. Interventions developed on the grounds of the present review results would help improve the organisational work culture in terms of improved interpersonal relationships, organisational commitment, organisational citizenship behaviour, and helps in employee retention. Considering the limited time and resources available for Indian organisations, such interventions will be more cost-effective. For example, since the present review emphasises the influence of certain socio-demographic differences in deciding the occurrence of violent communication, trainers can be more mindful of such individual differences among the organisational members while designing interventions to address acts of violent communication within the organisation. Moreover, the present review signifies the necessity for frequent violent communication surveys that consider the change in the socio-demographic profiles of victims and/or perpetrators, which would help update the preventive strategies accordingly. Similarly, the organisation-related factors suggested to be taken into account to prevent the occurrence of violent communication give a more nuanced understanding of the violent communication dynamics within organisations.

Lack of compassionate communication was one significant predictor of violent communication reported by a majority of the included studies, thus calling attention to the need for exploring compassion-related communication skills within Indian organisational culture [5, 79]. This, in turn, would help answer critical applied questions concerning the Indian human service economy. For example, despite corporal punishment being banned in India [80], the study by Deb et al. (2017) reported that 62% of students experienced corporal punishment perpetrated by teachers [20]. This proves the need for further studies to understand the context-specific reasons behind such compassion failures by professionals whose job demands them to have compassionate communication. This, in turn, would pave the way for developing interventions that cover the drawbacks of pre-existing communication skills and team-building training given by Indian organisations [55, 68, 81, 82].

An organisation that encourages compassionate communication will have members with increased work-life balance and work engagement [83] and teams with high resilience, psychological safety and psychological trust [3, 84]. The present review instigates the recruitment of experts to identify the potential factors that may lead to incidents of violent communication within the organisation. The findings also spread more awareness among teachers, healthcare professionals, managerial employees etc., which in turn helps them to be more sensitive towards the victims.

4.1. Limitations, de-limitations & future research directions

Many of the participants under-reporting their exposure to violent communication due to fear of negative consequences, complemented by a lack of trust in the researcher, could have affected the overall prevalence estimate of violent communication in such studies. The present review has included studies from 13 states across India. Further primary studies from the remaining states would give a more reliable prevalence estimate of violent communication within Indian organisations. Almost all the studies related to the current topic of interest were cross-sectional and had reported point prevalence. There is a scope for future studies to find the lifetime prevalence of violent communication, which would yield more exciting revelations.

Most of the included studies assessing the prevalence of violent communication were conducted in healthcare or educational organisations. More empirical studies need to be done in other organisational sectors like Banking, Information Technology, Manufacturing etc., to get a more reliable prevalence estimate representing violent communication within Indian organisations. In the unorganised sector, violent communication might vary and requires immediate scrutiny.

With the analysis results showing a high value for heterogeneity across the studies, subgroup and meta-regression analysis investigating the sources of heterogeneity could be done only for certain variables. Heterogeneity could not be controlled entirely in subgroup analysis, which can be justified with other research evidence stating the impossibility of eliminating heterogeneity in prevalence studies [85, 86, 87]. Type of violent communication was identified as one reason for high heterogeneity. Thus, there is a need for more specific empirical studies that give an in-depth understanding of each type of violent communication separately. The present review suggests future research on the verbal and non-verbal cues that trigger interpersonal conflicts within an organisation.

It was understood from the systematic review that the place of the organisation (urban/rural) and kind of prevalence (victimisation prevalence/perpetration prevalence) could be potential sources contributing to the high value of heterogeneity across the included studies. But the authors needed more information from the studies regarding the same to inspect this through analysis. Future primary studies can consist of all such details. Similarly, the varying tools used to assess the prevalence of violent communication across the studies might also be another reason for heterogeneity. In addition, meta-regression analysis confirmed the sampling method used as a potential source of heterogeneity. Thus, there is a need for future primary studies to adopt a more standardised methodology to study the phenomenon of violent communication.

Owing to the absence of a standard definition for violent communication in almost all the included studies, the authors made conscious efforts to be objective and specific while drawing conclusions. Future studies should use a standardised definition of violent communication to get an accurate prevalence estimate of the problem and more valid information on the associated factors and impact of violent communication. Most finalised studies operationalised verbal and non-verbal violence to include covert (for example, destructive criticisms, staring with anger, making rude remarks, clenching of fists etc.) and overt forms of violence (for example, screaming, shouting, slapping, pushing etc.). In studies where the prevalence of covert violence was given separately, the authors did not take prevalence estimates of overt verbal/non-verbal violence. But the prevalence estimate extracted from a few studies also included overt forms of violence. This could have influenced the present review's systematic review and meta-analysis results. Therefore, there is a need for future studies focusing on the prevalence, associated factors and impact of 'violent communication' in specific, which in turn would mainly consider passive forms of aggression through words and body language.

The phenomenon of violent communication profoundly varies with different cultural contexts, laws, and policies within various organisations. Therefore, the findings of the present review might not be relevant in other countries. In figuring out the associated factors of violent communication, the authors considered aspects that were not necessarily statistically proven as factors/predictors (i.e., the factors that could be "causing" or that could be statistically related to the greater or lesser prevalence). Those aspects that were stated in a particular study as "possibly associated" factors/predictors, based on the qualitative

synthesis, were also considered. This included identifying characteristics of victims/perpetrators that could act as "determining" factors of whether an individual is more or less likely to be a victim of violent communication or whether an individual is more or less likely to be a perpetrator. Further quantitative studies can confirm the potential antecedents of violent communication suggested by the present review. Besides the associated factors identified in the present review, there is a probability formany other variables also to impact the prevalence of violent communication, significantly influencing the characteristics and expression of violent communication within organisations. Therefore, future studies can aim at finding such factors (if any) and its corresponding impact on the occurrence of verbal and non-verbal violence. Further empirical studies can corroborate the effect of violent communication on other dependent variables like burnout, interpersonal deviance etc. The present review did not consider violent communication through online platforms and/or other low-intense acts of incivility like gossiping, making sarcastic remarks etc. There lies the scope for focus on these aspects as well.

Studies from the healthcare sector reported emergency departments within the health setting as the most violence-prone place [32, 41, 55]. None of the studies explained the reason for this in detail, which could have helped identify the significant factors predicting violent communication in the healthcare context. The majority of the studies had claimed poor communication skills to be a significant predictor of violent communication [8, 9, 30, 32, 41, 43, 61] and had emphasised the importance of giving training to develop compassionate communication between the members of the organisation [31, 55, 62, 68, 69]. Future studies on the facilitators and barriers to compassionate communication within an organisational context should be conducted to help develop more effective training programs that in turn would help in preventing occurrences of violent communication.

Hence, based on all the above-stated points, the authors of the present review suggest that future researchers explore the socio-demographic aspects, study the long-term impact of violent communication on the victims and examine the intentions and rationale of the perpetrators. In doing so, the significant risk factors to be kept in mind while designing organisation policies and prevention programs can be identified.

There is a lack of consensus in methods used to assess publication bias for epidemiological studies [88], and there exists evidence claiming conventional funnel plots to have shown asymmetry even when there was no publication bias [89]. In addition, deciding to include published studies written in the English language only as part of the review might also be some reasons why a bias was found in the egger test. Except for ten studies for which full text was unavailable, the authors tried their best to consider studies from all possible databases and additional sources. Considering the above-stated, the authors propose that the publication bias evident from the egger test in the present review be ignored. Considering the commonality of such limitations and the consistency of findings compared with other meta-analyses related to violence, the present review inferences can be interpreted as valid.

Future researchers can explore how individuals who are part of different service sectors seek to curtail acts of violent communication within their respective organisations. It is noteworthy that the findings instigate future studies in other countries to understand the relevance of socio-cultural dimensions in influencing the prevalence of violent communication. This, in future, would allow for significant cross-national comparisons that seek to clarify whether occurrences of violent communication are culture-specific or generic.

5. Conclusion

The present review has provided a reliable prevalence estimate of violent communication for major service sectors of India. As evident from the results, the prevalence of any type of violent communication in India is very high. Considering the delirious impact of verbal and non-verbal violence on the victims, it becomes critical for the managers of the organisations, especially those from the healthcare and educational sector, to advocate practices that protect their human resources from the experience of violent communication. The review facilitates more appropriate context-specific interventions to be put in place for dealing with violent communication within each organisational sector. With societal service being a mandatory mission for starting any organisation, it can be inferred that assessing the prevalence of violent communication within organisations would be an indirect method to appraise the effectiveness of service-oriented reforms in any country.

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