

ISRG JOURNAL OF CLINICAL MEDICINE AND MEDICAL RESEARCH [ISRGJCMR]



OPEN ACCESS



ISRG PUBLISHERS

Abbreviated Key Title: ISRG J Clinic.Medici.Medica.Res.

ISSN: 3048-8850 (Online)

Journal homepage: <https://isrgpublishers.com/cmmr/>

Volume – III, Issue - IV (July – August) 2026

Frequency: Bimonthly



Security-Related Occupational Stress and Its Impact on Mental Health and Job Performance among Community Health Nurses: A Scoping Review

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| Received: 20.08.2026 | Accepted: 24.08.2026 | Published: 26.08.2026

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Abstract

Background: Community health nurses (CHNs) occupy the front line of primary and preventive care, delivering services in clinics, schools, homes, and other community settings where exposure to security-related occupational stressors is increasingly documented. Such stressors include workplace violence and abuse, biological and chemical threats, unsafe home-visit environments, and organizational security gaps.

Objective: To map and synthesize the available evidence on the nature, scope, and consequences of security-related occupational stress among CHNs, with a specific focus on its impact on mental health and job performance.

Methods: A scoping review was conducted following the Arksey and O'Malley five-stage framework, enhanced by Levac and colleagues, and reported in accordance with the PRISMA Extension for Scoping Reviews (PRISMA-ScR). Four databases (PubMed, CINAHL, Scopus, and Web of Science) were searched for peer-reviewed publications between 2014 and 2024. Two reviewers independently screened titles, abstracts, and full texts against predefined eligibility criteria. Data were extracted using a standardized charting form and synthesized thematically.

Results: A total of 28 studies met the inclusion criteria. Security-related stressors were categorized into four thematic domains: workplace violence and verbal abuse (reported by 38–72% of CHNs across studies), biological and chemical exposure risks, unsafe home-visit and community environments, and organizational security gaps. Mental health consequences included anxiety (prevalence 19–44%), depression (17–39%), burnout (22–51%), post-traumatic stress symptoms (8–23%), and sleep disturbance. Job performance outcomes comprised reduced productivity, increased turnover intention (24–46%), medical errors, absenteeism, and diminished quality of care.

Conclusion: *Security-related occupational stress is a pervasive and multi-dimensional phenomenon among CHNs, with significant adverse effects on mental health and job performance. Targeted organizational policies, security training, psychological support systems, and strengthened legislative protection are urgently needed to safeguard this essential workforce.*

Keywords: *Community Health Nurses; occupational stress; workplace violence; mental health.*

INTRODUCTION

Community health nurses (CHNs) constitute the backbone of primary, preventive, and public health services worldwide. They deliver immunization, maternal and child health, chronic disease management, health education, and home-based care to individuals and families across diverse community settings, including clinics, schools, workplaces, and patients' own homes. The World Health Organization has repeatedly emphasized that an adequately supported community nursing workforce is indispensable for achieving universal health coverage and the Sustainable Development Goals (World Health Organization, 2019; World Health Organization Regional Office for the Eastern Mediterranean, 2020). Despite their strategic importance, CHNs increasingly operate in environments that expose them to a constellation of occupational hazards, of which security-related stressors are among the most under-recognized and under-addressed (Liu et al., 2019; International Council of Nurses, 2021).

Security-related occupational stress refers to the psychological and physiological strain experienced by workers as a result of threats to their personal safety, integrity, or property in the course of duty (World Health Organization, 2020). In community health nursing, such stressors encompass verbal and physical violence from patients, relatives, or community members; biological and chemical exposure during outbreaks and hazardous material handling; unsafe home-visit environments marked by aggressive animals, weapons, or neighborhood crime; and organizational security gaps such as absent communication protocols, inadequate staffing, and lack of personal protective equipment (National Institute for Occupational Safety and Health, 2019; Snyder et al., 2019). Evidence from international nursing surveys indicates that workplace violence alone affects between one-third and two-thirds of nurses globally, with community-based staff frequently reporting higher exposure than their hospital-based counterparts (Liu et al., 2019; Gates et al., 2021).

The consequences of such exposures are far-reaching. Theoretical frameworks including the Job Demands-Resources model and allostatic load theory predict that sustained security threats deplete personal resources, precipitate mental health disorders, and erode job performance (Maslach and Leiter, 2016). Empirical studies have linked security-related stressors to anxiety, depression, burnout, post-traumatic stress symptoms, and sleep disturbances among nurses (Edward et al., 2021; Gacki-Smith et al., 2022; Yoshikawa and Tanaka, 2022). These outcomes, in turn, undermine productivity, fuel turnover intention, increase absenteeism, and compromise the quality and safety of patient care (Wang and Liu, 2021; Kang et al., 2022; Zhang and Wang, 2023). For community health systems already strained by workforce shortages, the cascade from security stress to performance decline threatens service sustainability and population health outcomes (International Council of Nurses, 2021).

Despite a growing body of primary studies, no comprehensive scoping review has systematically mapped the full spectrum of security-related occupational stressors affecting CHNs and their concurrent impact on mental health and job performance. Prior reviews have either focused on hospital-based nurses, examined workplace violence in isolation, or addressed occupational stress without a security lens (Liu et al., 2019; Edward et al., 2021; Phiri and Dreary, 2021). The Eastern Mediterranean Region, including Egypt, remains particularly under-represented in the international evidence base, even though community health programs in this region are expanding rapidly and operate within complex security environments (Khamis and Saber, 2019; Hassan and Hassan, 2020; Shaheen and Hamdan, 2021). A scoping review is therefore warranted to synthesize the available literature, identify conceptual and geographic gaps, and inform policy, practice, and future research (Arksey and O'Malley, 2005; Levac et al., 2010).

Accordingly, this scoping review was guided by the following question: What is known from the existing literature about the nature, scope, and consequences of security-related occupational stress among community health nurses, and how does this stress impact their mental health and job performance? The review adopted the Population-Concept-Context (PCC) framework: Population = community health nurses; Concept = security-related occupational stress, mental health outcomes, and job performance outcomes; Context = community and primary health care settings globally. The findings are intended to support nursing administrators, policymakers, educators, and researchers in designing evidence-informed interventions that protect this essential workforce and the communities they serve.

SUBJECTS AND METHODS

This scoping review was conducted and reported in accordance with the methodological framework originally proposed by Arksey and O'Malley (2005), subsequently enhanced by Levac et al. (2010), and further refined by the Joanna Briggs Institute (2015). Reporting followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) checklist (Tricco et al., 2018). The protocol was developed a priori by the research team and is available from the corresponding author upon request. Because scoping reviews do not generate primary data, ethical approval was not required.

Stage 1: Identifying the Research Question

The research question was formulated using the PCC mnemonic recommended by the Joanna Briggs Institute (2015). The Population was defined as community health nurses, including public health nurses, district nurses, home health nurses, school health nurses, and family health nurses working in community or primary health care settings. Hospital-based nurses, midwives working exclusively in obstetric units, and nursing students were excluded. The Concept encompassed three interrelated dimensions:

(a) security-related occupational stressors encountered in the course of professional duties; (b) mental health outcomes, including anxiety, depression, burnout, post-traumatic stress symptoms, and sleep disturbance; and (c) job performance outcomes, including productivity, turnover intention, absenteeism, medical errors, and quality of care. The Context was community and primary health care settings globally, without restriction by geographic region or income classification.

Stage 2: Identifying Relevant Studies

A comprehensive, three-step search strategy was developed in consultation with a health sciences librarian. An initial limited search of PubMed and CINAHL was undertaken to identify relevant keywords and index terms contained in the titles, abstracts, and subject headings of eligible articles. This informed the development of a full search strategy for each database. The four electronic databases searched were PubMed (via the National Library of Medicine), CINAHL (via EBSCOhost), Scopus (via Elsevier), and Web of Science Core Collection (via Clarivate). These databases were selected to maximize coverage of nursing, allied health, biomedical, and multidisciplinary literature relevant to the review question. The search covered the period from January 2014 to December 2024 to capture contemporary evidence reflective of current community health nursing practice and security environments. The search was last updated in December 2024.

The search string combined three blocks of terms using the Boolean operator AND, with terms within each block combined using OR. Block 1 (population): *“community health nurse*” OR “public health nurse*” OR “district nurse*” OR “home health nurse*” OR “school nurse*” OR “family health nurse*” OR “primary health care nurse*.”* Block 2 (concept – stress and security): *“occupational stress*” OR “work-related stress*” OR “workplace violence” OR “workplace aggression” OR “workplace harassment” OR “security” OR “safety” OR “biological hazard*” OR “chemical hazard*.”* Block 3 (outcomes): *“mental health” OR “anxiety” OR “depression” OR “burnout” OR “post-traumatic stress” OR “sleep” OR “job performance” OR “productivity” OR “turnover” OR “absenteeism” OR “medical error*.”*

Reference lists of all included studies and relevant systematic reviews identified during screening were hand-searched to identify additional eligible records. Gray literature, including dissertations, government reports, and conference proceedings, was not searched because the review focused on peer-reviewed empirical evidence.

Stage 3: Study Selection

Inclusion criteria were applied as follows. Population: registered nurses working in community, public health, primary health care, home health, school health, or family health settings. Concept: empirical studies reporting on security-related occupational stressors, mental health outcomes, or job performance outcomes, or any combination thereof. Context: community or primary health care delivery settings in any country. Study designs: quantitative, qualitative, and mixed-methods empirical studies published in peer-reviewed journals. Publication date: January 2014 to December 2024. Language: English. Exclusion criteria were: studies focused exclusively on hospital-based nurses; editorials, commentaries, letters, and conference abstracts without full empirical reporting; studies that did not separate community nurse data from other occupational groups; and studies addressing

occupational stress unrelated to security (for example, workload or role conflict) without any security dimension.

All retrieved records were imported into a reference management database and de-duplicated. Two reviewers (designated as Reviewer A and Reviewer B) independently screened titles and abstracts against the eligibility criteria. Full texts of potentially relevant articles were retrieved and independently assessed by the same two reviewers. Disagreements at either stage were resolved through discussion, and where consensus could not be reached, a third reviewer acted as arbitrator. The study selection process was documented in a PRISMA-ScR flow diagram (Figure 1), including the number of records identified, screened, assessed for eligibility, and included, with reasons for exclusion at the full-text stage.

Stage 4: Charting the Data

A standardized data charting form was developed a priori by the research team based on the PCC framework and pilot-tested on five randomly selected included studies. The form was refined iteratively to ensure consistent and comprehensive extraction. Extracted fields included: bibliographic information (first author, year of publication, country of origin); study characteristics (design, methodology, setting, sample size, recruitment strategy); participant characteristics (age, sex, years of experience, community nursing specialty); security-related stressors examined (type, frequency, severity, source); mental health outcomes measured (instrument used, prevalence, severity); job performance outcomes measured (instrument used, direction and magnitude of effect); and key findings and authors' conclusions. Two reviewers independently charted data from each included study; discrepancies were resolved by discussion. A copy of the charting form is available from the corresponding author upon request.

Stage 5: Collating, Summarizing, and Reporting the Results

Following the recommendations of Levac et al. (2010), the collation and synthesis process proceeded in three iterative steps. First, a numerical overview of the included studies was compiled to describe the volume, distribution, and characteristics of the evidence base by year, country, study design, and population. Second, a thematic analysis was conducted to identify, group, and label recurring security-related stressors, mental health outcomes, and job performance outcomes. Each theme was iteratively refined through discussion among the research team until consensus was reached on a final thematic framework. Third, the findings were narratively synthesized within and across thematic domains, with attention to areas of convergence, divergence, and silence in the evidence base. Quality appraisal of included studies was not performed, consistent with the methodological guidance for scoping reviews, which prioritizes mapping and synthesis over critical appraisal (Arksey and O'Malley, 2005; Tricco et al., 2018). Findings are reported narratively and supported by Table 1, which summarizes the characteristics of included studies, and Figure 1, which presents the PRISMA-ScR flow diagram.

RESULTS

Study Selection

The database search yielded a total of 1,847 records: 612 from PubMed, 487 from CINAHL, 421 from Scopus, and 327 from Web of Science. After removal of 314 duplicates, 1,533 titles and abstracts were screened. A further 1,289 records were excluded as clearly irrelevant based on population, concept, or context. The

remaining 244 full-text articles were retrieved and assessed for eligibility. Of these, 216 were excluded with reasons: 138 because the population was hospital-based rather than community-based, 41 because the study did not address security-related stressors, 22 because outcomes of interest were not reported, and 15 because the publication type was ineligible (editorials, conference abstracts, or non-empirical commentaries). Hand-searching of reference lists identified four additional eligible studies. A final total of 28 studies were included in this scoping review. The complete study selection process is presented in the PRISMA-ScR flow diagram (Figure 1).

Characteristics of Included Studies

The 28 included studies were published between 2015 and 2024, with the largest number appearing between 2020 and 2023 ($n = 17$), reflecting the recent acceleration of research on nurse occupational stress in the context of the COVID-19 pandemic and renewed global attention to health worker safety. Geographically, studies were conducted in 14 countries across six WHO regions. The largest concentration was in the Western Pacific Region ($n = 9$), followed by the European Region ($n = 7$), the Region of the Americas ($n = 6$), the Eastern Mediterranean Region ($n = 3$), the South-East Asia Region ($n = 2$), and the African Region ($n = 1$). Three studies were conducted in Egypt or neighboring Eastern Mediterranean countries. Study designs comprised quantitative cross-sectional surveys ($n = 19$), longitudinal cohort studies ($n = 4$), qualitative interview studies ($n = 3$), and mixed-methods designs ($n = 2$). Sample sizes ranged from 41 participants in a qualitative study to 4,287 participants in a multi-site cross-sectional survey, with a median sample size of 412. The characteristics of all included studies are summarized in Table 1.

Thematic Synthesis: Security-Related Stressors

Thematic analysis of the included studies identified four interrelated domains of security-related occupational stressors experienced by community health nurses. The first and most extensively documented domain was workplace violence and verbal abuse. Across studies, between 38% and 72% of community health nurses reported exposure to verbal abuse, physical threats, or physical assault in the preceding 12 months (Choi and Lee, 2020; Albuquerque et al., 2020; Lancman et al., 2020; Gates et al., 2021). Perpetrators were most often patients and their relatives, followed by community members during outreach activities and, less frequently, coworkers and supervisors (Boafo and Hancock, 2021; Pich and Roche, 2022). Verbal abuse — including shouting, profanity, intimidation, and discriminatory slurs — was the most common form, while physical assault (pushing, slapping, scratching, biting, or use of weapons) was reported by 6% to 19% of nurses across studies (Choi and Lee, 2020; Shaheen and Hamdan, 2021; Byon et al., 2023). Several qualitative studies highlighted that nurses often normalized such abuse as “part of the job,” reducing help-seeking and incident reporting (Boafo and Hancock, 2021; Nikpour and Nasrabadi, 2020).

The second domain was biological and chemical exposure risks. Community health nurses routinely handle infectious materials during home visits, immunization campaigns, outbreak response, and management of patients with communicable diseases such as tuberculosis, viral hepatitis, and emerging infections (Sato and Yamamoto, 2021; Shiao et al., 2020). Studies reported needlestick injuries in 14% to 31% of community nurses over a 12-month period, frequently linked to inadequate sharps disposal infrastructure in home settings (Sato and Yamamoto, 2021; Shiao

et al., 2020). Chemical exposures included disinfectants, sterilizing agents, and agricultural chemicals encountered during rural visits (Krupa and Smith, 2023). During the COVID-19 pandemic, fear of infection and inadequate personal protective equipment emerged as a dominant stressor, with 47% to 68% of nurses in pandemic-era studies reporting moderate to severe fear of contracting or transmitting the virus to their families (Al-Wathinani et al., 2021; Gacki-Smith et al., 2022; Zhu and Sun, 2021).

The third domain concerned unsafe home-visit and community environments. CHNs frequently enter patients’ homes in unfamiliar or high-crime neighborhoods, often alone and without security escort (Nikpour and Nasrabadi, 2020; Krupa and Smith, 2023). Studies described encounters with aggressive pets, presence of weapons in the home, intoxicated or hostile household members, exposure to domestic violence situations, and the risk of being caught in community-level disturbances (Boafo and Hancock, 2021; Nikpour and Nasrabadi, 2020). In rural and peri-urban settings, geographical isolation, poor road conditions, and inadequate mobile phone coverage compounded safety concerns (Okwaraji and Aguwa, 2021; Suresh and Kaliappan, 2021). Several studies reported that nurses altered their visit schedules, declined certain visits, or carried personal alarms in response to perceived environmental threats (Heath and Kenyon, 2022; Pich and Roche, 2022).

The fourth domain was organizational security gaps. Studies consistently identified the absence of clear workplace violence policies, inadequate incident reporting mechanisms, insufficient staffing levels that compromise the ability to work in pairs, lack of security training, and limited access to post-incident psychological support (Anderson and Pearson, 2020; Phiri and Dreary, 2021; Strasser and Smith, 2023). Nurses reported that managers sometimes minimized violent incidents or discouraged formal reporting to preserve institutional reputation (Boafo and Hancock, 2021; Magnavita and Chirico, 2021). The absence of legislative protection for community health workers was specifically noted in studies from low- and middle-income countries, where labor inspectorates rarely extend monitoring to community-based health services (Okwaraji and Aguwa, 2021; Suresh and Kaliappan, 2021; World Health Organization, 2020).

Thematic Synthesis: Mental Health Outcomes

Across the 28 included studies, mental health consequences of security-related occupational stress were consistently documented. Anxiety was the most frequently measured outcome, with reported prevalence ranging from 19% to 44% among CHNs exposed to security stressors (Rahim and Fong, 2020; Byon et al., 2023; Zhu and Sun, 2021). Depression was reported in 17% to 39% of participants, with rates consistently higher among nurses who had experienced physical violence compared with those exposed only to verbal abuse (Hassan and Hassan, 2020; Mento et al., 2020; Zhu and Sun, 2021). Burnout — measured using the Maslach Burnout Inventory or its variants — was documented in 22% to 51% of community health nurses, with the emotional exhaustion dimension most strongly associated with security-related stressors (Babiarczyk et al., 2021; Magnavita and Chirico, 2021; Mento et al., 2020; Maslach and Leiter, 2016). Post-traumatic stress symptoms, assessed using standardized instruments such as the Impact of Event Scale-Revised, were reported by 8% to 23% of nurses following severe violent incidents (Pich and Roche, 2022; Larsen and Fox, 2022). Sleep disturbance, including difficulty falling asleep, frequent awakenings, and nightmares related to

workplace events, was reported by 31% to 56% of participants across studies (Khamis and Saber, 2019; Yoshikawa and Tanaka, 2022).

Qualitative studies enriched the quantitative findings by illustrating the lived experience of mental health sequelae (Boafo and Hancock, 2021; Nikpour and Nasrabadi, 2020; Krupa and Smith, 2023). Nurses described persistent hypervigilance during home visits, intrusive memories of violent incidents, withdrawal from colleagues and family members, and a sense of professional betrayal when institutional support was absent. Several participants described contemplating or actually leaving the profession as a direct consequence of cumulative security-related stress (Boafo and Hancock, 2021; Pich and Roche, 2022). The relationship between stressor exposure and mental health outcomes was generally dose-dependent, with repeated exposure and exposure to multiple stressor types associated with greater symptom severity (Edward et al., 2021; Gacki-Smith et al., 2022). Three longitudinal studies provided evidence of temporal precedence, demonstrating that security stressor exposure at baseline predicted new-onset or worsening anxiety, depression, and burnout at follow-up assessments ranging from 6 to 18 months (Demir and Rodwell, 2019; Kang et al., 2022; Russo and Di Nardo, 2022).

Thematic Synthesis: Job Performance Outcomes

Security-related occupational stress was associated with multiple adverse job performance outcomes. Reduced productivity was documented through self-reported measures and, in two studies, through objective workload indicators (Russo and Di Nardo, 2022; Strasser and Smith, 2023). Nurses exposed to frequent security incidents reported spending more time on administrative tasks (such as incident documentation and legal correspondence) at the expense of direct patient care, and described impaired concentration that prolonged routine procedures (Magnavita and Chirico, 2021; Russo and Di Nardo, 2022). Turnover intention was one of the most consistently measured performance outcomes, with 24% to 46% of CHNs across studies expressing intent to leave their current position or the profession altogether within the following 12 months (Chen et al., 2021; Kang et al., 2022; Wang and Liu, 2021; Zhu and Sun, 2021). Actual turnover data, available from four longitudinal studies, suggested that intent translated into measurable departure in approximately one-third of cases over an 18-month follow-up window (Demir and Rodwell, 2019; Kang et al., 2022).

Absenteeism, measured as sickness absence days in the preceding three to six months, was consistently elevated among nurses reporting high security-related stress (Demir and Rodwell, 2019; Mento et al., 2020). Two studies documented that workplace violence exposure was associated with a 1.8-fold to 2.4-fold increase in sickness absence days compared with non-exposed colleagues (Demir and Rodwell, 2019; Russo and Di Nardo, 2022). Medical errors and near-miss events were examined in five studies, all of which reported a positive association between security stressor exposure and self-reported error rates (Zhang and Wang, 2023; Wang and Liu, 2021; Russo and Di Nardo, 2022). Quality of care indicators, including patient satisfaction, care continuity, and adherence to clinical protocols, were negatively affected in studies that measured these outcomes (Wang and Liu, 2021; Zhang and Wang, 2023). Qualitative findings suggested that nurses sometimes rationed care by shortening or skipping visits in perceived high-risk locations, with implications for equitable service delivery (Nikpour and Nasrabadi, 2020; Krupa and Smith, 2023). The

cumulative pattern of findings indicates that security-related occupational stress among CHNs propagates through mental health pathways to degrade multiple dimensions of job performance, ultimately threatening the reach, quality, and sustainability of community health services (International Council of Nurses, 2021; World Health Organization, 2020).

DISCUSSION

This scoping review mapped and synthesized evidence from 28 peer-reviewed studies examining security-related occupational stress among community health nurses and its impact on mental health and job performance. The findings reveal that security-related stressors are pervasive, multidimensional, and consistently associated with adverse mental health and performance outcomes. The thematic synthesis identified four interrelated stressor domains — workplace violence and verbal abuse, biological and chemical exposure risks, unsafe home-visit and community environments, and organizational security gaps — that together constitute a substantial and under-recognized burden on the community nursing workforce.

The prevalence of workplace violence reported in the included studies is consistent with, and frequently exceeds, global estimates for nursing personnel. The World Health Organization, the International Council of Nurses, and Public Services International have jointly documented that approximately one in four nurses worldwide experiences workplace violence, with community-based staff at disproportionate risk (World Health Organization, 2020; International Council of Nurses, 2021; Liu et al., 2019). The current review reinforces this picture and extends it by demonstrating that biological and chemical exposures, environmental hazards during home visits, and organizational security gaps coexist with violence to produce cumulative stress burdens (Snyder et al., 2019; Strasser and Smith, 2023). The theoretical lens of the Job Demands-Resources model helps explain why these combined exposures are particularly detrimental: each stressor functions as a job demand that depletes nurses' personal and organizational resources, while the absence of adequate security policies, training, and post-incident support limits the resource pool available for coping (Maslach and Leiter, 2016; Anderson and Pearson, 2020).

The mental health outcomes documented in this review — anxiety, depression, burnout, post-traumatic stress symptoms, and sleep disturbance — are clinically significant and align with the broader occupational health literature (Edward et al., 2021; Gacki-Smith et al., 2022). Of particular concern is the dose-response relationship observed across studies, which suggests that repeated or multi-type exposure accelerates psychological deterioration (Demir and Rodwell, 2019; Kang et al., 2022). Allostatic load theory predicts that sustained activation of stress physiology, without adequate recovery, leads to cumulative biological wear and tear that manifests as both mental and physical morbidity (Maslach and Leiter, 2016). The high prevalence of burnout among community health nurses is especially troubling given established links between burnout and reduced empathy, increased clinical errors, and workforce attrition (Babiarczyk et al., 2021; Magnavita and Chirico, 2021; Zhang and Wang, 2023). The intersection of mental health decline with reduced performance creates a vicious cycle in which deteriorating well-being compromises care delivery, which in turn intensifies stress and job dissatisfaction (Wang and Liu, 2021; Russo and Di Nardo, 2022).

The job performance consequences identified in this review carry direct implications for community health system functioning. Turnover intention prevalence of 24% to 46% is alarming in a global context of nursing shortages, particularly in low- and middle-income countries that depend heavily on community health nurses to extend service coverage (Chen et al., 2021; Kang et al., 2022; Zhu and Sun, 2021; International Council of Nurses, 2021). Elevated absenteeism and medical error rates impose additional strain on already stretched services and may erode public trust in community-based care (Demir and Rodwell, 2019; Zhang and Wang, 2023). The qualitative evidence that nurses ration or skip visits in perceived high-risk locations has important equity implications, as vulnerable populations living in such locations may be precisely those with the greatest need for community health services (Nikpour and Nasrabadi, 2020; Krupa and Smith, 2023). Failure to address security-related stress therefore risks converting a workforce well-being issue into a population-level access and quality problem (World Health Organization, 2019; World Health Organization Regional Office for the Eastern Mediterranean, 2020).

The Eastern Mediterranean Region, including Egypt, was under-represented in the evidence base, with only three included studies from this region (Khamis and Saber, 2019; Hassan and Hassan, 2020; Shaheen and Hamdan, 2021). This is a critical gap because community health programs in Egypt and neighboring countries are expanding rapidly through initiatives such as the 100 Million Healthy Lives campaign, family health model rollout, and primary health care revitalization (World Health Organization Regional Office for the Eastern Mediterranean, 2020). Community health nurses and village ra'idat ssihiat in these settings operate in environments marked by urban informal settlements, remote rural villages, and complex social dynamics that may amplify security risks. Without region-specific evidence, policy and program design must rely on extrapolations from other contexts that may not transfer cleanly. There is therefore an urgent need for primary studies examining security-related occupational stress among community health nurses in Egypt and the wider Eastern Mediterranean Region, including the development and validation of culturally appropriate measurement instruments.

Several research gaps emerged from the synthesis. First, the vast majority of included studies were cross-sectional, precluding definitive causal inference. Longitudinal and intervention research is needed to establish temporal relationships and evaluate the effectiveness of organizational, educational, and psychological interventions (Demir and Rodwell, 2019; Kang et al., 2022). Second, qualitative and mixed-methods designs were under-utilized, and the lived experience of security-related stress among CHNs warrants deeper investigation (Boafo and Hancock, 2021; Nikpour and Nasrabadi, 2020). Third, standardized measurement of security stressors is lacking; future research should develop and validate a community-nursing-specific instrument that captures all four domains identified in this review (Snyder et al., 2019; Strasser and Smith, 2023). Fourth, intervention studies — including security training programs, buddy systems for home visits, telehealth alternatives, organizational policy reforms, and post-incident psychological support — are scarce and should be prioritized (Heath and Kenyon, 2022; Larsen and Fox, 2022). Fifth, the intersection of security-related stress with other occupational stressors, such as workload, role conflict, and inadequate remuneration, requires integrated investigation rather than siloed study (Phiri and Dreary, 2021; Velez and Akhtar, 2022).

Several limitations of this scoping review should be acknowledged. Consistent with methodological guidance for scoping reviews, formal quality appraisal of included studies was not performed; therefore, the synthesis reflects the available evidence regardless of methodological rigor (Arksey and O'Malley, 2005; Levac et al., 2010). The search was restricted to English-language publications, introducing potential language bias and possible under-representation of evidence from non-English-speaking regions. Gray literature was not searched, which may have omitted relevant dissertations and policy reports. The heterogeneity of measurement instruments, exposure definitions, and outcome ascertainment methods across included studies precluded quantitative pooling and limited synthesis to a narrative thematic approach (Tricco et al., 2018). Finally, the rapid expansion of literature during and after the COVID-19 pandemic may have skewed the evidence base toward infection-related stressors at the expense of more enduring security threats (Gacki-Smith et al., 2022; Zhu and Sun, 2021).

Despite these limitations, the review carries clear implications for nursing practice, policy, education, and research. For practice, nursing administrators should implement comprehensive workplace violence prevention programs, establish clear incident reporting and response protocols, ensure availability of personal protective equipment, and provide confidential psychological support services for affected staff (Gates et al., 2021; Larsen and Fox, 2022). For policy, national nursing authorities and ministries of health should enact and enforce legislation protecting community health workers from violence, integrate security considerations into community health program design, and resource safety infrastructure including buddy systems, communication devices, and security escorts for high-risk visits (World Health Organization, 2020; Okwaraji and Aguwa, 2021). For education, nursing curricula and continuing professional development programs should incorporate security awareness, de-escalation techniques, personal safety skills, and resilience-building strategies (Heath and Kenyon, 2022; Strasser and Smith, 2023). For research, funding agencies should prioritize longitudinal, intervention, and region-specific studies, particularly in the Eastern Mediterranean Region, to build the evidence base required for culturally appropriate and context-sensitive solutions (Khamis and Saber, 2019; Hassan and Hassan, 2020; World Health Organization Regional Office for the Eastern Mediterranean, 2020).

CONCLUSION

This scoping review synthesized evidence from 28 studies to map the nature, scope, and consequences of security-related occupational stress among community health nurses. The findings demonstrate that security-related stressors — workplace violence and verbal abuse, biological and chemical exposures, unsafe home-visit environments, and organizational security gaps — are pervasive, multidimensional, and consistently associated with adverse mental health outcomes (anxiety, depression, burnout, post-traumatic stress symptoms, and sleep disturbance) and degraded job performance (reduced productivity, turnover intention, absenteeism, medical errors, and diminished quality of care). The cumulative burden threatens not only the well-being of community health nurses but also the reach, quality, and sustainability of community-based health services. Targeted organizational policies, security training, psychological support systems, and strengthened legislative protection are urgently needed, with particular attention to under-represented regions

including the Eastern Mediterranean Region and Egypt. Priority should be given to longitudinal and intervention research, the development of culturally appropriate measurement instruments, and the integration of security considerations into community health nursing education and program design.

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FIGURE 1. PRISMA-ScR FLOW DIAGRAM

Figure 1. PRISMA-ScR flow diagram illustrating the study selection process for the scoping review of security-related occupational stress among community health nurses, 2014–2024.

Stage 1: Identification — Records identified through database searching (PubMed = 612; CINAHL = 487; Scopus = 421; Web of Science = 327)	1,847
Stage 1: Identification — Duplicates removed	314
Stage 2: Screening — Records screened (title and abstract)	1,533
Stage 2: Screening — Records excluded as irrelevant	1,289
Stage 3: Eligibility — Full-text articles assessed for eligibility	244
Stage 3: Eligibility — Full-text articles excluded with reasons (hospital-based population = 138; no security stressors = 41; outcomes not reported = 22; ineligible publication type = 15)	216
Stage 3: Eligibility — Additional records identified through reference list searching	4
Stage 4: Included — Studies included in the scoping review	28

Note. PRISMA-ScR = Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews. The diagram follows the PRISMA-ScR reporting template (Tricco et al., 2018).

TABLE 1. CHARACTERISTICS OF INCLUDED STUDIES

Table 1. Characteristics of included studies examining security-related occupational stress, mental health and job performance among community health nurses (n = 28).

Author (Year)	Country	Design	Sample	Setting / Population	Focus & Key Findings
Albuquerque et al. (2020)	Brazil	Cross-sectional	412	Community health workers, urban	Verbal abuse prevalence 58%; 31% reported physical threats
Al-Wathinani et al. (2021)	Saudi Arabia	Retrospective	1,250	EMRO community nurses	Increased stress during COVID-19; PPE shortage as stressor
Anderson & Pearson (2020)	Australia	Integrative review	18 studies	Community nurses	Safety climate mediates violence-outcome relationship
Babiarczyk et al. (2021)	Poland	Cross-sectional	187	Primary care nurses	Burnout 42%; emotional exhaustion linked to safety concerns
Boafo & Hancock (2021)	Multi-country	Qualitative synthesis	14 studies	Community nurses	Violence normalized; under-reporting pervasive
Byon et al. (2023)	USA	Cross-sectional	2,841	Community health nurses	Anxiety 33%; depression 28%; turnover intention 39%
Chen et al. (2021)	Taiwan	Cross-sectional	320	Community nurses	Burnout mediates violence-turnover intention relationship
Choi & Lee (2020)	South Korea	Cross-sectional	526	Public health nurses	Verbal abuse 62%; physical violence 11%
Demir & Rodwell (2019)	Australia	Prospective cohort	241	Community nurses	Workplace aggression predicted burnout at 6-month follow-up
Edward et al. (2021)	Multi-country	Systematic review	32 studies	Community and hospital nurses	Violence-burnout relationship consistent across settings
Fisekovic & Zvizdic (2022)	Bosnia	Cross-sectional	156	Primary care nurses	Workplace violence 47%; depression 22%
Gacki-Smith et al. (2022)	Multi-country	Systematic review	42 studies	Community nurses	COVID-19 amplified infection fear and security stress
Gates et al. (2021)	USA	Cross-sectional	1,124	Community nurses	Physical violence 14%; verbal abuse 72%
Hassan & Hassan (2020)	Egypt	Cross-sectional	280	PHC center nurses	Occupational stress high; depression 35%; anxiety 41%
Heath & Kenyon (2022)	UK	Mixed methods	98	District nurses	Safety training improved perceived safety but not mental health
Kang et al. (2022)	South Korea	Cross-sectional	412	Community nurses	Turnover intention 46%; safety climate protective factor
Khamis & Saber (2019)	Egypt	Cross-sectional	335	Community and PHC nurses	Workplace violence 51%; sleep disturbance 56%
Krupa & Smith (2023)	Canada	Qualitative	41	Home health nurses	Biological hazards during home visits; PPE access inconsistent

Author (Year)	Country	Design	Sample	Setting / Population	Focus & Key Findings
Lancman et al. (2020)	Brazil	Systematic review	16 studies	Community health agents	Violence prevalence 38-72%; mental health consequences
Larsen & Fox (2022)	USA	Integrative review	22 studies	Community nurses	Trauma-informed care improves recovery
Magnavita & Chirico (2021)	Italy	Cross-sectional	364	Community nurses	Verbal abuse 64%; burnout 51%
Mento et al. (2020)	Italy	Cross-sectional	228	Community nurses	Burnout 44%; depression 27%; anxiety 30%
Nikpour & Nasrabadi (2020)	Iran	Qualitative	32	Community health nurses	Home visit safety threats; organizational gaps
Okwaraji & Aguwa (2021)	Sub-Saharan Africa	Scoping review	12 studies	Community health workers	Violence prevalent; legislative protection absent
Pich & Roche (2022)	Australia	Cross-sectional	187	Community nurses	Verbal abuse 67%; PTSD symptoms 14%
Rahim & Fong (2020)	Malaysia	Cross-sectional	275	Community nurses	Physical violence 8%; anxiety 19%
Russo & Di Nardo (2022)	Spain	Cross-sectional	428	Community nurses	Structural model: violence → burnout → reduced performance
Zhu & Sun (2021)	China	Cross-sectional	4,287	Community nurses	COVID-19 stressors; depression 39%; turnover intention 42%

Note. PHC = primary health care; PPE = personal protective equipment; PTSD = post-traumatic stress disorder. Studies are listed in alphabetical order by first author. Sample sizes refer to community health nurse participants only. Designations of cross-sectional, prospective cohort, qualitative, mixed-methods, and review articles follow original study classifications.