EDITORIAL

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Identity and the more things change

José Luís (Joe) Couto*†

The adage attributed to French writer Jean-Baptiste Alphonse Karr that says, "Plus ça change, plus c'est la même chose" or "The more things change, the more they stay the same", seems to be applicable to societies across our globe. Humans seem to hold the contradictory urge to innovate and progress as a species while also simultaneously resisting change. My more than 20 years in policing has taught me that this contradiction – whether biologically, psychologically, or socially constructed – holds true in the law enforcement profession.

As a journalist by training, a public affairs professional by trade, and an academic by choice, I've wondered what makes such professionals – especially police officers – tick. Spending two decades working among police leaders, civilian managers, and front-line officers has given me a front-row seat to the identity-building process in law enforcement.

In my role as Director of Government Relations with the Ontario Association of Chiefs of Police (OACP), I've spent many years working with and lobbying governments on behalf of police in the Province of Ontario. Working with cops has allowed me to appreciate the dedication and innovation (most often selfless and done without fanfare) of police officers and other law enforcement professionals. I've also observed the deep roots of the traditional police culture that stubbornly resists change. There's that very human contradiction again.

On the academic side of things, the policing profession inspired me to look into the lives of 2SLGBTQI+ police officers through my Master's work and then doctoral research on how police officers in Canada build their unique professional identities, both at Royal Roads University. All of this led to a simple conclusion for me: it's not easy being a cop.

In any profession, identity – the sense of "self" shaped by values, beliefs, and organizational culture – plays a fundamental role in how individuals perceive and perform their roles. This is especially true in policing, where officers balance their sworn duty to serve communities impartially with upholding the law, often in high-stakes and dangerous situations that shape not only their personal identities, but also the public perceptions of their profession.

Study after study on police legitimacy, trust, procedural justice, community relations, systemic racism, etc. has led me to conclude that the very essence of policing is at stake at this point in Canadian history. We need to study how we are literally constructing police officers today through recruitment, training, socialization, policymaking, and many other factors which shape the police officer and how they do their work out in the real world (where this work can literally change lives for the better or be destructive).

That's why I am delighted to be working with the amazing academic minds in this uniquely Canadian journal. The *Journal of Community Safety and Well-Being* has carved out a reputation for publishing academic work that needs to be read and actioned by those who shape law enforcement and public safety in general.

In the coming edition of the journal, I will be publishing the findings of my study *Born to be Blue? The Construction of Canadian Police Officers' Identity*. My research considers the concept of identity formation in policing as an active process, rich in changing values and contradictions. It reveals complex dynamics within Canadian law enforcement and how identity construction impacts both officers and the broader community.

Over the course of the last 20 years, I have seen a movement within policing toward a greater understanding of the role of identity in terms of what officers go through on "the job", how they cope with the demands of police work, and how they see their role in relation to their superiors, their peers, and ordinary people they inevitably interact with.

The idea that a "cop will always be a cop" may not hold true today than it was 70 years ago when things like work–life balance, community policing, evidence-informed policing, mental health and the realities of occupational stress injuries, and equity, inclusion, and diversity issues weren't the big factors they are today for today's cops.

I have had the privilege of teaching undergrad students in Justice programs at both Humber College and the University of Guelph-Humber in Toronto for years as well as teaching communication and leadership students at Royal Roads University. I'm very proud that many of my students have gone on to become the police officers they dreamed of being. Many have stayed in touch. One in particular stands out to me. This young person was a quiet and respectful student, generally average in their academic performance. Four years after graduating and being hired by a police service, they reached out to me to volunteer to be part of my doctoral research.

To say that this quiet and very pleasant young person had changed would be an understatement. In five short years, they admitted that they had become fairly distrustful of people as a rule and been thoroughly socialized into the cop culture.

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The concept of the police "brotherhood" had certainly done its job in attaching this person's sense of self to the job.

This is not a bad thing. My former student had become a good cop in terms of enforcing the law. What they struggled with was how to bring the other part of themselves that wanted to be a cop in the first place – the sense of duty and service and the goal of making a positive difference and respecting people – into their police work. With all the pressures and public scrutiny on police officers, no wonder good, young law enforcement professionals like this struggle for that balance in their sense of self.

These identity-building challenges are just as relevant in other areas – in health care, education, housing, social services, and even government – that impact people's lives. The *Journal of Community Safety and Well-Being* can play a significant role in helping law enforcement and other professions think critically about such challenges.

I encourage academics and researchers in areas related to community safety and well-being to be brave and to publish their work here so that we can get to the root of the challenges that hinder advancement and positive social change. As African American writer and social critic James Baldwin famously puts it, "The world changes according to the way people see it, and if you can alter, even by a millimeter, the way people look at reality, then you can change the world".

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REVIEW

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The role of public health in the primary prevention of interpersonal violence: A systematic review of international frameworks

Lara Snowdon*†, Zara Quigg*, Conan Leavey*

ABSTRACT

In recent years, there has been a surge of interest in violence as a public health issue. Preventing violence before it occurs and developing effective response strategies are key to achieving the United Nations Sustainable Development Goals and improving health and well-being. This systematic scoping review explores the role of public health frameworks in the primary prevention of interpersonal violence. A systematic literature search was undertaken to identify frameworks from both academic and grey literature. Extracted records (n = 17) were thematically analyzed to explore themes, divergences, and theoretical underpinnings. Most frameworks were published in the last decade by national and international public health bodies. The majority were from high-income countries and explored a range of interpersonal violence types. Nine themes were identified, which provide opportunities for violence prevention across the socio-ecological model, including: families, caregivers, and early years; early identification and support; schools, education, and skill development; safe community environments; safe activities and trusted adults; social norms and values; empowerment and equality; policy and legislation; and poverty reduction. These frameworks evidence the leadership role played by public health in the development and implementation of the primary prevention of violence. However, to effectively embed a public health approach, the review identified several areas which warrant further attention. These included redressing disparities in evidence, particularly from low-income countries; building the evidence base for addressing community and structural determinants of violence such as gender, poverty, and inequality; and investing in research which explores the implementation of primary prevention approaches.

Key Words Primary prevention; public health approach; evidence-based practice; violence prevention.

INTRODUCTION

Interpersonal violence contributes to the global burden of premature death and injury, as well as having serious, lifelong consequences for health and well-being (Krug et al., 2002). Interpersonal violence involves the intentional use of physical force or power against other persons by an individual or small group of individuals and may be physical, sexual, or psychological, or involve deprivation and neglect. Interpersonal violence can be further divided into family, partner, and community violence (Mercy et al., 2017). Preventing interpersonal violence before it occurs and developing effective response strategies are key to achieving the United Nations (UN) Sustainable Development Goals (Quigg et al., 2020), improving the health and well-being of individuals and communities, and benefitting the economy and society (WHO, 2021).

Following the 1996 World Health Assembly resolution (WHA49.25) which declared violence a major and growing public health problem across the world and the 2002 World Health Organization (WHO) *World Report on Violence and Health* (Krug et al., 2002), there has been a surge of interest in violence as a public health issue. The public health approach premises that violence can be predicted and prevented from occurring through understanding and modifying risk factors, prevention programming, policy interventions, and advocacy (Krug et al., 2002). Public health bodies from across the globe have increasingly published frameworks designed to support the implementation of a public health approach to violence prevention (i.e., Our Watch (2015), David-Ferdon et al. (2016),

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TABLE I Search terms

Framework OR "technical package"
"Public health" OR "whole system" OR "population health" OR prevent* OR "primary prevent*"
Violence OR maltreatment OR abuse

TABLE II Eligibility criteria

Inclusion Criteria	Exclusion Criteria
Available in English language.	Not available in English language.
Framework must provide information on evidence-based strategies for the primary prevention of interpersonal violence as part of a public health approach.	Not part of a wider public health approach to violence prevention.
Focused on primary prevention of interpersonal violence.	Not focused on primary prevention. Not focused on interpersonal violence prevention.
Frameworks should provide a methodology or discussion of how they have been developed through an evidence-based approach.	Not evidence based.

WHO (2016), and WHO (2019)). Typically, these frameworks provide an epidemiological analysis of violence as a public health issue, outline the process of developing a public health approach, and provide guidance on evidence-based practice for prevention.

The range of regional, national, and international frameworks seek to realize a collective ambition to apply public health concepts to the management of a problem historically regarded as a criminal justice concern (Krug et al., 2002). However, there is large variation in the approach, content, and structure of these frameworks. At a time when the public health approach to violence prevention is becoming increasingly prominent (WHO, 2022), an exploration of the public health role, including an analysis of the messaging on primary prevention, is an important contribution. Particularly, in supporting the adoption, implementation, and embedding of a public health approach to violence prevention across countries, that builds on the international evidence.

METHOD

A systematic literature search was undertaken to identify violence prevention frameworks from academic and grey literature. The search included two phases. Phase one (December 2022) included a search of academic databases (CINAHL, Medline, and Web of Science) using a defined search strategy (Table I) and eligibility criteria (Table II). Phase two (January 2023) identified grey literature through hand searching relevant organizational websites, international evidence repositories, and Google, in addition to contacting international experts to request relevant records. Backward searches were completed for all records that met the inclusion criteria.

The first author screened records for eligibility, extracted data, and removed duplicates. All records were assessed against the inclusion/exclusion criteria and for accuracy and consistency by the second author. Where there were multiple papers describing one framework, these were clustered together for the purpose of analysis. The systematic review was guided by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) checklist (PRISMA, 2015), outlined in the flow diagram (Figure 1). Following full-text review, 17 frameworks were included. The extracted data were analyzed using thematic analysis (Braun & Clarke, 2006).

RESULTS

Framework Characteristics

Most records were published by national public health agencies (53%) and international organizations (24%). The remaining records were regional (6%) (i.e., a group of countries) or sub-national (18%) (state or region). Analysis of publication dates demonstrates that there has been a rapid increase in the number of frameworks published in the past 10 years (82%).

Aside from international frameworks (24%), geographic[1] distribution was uneven, with over half from the Region of the Americas (53%), two from the Western Pacific Region (12%), and one each from the African (6%) and European Regions (6%). No frameworks were identified from the Eastern Mediterranean or Southeast Asian Regions. Most frameworks were from high-income countries (59%), and 18% were from middle-income countries.[2] No frameworks were identified from low-income countries. However, one international framework (Mercy et al., 2008) is a framework for preventing violence in developing countries.

Violence Type and Target Group

Most frequently, frameworks (35%) focused on violence against women (VAW). Within this category, one framework from Australia focused specifically on violence against Aboriginal and Torres Strait Islander women and their children (Our Watch, 2018). Other violence types included interpersonal violence (18%), youth violence (12%), violence against

[1]World Health Organization regions.
[2]World Bank country classification by income.

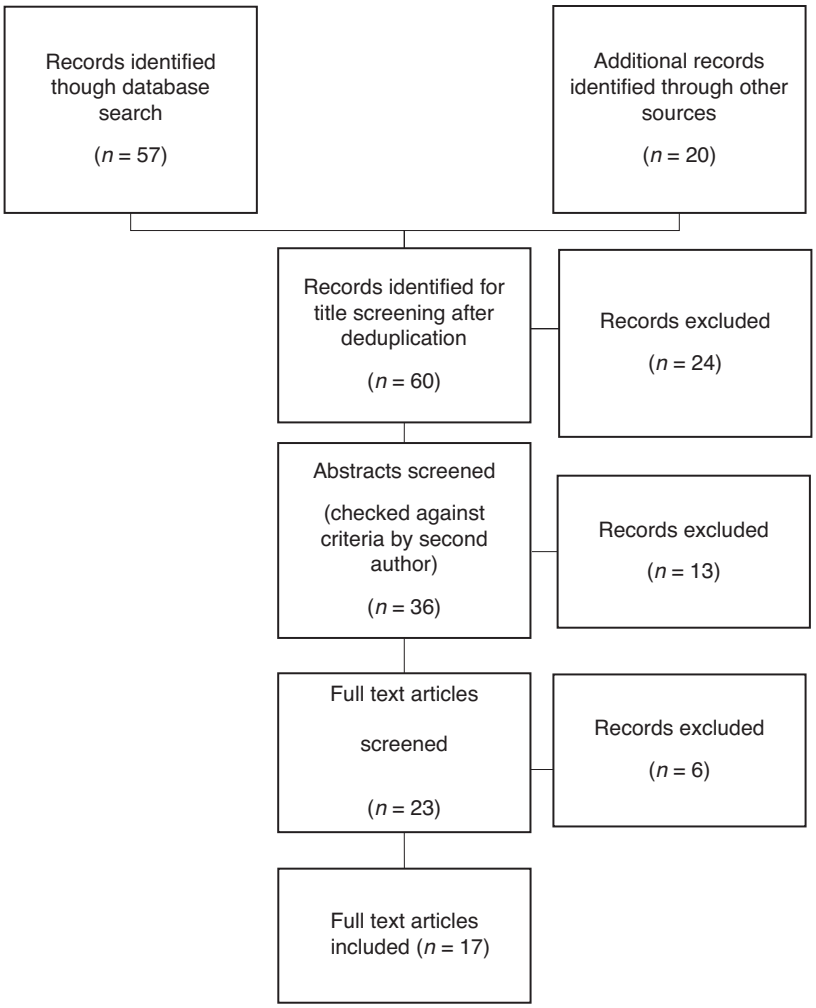

FIGURE 1 PRISMA flow diagram of search and inclusion process.

children (12%), sexual violence (6%), intimate partner violence (IPV) (6%), family violence (6%), and gun violence (6%).

Primary Prevention Strategies

All frameworks promoted the implementation of multi-component violence prevention programming as part of a whole-system approach. According to public health science, to generate population scale impact, an integrated, systemic model should be utilized in which there are multiple theory and evidence-based interventions implemented across the socio-ecological model (Krug et al., 2002). This model aims to address the range of factors that can contribute to violence across the life course at an individual, relationship, community, and societal level. Given the range of modifiable, interrelated risk and protective factors for violence, there is growing evidence that multi-component approaches which address multiple factors across the socio-ecological model are more effective in preventing violence than those with a single component (Degue et al., 2014; Nation et al., 2003). Thus, through a whole-system approach, interventions function together to reinforce the conditions for interpersonal violence prevention in a comprehensive and sustainable way (David-Ferdon et al., 2016).

To promote this multi-component programming, all frameworks provided a range of strategies for the primary prevention of violence, as part of a public health approach. Through thematic analysis, nine themes were identified that describe the range of violence prevention strategies included in the frameworks across all forms of interpersonal violence represented. The themes are organized across the socio-ecological model (Figure 2).

Families, caregivers, and early years

This theme was represented commonly within the frameworks (David-Ferdon et al., 2016; Matzopoulos & Myers, 2014; Mercy et al., 2008; Our Watch, 2021; Wells & Ferguson, 2012; WHO, 2016). It describes how investing in a child's early years can benefit health and well-being across the life course, as a protective factor for violence prevention (Darling et al., 2020; WHO, 2016). Examples of interventions identified included antenatal and postnatal care, childhood home visitation, parenting skills and family relationship programs, affordable and accessible childcare, pre-school enrichment, quality education in the early years, domestic abuse prevention programs, and enhanced services to support families/children with parents in prison.

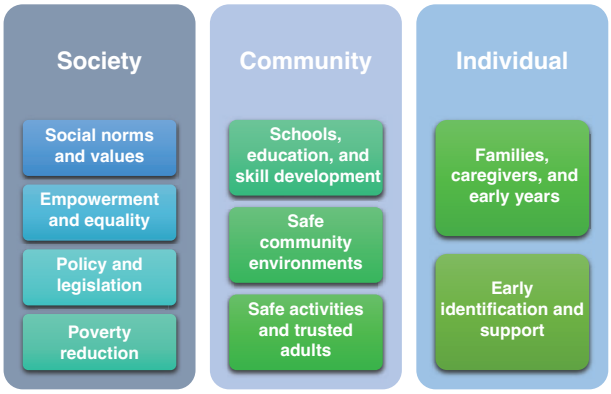

FIGURE 2 Violence primary prevention themes mapped against the socio-ecological model.

Early identification and support

Many frameworks (Basile et al., 2016; David-Ferdon et al., 2016; Matzopoulos & Myers, 2014; Niolon et al., 2017; UNDP, 2014; Wells & Ferguson, 2012; WHO, 2016, 2019) stressed the importance of early identification and support to ensure that individuals are identified and receive appropriate support when they are at-risk of and/or have experienced violence. While this is classified as secondary prevention, it plays a critical role in complementing primary prevention services which are often delivered universally, as many people may have experienced violence or trauma during childhood or adulthood. Interventions included helplines, trauma-informed training, specialist services, identification and referral in healthcare and custody settings, and safeguarding.

Schools, education, and skill development

Education settings play a crucial role in violence prevention. These are places where children and young people socialize, learn about relationships, develop a sense of belonging, and acquire knowledge, skills, and experiences (WHO, 2016). The majority of frameworks identified education as a key setting for prevention (Basile et al., 2016; David-Ferdon et al., 2016; Fortson et al., 2016; Mercy et al., 2008; Niolon et al., 2017; Our Watch, 2021; Rajan et al., 2022; Tekkas Kerman & Betrus, 2020; UN Women, 2015; WHO, 2016, 2019). Strategies for violence prevention included increasing children's access to effective, gender-equitable education, socio-emotional learning and life-skills training, whole school approaches, schemes to prevent exclusion, trauma-informed schools, bystander programs, relationship and dating violence prevention programs, and ensuring that education environments are safe, enabling, and free from violent punishment.

Safe activities and trusted adults

Children and young people's risk of becoming involved in violence can be reduced through strong connections with caring adults and undertaking activities that encourage skill development (including development of healthy relationships), creativity, learning, and growth (David-Ferdon et al., 2016; Mercy et al., 2008; Niolon et al., 2017; WHO, 2016). These relationships can have a positive influence on children and young people's choices and prevent them from experiencing violence and engaging in health risk behaviours (e.g., using alcohol and drugs/harmful sexual behaviour) (David-Ferdon et al., 2016). Activities included play, sports, arts, and cultural activities; grassroots community-led schemes (particularly in marginalized communities); after-school programs; and youth work. These activities are used universally and/or targeted toward those who have experienced or are at-risk of violence to prevent further violence/risks.

Safe community environments

Many frameworks included a focus on the provision of safe community environments to ensure that people feel safe where they live, work, and play (Abt, 2017; Basile et al., 2016; David-Ferdon et al., 2016; Niolon et al., 2017; Oregon Department of Human Services, 2005; Rajan et al., 2022; Tekkas Kerman & Betrus, 2020; WHO, 2016, 2019). Communities can include places with any defined population with shared characteristics and environments. Characteristics of a community's environment can influence how a person/group acts, creating a context that can have a positive or negative effect on their behaviour. Approaches that modify the characteristics of these places are considered community-level ways of working (WHO, 2016). Examples included improving the built environment to create appealing, safe, and accessible community spaces or identifying violence hotspots to inform the development and targeting of prevention activity, including alcohol-licensing decisions, transport planning, or policing.

Social norms and values

Group and individual behaviours are influenced by social norms and values. For example, social norms and values guide attitudes and behaviours around child-rearing, gender roles, sexuality, inclusion, and the acceptability of violence within a group or society. Violence prevention efforts in this area seek to strengthen social norms and values that support non-violent, respectful, nurturing, positive, and gender-equitable relationships. This type of violence prevention strategy was prominent in frameworks which seek to prevent gender-based violence (Basile et al., 2016; Fortson et al., 2016; Mercy et al., 2008; Oregon Department of Human Services, 2005; Our Watch, 2018, 2021; Wells & Fotheringham, 2022; WHO, 2019), but also featured in other frameworks to prevent violence against children (WHO, 2016). Examples of interventions included group work to challenge adherence to restrictive and harmful social and gender norms; interventions to challenge social norms relating to child marriage; community mobilization programs; active (positive) bystander interventions; as well as social norms marketing campaigns.

Empowerment and equality

Cross-national evidence indicates that rates of violence are lower in countries where there is less inequality between groups, as social inequalities relating to gender, race, ethnicity, sexuality, disability, and migrant status increase the likelihood of violence taking place (David-Ferdon et al., 2016). In turn, violence further ingrains and perpetuates those inequalities, leaving marginalized populations more vulnerable to violence, exploitation, harm, neglect, maltreatment, trauma, and its consequences. As such, many frameworks promoted the use of primary prevention strategies which seek to promote the empowerment of women and marginalized

groups (Basile et al., 2016; Matzopoulos & Myers, 2014; Our Watch, 2018, 2021; UN Women, 2015; WHO, 2019). Examples of interventions included gender mainstreaming[3] and gender budgeting;[4] minimum basic income schemes; strengthening economic programs to promote full and equal labour force participation; and strengthening leadership opportunities, including political participation for people from marginalized groups.

Policy and legislation

A robust legislative and policy framework lays the groundwork to prevent violence, address risk factors (and promote protective factors), and legislate for employing a human rights and gender equality approach. It can also provide a structure for protecting, responding to, and supporting victims, witnesses, and children. While laws alone cannot reduce violence, implementing and enforcing them strengthens violence prevention efforts (WHO, 2016). This strategy for primary prevention was more frequent in international frameworks or those from middle-income countries, where rule of law to safeguard children and young people and marginalized groups may not be as well established (Matzopoulos & Myers, 2014; Mercy et al., 2008; Tekkas Kerman & Betrus, 2020; UN Women, 2015; WHO, 2016). Examples of policy and legislation included prohibiting violent punishment of children by parents, teachers, or other caregivers; criminalizing sexual abuse and exploitation of children; preventing alcohol misuse through minimum age purchase limits; preventing child mariage; limiting access to firearms and weapons; and increasing statutory funding for prevention programs.

Poverty reduction

The adverse impacts of violence are most severe in communities with high levels of socioeconomic deprivation. Reducing poverty and income inequality is a fundamental building block in preventing violence and improving community safety (Bourguignon, 2000). A range of frameworks included strategies to tackle poverty and socio-economic inequality as a key focus for the primary prevention of violence (Niolon et al., 2017; UNDP, 2014; WHO, 2016). Examples of interventions included minimum basic income schemes; strengthening economic programs to promote full and equal labour force participation; strengthening leadership opportunities for people from marginalized groups; and gender budgeting.

DISCUSSION

Public Health Role in Violence Prevention

In 2002, the "*World Report on Violence and Health*" (Krug et al., 2002) set out for the first time a global, public health approach to violence prevention. Since then, international bodies (e.g., WHO/UN) have invested significantly in this approach, most recently, through the development of the INSPIRE framework and technical package to prevent violence against children (WHO, 2016), and the RESPECT framework to prevent VAW (WHO, 2019). Despite the WHA recognizing violence as a major public health issue over two decades ago, our study demonstrates that while there has been a proliferation of this approach internationally, this has predominantly been in recent years, with 82% of the frameworks identified published in the past decade.

For many, the involvement of public health in the violence prevention agenda is a welcome one, particularly regarding its focus on primary prevention (Nation et al., 2021). However, for some, it represents public health "empire building" (Keithley & Robinson, 2000) or even part of a post-colonial agenda that embeds structural global inequality (Richardson, 2020). While these opinions may be uncomfortable for public health practitioners to consider, Orchowski (2019) argues that, criticisms notwithstanding, preventing violence is of such importance to promoting human health and well-being, it warrants critical attention to improve evidence, theory, and practice.

How Robust is the Evidence?

As a science-based approach which focuses on improving population health, public health is inherently interdisciplinary. Interdisciplinary research and practice can bring new insights and understanding across disciplinary boundaries to address sophisticated or so-called "wicked" problems (van Teijlingen et al., 2019), such as violence (Krug et al., 2002). This systematic review demonstrates the breadth of interdisciplinary theory and evidence that has now been collated to produce a range of strategies for primary prevention which seek to modify risk pathways for violence across the social ecology (Figure 2). However, significant gaps in the research remain which warrant attention if public health wants to truly "walk the talk" of preventing violence. Nation et al. (2021) argue that while public health has had success in tackling youth violence, by focusing on individual and interpersonal factors such as healthy relationships, developing problem solving, and diffusing interpersonal conflict (Farrell & Flannery, 2006), it has had less success in demonstrating population-level effects or diminishing race and class inequities in violence-related outcomes (Golden & Earp, 2012).

Similarly, this systematic review provides clear evidence of a global inequity in the development of public health frameworks and violence prevention research. Most frameworks identified in this study were from high-income countries, with only a small representation from middle-income countries (n = 3), and none from low-income countries. However, >90% of violence-related deaths worldwide occur in low- to middle-income countries, where the mortality rate due to violence is almost 2.5 times greater than that in high-income countries (Matzopoulos et al., 2008). Overall, there is a lack of literature exploring violence prevention interventions in low-income countries. Lester et al. (2017) suggest that despite the prevalence of sexual assault rates in Africa, Eastern Mediterranean, and Southeast Asia, most programs are implemented and evaluated in the United State of America. This global inequity should be a priority for international bodies as the implementation of violence prevention interventions is likely to differ between high and low resource settings, and in different political, cultural, and social contexts.

One of the striking messages laid out for the first time in the *World Report on Violence and Health* (Krug et al., 2002) is the extent to which all forms of violence are interlinked.

[3]Gender transformative approaches are concerned with redressing gender inequalities, removing structural barriers, such as unequal roles and rights, and empowering disadvantaged populations.

[4]Gender budgeting involves conducting a gender-based assessment of budgetary decisions.

The report presents a typology which proposes how different types of violence are fundamentally diverse expressions of the same human behaviour (Krug et al., 2002). This idea has since been developed by public health researchers, based on evidence of risk and protective factors which are shared across multiple forms of violence, and has been used to advocate for the use of approaches which address multiple, "overlapping" risk factors to prevent siloed working and improve impact (Wilkins et al., 2018).

Indeed, our study demonstrates that there is considerable homogeneity between primary prevention strategies proposed across different forms of interpersonal violence, such as investment in early years or whole school approaches. However, a notable difference was evident when examining frameworks to prevent VAW, which invoked feminist theory and placed a gender transformative approach at the heart of solutions, despite global evidence that men are more likely to perpetrate nearly *all* types of interpersonal violence than women (Fleming et al., 2015).

The WHO recommends that a "gender transformative" paradigm is used for the prevention of VAW (Brush & Miller, 2019). However, no similar recommendation is made for the prevention of other forms of violence, despite evidence that adherence to "traditional masculinity ideologies" is associated with poor health outcomes and violence perpetration for men, and increased violence victimization and poor health outcomes for women (Barker et al., 2007; Jewkes et al., 2011). Furthermore, interventions designed to increase gender-equitable attitudes and behaviours have evidenced impact on other health risk behaviours such as alcohol use, substance use, transactional sex, as well as the prevention of VAW and other forms of interpersonal violence perpetration and victimization (Coker et al., 2017; Jewkes et al., 2008). As such, this potential bias in the implementation of evidence-based primary prevention requires further scrutiny.

Challenges for Implementation

Another area which warrants attention are more pragmatic concerns regarding the implementation of a public health approach, particularly on a global scale. Vincenten et al. (2019) write how improving public health outcomes through successful uptake of evidence-based interventions is not a simple or quick task. Instead, it involves the co-ordinated efforts of public health experts to influence commissioning, decision-making, and policy. Several authors have reported barriers to achieving uptake of evidence-based practice within complex public health systems (Cairney, 2012; Damschroder et al., 2009; Oliver et al., 2014). However, there is little global research into the implementation of violence prevention programming specifically.

In one multi-agency study in Sweden, Jakobsson et al. (2012) report on a range of barriers to the implementation of IPV prevention among multi-agency professionals, including lack of knowledge and commitment, professional disillusion, and deferment of responsibility. Similarly, Matzopoulos & Myers (2014) explore successes and challenges to the implementation of the Western Cape Government's *Integrated Provincial Violence Prevention Policy Framework*. They highlight intra-departmental priorities and the impact of competing policies and directives as early barriers to implementation. However, these critical reflections on the implementation of primary prevention approaches represent a small, but growing, area of research.

Limitations

While this research comprehensively reviewed global public health frameworks for violence prevention, a key limitation is that the search was conducted in the English language. As such, there may be a range of frameworks not identified in the review.

CONCLUSION

This study explored the extent and content of international public health frameworks for violence prevention, assessing the guidance and messaging that public health bodies provide regarding the primary prevention of interpersonal violence through a public health approach. Nine primary prevention themes were identified, providing opportunities for violence prevention across the socio-ecological model. However, we identified several areas for further attention including addressing evidence gaps and tensions, and investing in research which explores the implementation of prevention approaches. Consideration of both; the common approaches across frameworks and gaps identified is critical for transforming and embedding a public health approach to violence prevention at a global and community level.

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CONFLICT OF INTEREST DISCLOSURES

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ORIGINAL RESEARCH

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Validation of group process assessment for youth who misuse substances: Group level coding

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ABSTRACT

Group interventions are commonly used for treating youth. Assessing group processes during intervention has presented challenges. The present study evaluated the psychometric properties of a group process-group level measure. This measure examined behaviours (e.g., positive or deviant) of incarcerated youth during group substance use interventions. Adolescents and counsellors completed a series of questions after each group session (n = 584 sessions). Observers rated group behaviour from 153 video-recorded sessions. The results supported internal consistency (median $\alpha = 0.78$), inter-rater reliability (median α = .63), and validity (e.g., r = 0.12–0.82, $p < 0.01$). Importantly, a measure with demonstrated reliability and validity at the group level can be part of quality control for researchers and practitioners when individual-level ratings are not needed or too costly.

Key Words Group assessment; group psychotherapy; substance use; deviancy training; youth.

INTRODUCTION

Group-based peer (GBP) interventions are the predominant approach for treating adolescents with substance use issues (Wendt & Gone, 2018). These interventions are favoured due to efficient resource utilization, facilitation of crucial developmental tasks (e.g., emotion regulation; interpersonal skills), creation of environments mirroring youths' daily lives, and perception of being less intimidating compared to individual therapy (Engle et al., 2010).

Despite widespread use of group treatments for youth, there is conflicting evidence regarding their efficacy. Hogue et al. (2018) conducted a review of youth interventions and found no support for concerns in the literature, suggesting that group treatment might be harmful. They also highlighted the likely effectiveness of group-based cognitive behavioural therapy (CBT). However, in a subsequent review, Hogue et al. (2021) cautioned that groups could have iatrogenic effects if youth are encouraged to express and reinforce non-normative or deviant behaviour by their peers. Peer acceptance is crucial during adolescence, and behaviours modelled and reinforced by peers significantly influence adolescents' own behaviours. Thus, group activities can profoundly impact outcomes for youth, with the behaviour of group leaders playing a crucial role in mitigating deviant behaviour (Hogue et al., 2021). The conflicting evidence underscores the importance of investigating the underlying mechanisms of group change and peer influence in group treatment to minimize unintended negative effects and optimize interventions (Kaminer, 2005).

Assessing group processes has been challenging due to the adaptation of assessments originally designed for individual psychotherapy, such as the Working Alliance Inventory (Horvath & Greenberg, 1989) and the Empathy Scale (Persons & Burns, 1985) (Jensen et al., 2012). While these tools capture elements of the client-provider relationship, they lack validation for understanding group dynamics, including peer relationships. Additionally, some measures (e.g., Group Climate Questionnaire-Short Form (MacKenzie, 1983); Curative Climate Instrument (Fuhriman et al., 1986); Groupwork Engagement Measure (Macgowan, 2006)) have psychometric support but were not specifically validated for use with youth,

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overlooking adolescent development and peer influence (Dishion et al., 1999, 2001). Adolescents' social behaviours are significantly influenced by peer interactions (Spear, 2000; Steinberg, 2008), where association with peers engaging in problematic behaviour can escalate it (Utržan et al., 2017), while exposure to prosocial peers can mitigate anti-social behaviours (Dishion et al., 1999). Hence, a tailored measure of group processes considering youth developmental stage and peer influence is imperative (Dishion et al., 1999, 2001).

Dishion et al. (2001) used an observational measure to assess group processes in 12 sessions of CBT for youth. They employed a Likert scale (0 = not observed to 4 = very true for client) to code deviancy training, positive group involvement, peer rejection, and counsellor praise. Connectedness to peer counsellors was assessed by recording the average number of older peer counsellors with whom the client had a positive relationship across the sessions. Reliability was measured with split-half reliabilities ranging from 0.53 to 0.87 ($p < 0.001$), while internal consistencies ranged from $\alpha = 0.86$ to 0.89 (none reported for connectedness or counsellor praise). Stein et al. (2014) improved on this measure by creating versions for youth and counsellor, providing detailed validity data, and simplifying coding to only the third and last sessions out of 10 GBP sessions for incarcerated youth. However, both measures code youth at the individual level (i.e., behaviour of specific youth, as compared to behaviour of the group). Ability to efficiently code group behaviour as a whole may have appeal for stakeholders who wish to ask broader programming questions without attention to specific youth (e.g., are groups functional; are groups decompensating?). Simply stated, an individual-level point of reference tracks performance of individual youth, whereas a group-level point of reference tracks performance of the group.

Despite progress toward developing measures for group process, additional research is needed to assess group-based treatment in youth correctional facilities. Therefore, the purpose of the present study was to examine reliability and validity of a group process measure modelled after the one used by Dishion et al. (2001). Adolescence is a sensitive developmental period, and although counsellors may provide contingent praise and attention to promote positive outcomes in youth (Handwerk et al., 2000) or offset peer rejection (Dishion et al., 2001), peers may selectively reinforce deviant behaviour or ignore such behaviour in favour of more normative or prosocial behaviour (Dishion et al., 1999). While the measure described above by Dishion et al. (2001) accounts for both peer socialization and counsellor behaviours, it was developed for at-risk (e.g., referrals by teachers) as compared to incarcerated youth; individual youth were coded on each of the 12 sessions by an observer at three 15-minute increments; and no formal validity studies were conducted on the measure. A measure that may use counsellor and youth reports in addition to observers, which is coded only once at the end of a session, and that is validated holds promise to better understand groups and maintain their effectiveness. The present study evaluated the psychometric properties of a group process-group level (GP-GL) measure. Coding for group behaviour as a whole (e.g., amount of deviancy or prosocial behaviour in a group), as compared to coding degree of anti- or pro-sociality in individual youth, may assist stakeholders to efficiently evaluate and maintain group programming.

METHODS

Participants

Data were collected as part of an institutional review board-approved randomized clinical trial comparing two group-based treatments for incarcerated adolescents with a history of alcohol and/or cannabis use (Stein et al., 2014, 2020). Participants, recruited from a Northeastern United States youth correctional facility, faced charges ranging from truancy to violent offences. These adolescents, 14 and 19 years old and sentenced to the facility for 4–12 months, received comprehensive services, including group and individual treatment on a variety of topics. Consent procedures involved obtaining assent from youth aged below 18 years and consent from legal guardians.

The eligibility criteria were as follows: prior to incarceration used (1) cannabis or drank alcohol at least monthly or binge drank (≥5 standard drinks for boys, ≥4 for girls) at least once, (2) cannabis or drank in the 4 weeks before the offence, or (3) cannabis or drank in the 4 weeks before incarceration.

The baseline sample ($N = 205$) of participants is described as follows: 40% Hispanic, 39.5% African American, 35.1% White, 8.8% Native American, 3.9% Pacific Islander, 3.9% Asian American, 7.3% self-identified as other; 89.3% male; mean (M) age = 17.1 years (standard deviation (SD) = 1.0); M = 2.5 (SD = 2.3) weeks previously detained/incarcerated; and 32.2% and 61.5% alcohol and cannabis dependent, respectively (American Psychiatric Association, 2000).

Procedures

Following baseline assessment, adolescents were randomly assigned to either 2 sessions of motivational interviewing followed by 10 CBT group sessions or 2 sessions of relaxation training followed by 10 Substance Education and Twelve-Step Introduction (SET) group sessions. A total of 584 group sessions were conducted with fidelity procedures to ensure adherence to treatment protocols. These gender-segregated groups, lasting approximately 75 minutes, utilized rolling admission, and occurred one to three times weekly, with two to seven participants (median of three) in each group. See the study by Stein et al. (2020) for more information about treatments and fidelity procedures.

Counsellors ($n = 6$) underwent approximately 160 hours of manualized training, covering readings, role-plays, and feedback for both intervention types. One had a bachelor's degree, four had a master's degree, and one had a doctoral degree. A doctoral-level clinical psychologist provided weekly supervision to all counsellors and reviewed all study intervention files. All group sessions were videotaped, and fidelity coding was performed proactively throughout the study. Counsellors with fidelity scores below threshold received additional individual supervision and tracking until acceptable fidelity was achieved.

Measures

GP-GL questionnaire

GP-GL questionnaire, is an adaptation of Dishion et al.'s (2001) original measure, featuring five scales and eight associated indices. Scales are as follows: (1) *Deviancy training* (six items) measures extent to which youths received group attention for

problem behaviour (e.g., "members gave each other explicit attention for counter-norm talk or problem behaviour"); (2) *Positive group involvement* (four items) describes engagement with session curriculum (e.g., members spent group time on normative talk); (3) *Peer rejection* (three items) reflects extent to which youths displayed rejecting behaviours to one another (i.e., members negatively interacted or seemed to reject each other); (4) *Counsellor praised positive behaviour* (three items) describes extent to which youths were encouraged or praised by the counsellor for positive behaviour or commitment to prosocial goals (i.e., extent to which members were personally encouraged by counsellor); (5) *Connectedness to counsellor* – counsellor/observer version, indicates the number of youths who seemed to have a positive relation with the counsellor; and *Connectedness to counsellor* – adolescent version (one item), describes extent to which members seemed to have a positive relationship with the counsellor. Items were rated from 0 (no examples, not observed in group) to 4 (multiple examples, very true for group). Means are obtained per scale. Better group behaviour is indicated by lower scores on Deviancy and Peer rejection and higher scores on positive group involvement, Counsellor praised positive behaviour, and Connectedness to counsellor.

Regarding the eight indices, counsellor/observer forms requested the number of youth per group and the number of youth (1) who gave attention to/received attention for counter-norm behaviour (Deviancy), (2) who gave attention to/received attention for normative or positive behaviour (Positive involvement), (3) who appeared to reject/be rejected by other group members (Peer rejection), (4) who the counsellor gave attention for normative or positive behaviour (Counsellor praised positive behaviour), and (5) who the counsellor gave attention for counter-norm behaviour. These questions produced indices reflecting percentages of youth engaging in each behaviour (e.g., percentage who received attention for positive behaviour).

The form was completed following each group session by the counsellor, and a youth (randomly chosen by a project director before the session) who reported their impressions of the session. All sessions (n = 584) were video-recorded, and observer supervisors completed a subset of sessions (n = 153) including double-coding (n = 64).

Group Report Grid

Counsellors completed the grid (Sampl & Kadden, 2001) at the end of every group session, rating each session overall for quality and quantity of group participation (0 = none to 3 = high). After each session, counsellors rated individual youth in terms of clinical status (1 = poor to 5 = excellent), number of disruptive behaviours (aggressive, interrupts, profanity, sexually inappropriate, glorifying drug use, etc.), and quality/quantity of participation. Average rating among youth was calculated per session for clinical status, disruptive behaviours, and for quality and quantity of participation.

Analyses

Group-level analyses were conducted using SPSS 22.0.0 (IBM, Armonk, USA). Internal consistencies (α) were calculated for scales. Convergent validity was assessed by correlating scores across respondent versions. Expected positive and negative relationships between scales were examined. Intra-class correlation coefficients (ICCs) were calculated for inter-rater reliability (Cicchetti, 1994; Koo & Li, 2016). Analysis of variance (ANOVA) was used to compare group treatments (CBT vs. SET). Effect sizes (η^2) were reported. No specific hypotheses were established. Group variables were examined as covariates, but none met criteria for inclusion. Refer to the supplement for detailed analysis.

RESULTS

Internal Consistency

Internal consistencies were calculated for the Deviancy, Positive involvement, Peer rejection, and Counsellor praise scales (Table I). The resulting α coefficients ranged from very good to good (Ursachi et al., 2015): Deviancy (α = 0.97, 0.97, and 0.82 for observer (O), counsellor (C), and adolescent (A), respectively), Positive involvement (α = 0.75, 0.90, and 0.74 for O, C, and A, respectively), Peer rejection (α = 0.76, 0.89, and 0.86 for O, C, and A, respectively), and Counsellor praise (α = 0.74 and 0.74 for O and A, respectively). However, Counsellor praise showed poor internal consistency for counsellor version (α = 0.47).

TABLE I Description of scales

Scale (Number of Items)	Observer (n = 153)		Counsellor (n = 584)		Adolescent (n = 584)	
	M (SD)	α	M (SD)	α	M (SD)	α
Deviancy (4)	1.47 (1.15)	0.97	1.36 (0.99)	0.97	0.63 (0.87)	0.82
Counsellor connection (1)	74.95 (28.53)	–	85.12 (22.54)	–	3.26 (1.02)	–
Positive involvement (3)	2.94 (0.44)	0.75	3.06 (0.48)	0.90	3.31 (0.76)	0.74
Peer rejection (3)	0.41 (0.56)	0.76	0.49 (0.64)	0.89	0.21 (0.60)	0.86
Counsellor praise (3)	2.06 (0.59)	0.74	2.52 (0.35)	0.47	3.15 (0.93)	0.74

Note. Percentage provided for counsellor and observer ratings of Counsellor connection since these ratings indicated the number of youths connected to the counsellor during the session (out of total youth), whereas youth ratings reflect how the connected group was to the counsellor using the Likert scale (0 = no examples to 4 = multiple examples, very true for group).
M = mean; n = number of group sessions coded; SD = standard deviation.

Convergent and Criterion Validity

Correlations between scales and indices that should be related are presented in Tables II and III. Effect sizes were interpreted as follows: small, $r = 0.10$; medium, $r = 0.30$; and large, $r = 0.50$ (Cohen, 1988). In Table II, substantial correlations were observed across observer, counsellor, and adolescent respondents in the Deviancy scale, with noteworthy correlations with both counsellor and observer indices (e.g., percentage of youth who got reinforced for anti-social behaviour according to counsellor correlated with the observer Deviancy scale with $r = 0.64$). Similarly, the Peer rejection scale demonstrated noteworthy correlations with indices. Correlations were somewhat more moderate for Positive involvement and Counsellor praise scales with indices. Over 70% of significant correlations were of medium effect size or better. In Table III, the Connectedness to counsellor scale evidenced noteworthy correlations with both counsellor and observer indices, though this was moderated for youth ratings. Over 60% of significant correlations were of medium effect size or better. Table IV contains correlations among scale scores across adolescent, counsellor, and observer versions, demonstrating medium to large correlations across the three versions within a scale (i.e., same-trait-different-method correlations). However, there were low correlations between adult and adolescent ratings for Counsellor praise and Positive involvement.

Table V contains correlations between scale scores and counsellor reports using the Group Report Grid, showing over 50% of significant correlations were of medium effect

TABLE II Correlations between scales and indices

	Deviancy Scale			Positive Involvement Scale		Peer Rejection Scale		Counsellor Praise Scale
	% Who Reinforced Anti-social Behaviour	% Got Reinforced Anti-social Behaviour	% Counsellor Reinforced Anti-social Behaviour	% Who Reinforced Positive Behaviour	% Got Reinforced Positive Behaviour	% Who Rejected Others	% Got Rejected	% Who Counsellor Praised Positive Behaviour
Counsellor indices								
A	0.44**	0.44**	0.23**	0.06	0.12*	0.31**	0.30**	0.01
C	0.77**	0.74**	0.22**	0.11*	0.04	0.77**	0.74**	0.18**
O	0.62**	0.64**	0.30	0.07	−0.01	0.41**	0.39**	0.16
Observer indices								
A	0.35**	0.35**	0.13	0.04	0.00	0.15	0.02	0.11
C	0.56**	0.51**	0.29**	−0.03	−0.10	0.26*	0.18	0.04
O	0.82**	0.77**	0.45**	0.34**	0.27*	0.73**	0.64**	0.43**

A = adolescent ($n = 584$); C = counsellor ($n = 584$); O = observer ($n = 153$).
*$p < 0.01$.
**$p < 0.000$.

TABLE III Correlations between indices and connectedness to counsellor scale

	Connectedness to Counsellor Scale				
	% Who Reinforced Anti-social Behaviour	% Got Reinforced Anti-social Behaviour	% Who Reinforced Positive Behaviour	% Got Reinforced Positive Behaviour	% Who Counsellor Praised Positive Behaviour
Counsellor indices					
A	−0.05	−0.06	−0.02	−0.02	0.05
C	−0.30**	−0.30**	0.44**	0.30**	0.13*
O	−0.40**	−0.39**	0.23*	0.18	0.02
Observer indices					
A	0.00	0.04	0.03	−0.03	0.24*
C	−0.14	−0.10	0.27*	0.21*	0.26*
O	−0.12	−0.09	0.41**	0.36**	0.34**

A = adolescent ($n = 584$); C = counsellor ($n = 584$); O = observer ($n = 153$).
*$p < 0.01$.
**$p < 0.000$.

TABLE IV Correlations among scales

	Deviancy			Positive Involvement			Peer Rejection			Counsellor Praise			Counsellor Connection		
	A	C	O	A	C	O	A	C	O	A	C	O	A	C	O
Deviancy															
A	–	0.50**	.51**	−0.16**	−0.17**	−0.02	.28**	.28**	.15	−0.11*	−0.06	−0.13	−0.01	−0.21**	−0.21*
C		–	0.68**	−0.23**	−0.19**	−0.13	.26**	0.53**	0.27*	−0.02	−0.06	−0.12	−0.10	−0.32**	−0.43**
O			–	−0.05	−0.11	−0.08	0.35**	0.26*	0.41**	0.09	0.00	−0.15	−0.06	−0.13	−0.18
Positive involvement															
A				–	0.17**	0.13	−0.23**	−0.21**	−0.06	0.42**	0.01	0.30**	0.42**	0.13*	0.16
C					–	0.45**	−0.10	−0.03	−0.18	0.14*	0.21**	0.21*	0.12*	0.38**	0.12
O						–	−0.11	−0.04	−0.06	−0.01	−0.01	0.07	0.03	0.24*	0.32**
Peer rejection															
A							–	0.30**	0.39**	−0.01	0.08	−0.02	−0.14*	−0.12*	−0.17
C								–	0.39**	0.04	0.07	−0.08	−0.03	−0.21**	−0.25*
O									–	0.05	−0.02	−0.17	0.03	−0.02	−0.00
Counsellor praise															
A										–	0.17**	0.14	0.34**	0.09	−0.02
C											–	0.27*	0.05	0.13*	0.05
O												–	0.19	0.15	0.10
Counsellor connection															
A													–	0.08	0.01
C														–	0.44**
O															–

A = adolescent (n = 584); C = counsellor (n = 584); O = observer (n = 153).
*$p < 0.01$.
**$p < 0.000$.

size or better. Consistent validity support was observed for Deviancy, Positive involvement, and Peer rejection, some support for Counsellor connection, and relatively less support for Counsellor praise. Across scales, observer ratings demonstrated least support.

Inter-rater Reliability

Table VI contains ICC observer results for scales and indices; the median ICCs were 0.54 and 0.64, respectively (fair to good; Cicchetti, 1994).

Treatment Differences

Adolescent scales (Table VII) showed no significant effects. However, for counsellors and observers, CBT groups produced significantly higher Deviancy scores compared to SET groups, while SET groups had higher scores on the Positive involvement scale than CBT groups. Moreover, compared to SET, CBT had significantly higher percentages of adolescents reinforcing or being reinforced for anti-social behaviour. For counsellor indices, CBT had significantly higher percentages of adolescents reinforcing positive behaviour, and experiencing peer rejection, compared to SET. In addition, for observers, CBT was associated with higher Peer rejection scale scores and higher percentage of youth reinforced for anti-social behaviour by counsellors, compared to SET. Generally, effect sizes were larger for observers than counsellors, with counsellors' effect sizes being small.

DISCUSSION

This study provided psychometric analyses of a group process measure using five scales and eight indices. Internal consistencies (Table I) ranged from acceptable to very good (α = 0.74–0.97) except for Counsellor praise as rated by counsellors (α = 0.47). Scales generally related well to similar constructs across versions (Tables II and III), and scales (Table IV) related as expected to each other (e.g., adolescent ratings of Positive involvement correlated well with observer ratings of Counsellor praise), indicating good convergent validity.

When relating scales to counsellor ratings of behaviours following sessions (e.g., quality of involvement), observer ratings of Peer rejection, Positive involvement, and Deviancy showed little criterion-related validity (Table V). On the other hand, adolescent and counsellor ratings on these scales evidenced good validity (e.g., adolescent and counsellor ratings on Deviancy correlated inversely with quality of

TABLE V Correlations among scales and Group Report Grid constructs (n = 584)

	Average Quantity of Participation	Average Quality of Participation	Average Clinical Status	Average Misbehaviours
Deviancy				
A	−0.15**	−0.24**	−0.11*	0.38**
C	−0.35**	−0.46**	−0.39**	0.47**
O	−0.03	−0.30	0.09	0.32*
Positive involvement				
A	0.16**	0.18**	0.14*	−0.15**
C	0.45**	0.45**	−0.03	−0.29**
O	0.47**	0.28	0.26	−0.22
Peer rejection				
A	−0.14*	−0.15**	−0.13*	0.24**
C	−0.30**	−0.33**	−0.34**	0.23**
O	−0.07	−0.16	0.03	0.19
Counsellor praise				
A	−0.01	0.03	−0.02	0.01
C	0.05	0.07	0.09	−0.07
O	0.34*	0.45**	0.21	−0.30
Counsellor connection				
A	0.04	0.01	−0.01	−0.02
C	0.37**	0.35**	0.18**	−0.18**
O	0.38*	0.29	0.46**	−0.18

Note. Higher scores on clinical status indicate better functioning.
A = adolescent (n = 584); C = counsellor (n = 584); O = observer (n = 153).
*p < 0.01.
**p < 0.000.

TABLE VI Intra-class correlation coefficients (ICCs) for observer ratings (n = 64)

Scale	ICC
Deviancy	0.89
Positive involvement	0.41
Peer rejection	0.62
Counsellor praise	0.45
Counsellor connection	0.71
Indices	**ICC**
% who reinforced anti-social behaviour	0.81
% got reinforced for anti-social behaviour	0.80
% who reinforced positive behaviour	0.64
% got reinforced for positive behaviour	0.63
% who rejected others	0.60
% got rejected	0.44
% counsellor praised for positive behaviour	0.55
% counsellor reinforced for anti-social behaviour	0.72

participation). Adolescent ratings of Counsellor praise and Connection did not show good validity evidence as compared to observer ratings for these scales. Counsellor ratings of Counsellor praise also evidenced little validity, whereas counsellor ratings of Connection showed validity (e.g., Connection was correlated inversely to session misbehaviours). Agreement between observers (Table VI) was fair to excellent across scales and indices.

Compared to SET, both observers and counsellors had higher deviancy scores for CBT groups (Table VII), consistent with those in the study by Dishion et al. (2001). Only observers reported counsellors reinforcing anti-social behaviour in CBT as compared to SET, which may (with replication) be noteworthy for supervision. This aligns with findings suggesting therapists may struggle to detect certain behaviours compared to observers (Carroll et al., 2000). Only counsellor estimates for percentages of youth reinforcing positive behaviour and rejecting peers were higher in CBT than in SET, though effect size was small. While this suggests counsellors are more sensitive than observers in detecting such processes, further research is needed. Adolescent ratings of group process did not meaningfully differ between groups.

The results resemble those of Engle et al. (2010) who analyzed a group-based adolescent substance intervention and found associations between leader empathy (related to connection or alliance; Horvath, 1994) and participant behaviours (both deviant and positive). While their approach began with more labour-intensive coding of individual youth, our measures directly coded group-level data incorporating scales for rejection and counsellor praise.

Limitations

Some observer correlations were not statistically significant, possibly due to a smaller sample of observer ratings (n = 153) compared to counsellor and adolescent ratings (n = 584). However, larger samples may have led to significant results, prompting inclusion of effect sizes to enhance interpretation. Future research could explore additional items for assessing connectedness, in the GP-GL measure, which currently includes only one item for Connection to Counsellor. While this study was focused on validating the GP-GL measure, significant relationships between constructs suggest further research, including examining predictive validity and applying the measure to other youth interventions and settings. Additionally, reliability data for counsellor ratings on Group Report Grid were unavailable, though counsellors received training and supervision.

Implications

The GP-GL measure offers a streamlined approach for assessing group dynamics in adolescent substance use treatment, particularly in resource-limited settings. Utilizing this measure can improve the efficiency and effectiveness of group interventions for adolescents with substance use issues (Hogue et al., 2021; Jensen et al., 2012).

TABLE VII Between-group ANOVA results

	CBT, M (SD)	SET, M (SD)	*F*	η^2
Counsellor Ratings, DV				
Deviancy training	1.48 (1.08)	1.24 (0.95)	8.68**	0.02
Positive involvement	3.00 (0.48)	3.12 (0.47)	11.23**	0.02
Peer rejection	0.51 (0.67)	0.46 (0.61)	0.90	0.00
Praise positive behaviour	2.55 (0.35)	2.50 (0.35)	3.17	0.01
Connectedness to counsellor	84.73 (22.68)	85.54 (22.42)	0.19	0.00
% who reinforced anti-social behaviour	37.25 (23.70)	23.70 (36.17)	17.69***	0.03
% who got reinforced for anti-social behaviour	31.52 (35.97)	19.00 (29.70)	20.78***	0.03
% who reinforced positive behaviour	79.92 (27.59)	74.94 (31.65)	4.14*	0.01
% who got reinforced for positive behaviour	81.35 (26.93)	76.13 (30.82)	4.78*	0.01
% who appeared to reject others	10.01 (20.76)	5.71 (15.11)	8.04**	0.01
% who appeared rejected	8.72 (18.73)	5.42 (14.74)	5.52*	0.01
% counsellor reinforced positive behaviour	93.92 (19.00)	95.76 (12.85)	1.84	0.00
% counsellor reinforced anti-social behaviour	9.62 (22.08)	6.63 (20.84)	2.82	0.01
Observer Ratings, DV				
Deviancy training	1.98 (1.10)	0.95 (0.95)	38.31***	0.20
Positive involvement	2.83 (0.41)	3.05 (0.44)	10.89**	0.07
Peer rejection	0.54 (0.63)	0.27 (0.45)	8.94**	0.06
Praise positive behaviour	2.08 (0.58)	2.04 (0.60)	0.23	0.00
Connectedness to counsellor	74.16 (27.95)	75.75 (29.26)	0.12	0.00
% who reinforced anti-social behaviour	64.13 (40.92)	21.47 (32.91)	50.43***	0.25
% who got reinforced for anti-social behaviour	56.13 (38.33)	20.07 (30.94)	40.93***	0.21
% who reinforced positive behaviour	45.91 (35.78)	50.44 (37.33)	0.59	0.00
% who got reinforced for positive behaviour	42.23 (35.07)	49.52 (37.20)	1.56	0.01
% who appeared to reject others	11.49 (20.80)	6.14 (16.52)	3.10	0.02
% who appeared rejected	10.18 (19.20)	6.25 (16.95)	1.79	0.01
% counsellor reinforced positive behaviour	86.39 (23.50)	85.90 (24.81)	0.02	0.00
% counsellor reinforced anti-social behaviour	10.87 (21.65)	3.18 (9.42)	8.07**	0.05
Teen Ratings, DV				
Deviancy training	0.69 (0.90)	0.57 (0.84)	2.46	0.00
Positive involvement	3.33 (0.73)	3.29 (0.79)	0.46	0.00
Peer rejection	0.23 (0.60)	0.19 (0.60)	0.59	0.00
Praise positive behaviour	3.14 (0.94)	3.17 (0.92)	0.15	0.00
Connectedness to counsellor	3.27 (1.02)	3.24 (1.02)	0.140	0.00

Note. Between-group *df* = 1 for all analyses; within-group *df* = 583 for counsellor and teen analyses; within-group *df* = 151 for observer analyses. ANOVA = analysis of variance; CBT = cognitive behavioural therapy group treatment; DV = dependent variable; M = mean; SD = standard deviation; SET = substance abuse education group treatment.
*$p < 0.05$.
**$p < 0.01$.
***$p < 0.001$.

Conclusions

Analyses for all three versions indicated sound psychometric properties for the GP-GL measure. If pressed for counsellor time, adolescent ratings may suffice, although somewhat stronger validity was found for counsellor and observer versions. In choosing between observer and counsellor versions, settings with limited resources may choose the counsellor version to reduce time needed from an observer. In these cases, in order to encourage honest responding, it is important that counsellors feel supported and that ratings are not to be used punitively.

SUPPLEMENTARY MATERIAL

Supplemental information is linked to the online version of the paper at https://www.journalcswb.ca/index.php/cswb/article/view/384/supp_material.

- Data Analysis (full description)

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CONFLICT OF INTEREST DISCLOSURES

The authors have no conflicts of interest to declare.

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This work is the sole responsibility of the authors and does not necessarily represent the official views of the National Institutes of Drug Abuse.

ETHICAL APPROVAL

This study was approved by the Institutional Review Board of the University of Rhode Island, Kingston, RI 02881.

STATEMENT OF HUMAN RIGHTS

All procedures in this study were conducted in accordance with Institutional Review Board of the University of Rhode Island, Kingston, RI 02881.

INFORMED CONSENT

All study participants, or their legal guardian, provided informed written consent prior to study enrollment.

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ORIGINAL RESEARCH

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Are neighbourhood parks crime generators? A nationwide study

Ginger Cameron*,† and Kathryn G. Kelly‡

ABSTRACT

This research investigates the relationship between neighbourhood parks and crime, exploring park conditions, activities, landscaping, and socioeconomic factors. Evaluating 351 parks across 45 states using the BRAT-direct observation instrument and national crime data, the study aims to discern links between parks and crime, emphasizing the impact of park attributes and surrounding income levels. Contrary to some prevailing theories, no significant correlation was found between park conditions or activities and crime rates. However, a moderate correlation emerges between burglary rates and the poverty levels of the surrounding area, and a negative correlation between burglary and median income of the area, suggesting that while parks themselves may not be crime generators, they may facilitate burglaries of opportunity due to increased foot traffic. The findings prompt a re-evaluation of existing theories, emphasizing the need for tailored safety measures during peak park usage times.

Key Words Neighbourhood parks; crime; park conditions; crime generators.

INTRODUCTION

Neighbourhood parks are important and can provide many benefits. Parks bring people together, enhance the community, and contribute to the feel of the neighbourhood and city. Park functions differ; some provide recreational activities, and some simply provide aesthetic appeal. The many benefits of parks listed by the American Planning Association include community revitalization and engagement, economic development, providing green infrastructure, improving public health, promoting tourism, and managing climate change (American Planning Association, 2023).

However, the association between neighbourhood parks and crime has long been disputed and researched. Positively, urban parks tend to be related to higher real estate values (Troy & Grove, 2008; Voicu & Been, 2008). The proximity of parks can raise the home value by an estimated 20% for passive parks (Crompton & Nicholls, 2020). They also found that parks that attract a large number of people raise the home values of homes in the surrounding two or three blocks, but to a lesser extent (about 10%) (Crompton & Nicholls, 2020).

And adding green space has also been found to lower crime (Shepley et al., 2019). Research shows that the mere presence of trees, parks, and other natural areas in urban settings reduces the incidence of violent crime (Shepley et al., 2019). A literature review by Shepley et al. (2019) indicated that over 100 studies have connected the benefits of green space and nature to human well-being and health. The authors further explored the impact of green space on violence and found that green space reduces violent crime.

The Human-Environment Research Laboratory of the University of Illinois at Urbana-Champaign studied the green space next to Chicago public housing and found that the neighbourhoods adjacent to green space generated fewer violent and property crimes, as cited in American Planning Association (2023). Furthermore, the authors found that green spaces provided places for neighbours to form social ties and protect each other (American Planning Association, 2023). A deteriorating infrastructure is considered a crime magnet (Kelling & Wilson, 1982). Larson and Ogletree (2019) and Ogletree et al. (2022) cite many examples of significantly lower crime levels when city parks with high crime rates underwent revitalization.

Another prevailing theory has been that neighbourhood parks are crime generators (Newton, 2018). Newton (2018) describes parks as a macro crime generator. Macro crime generators are places where many people, including a criminal element, congregate. Newton further distinguishes between areas that are crime generators and crime attractors, a notion originally offered by Brantingham and Brantingham (1995). The distinction depends on the motivation of the perpetrator.

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Newton's (2018) theory states that places with a bad reputation attract crime and are referred to as crime attractors. Examples are districts with many bars, drugs, prostitution, check cashing stores, homeless shelters, or unsecured parking areas. In other crowded places, such as parks, crime just happens opportunistically (Newton, 2018). Parks can fall into either category, either a crime generator or a crime attractor, or they can be neutral areas.

Groff and McCord's (2012) research supported the idea that parks can be neutral areas. Their study, which focused on Philadelphia parks, revealed that the parks had higher crime rates than other parts of the city, which would make them crime generators. However, the parks with more activity generators (e.g., recreational centers, pools, playgrounds, night lighting, etc.) experienced less crime than the parks with fewer activity generators (Groff & McCord, 2012). This difference was attributed to the presence of features such as basketball courts, sports fields, and playgrounds that attracted legitimate users and more "eyes on the street" (Jacobs, 1961). Jacobs (1961) noted that people feel safe and secure in places where many people congregate. Since parks tend to be used during the day, they attract more legitimate users. In short, Groff and McCord (2012) concluded that the design of the park, the mix and number of activities, and the surrounding environment all contributed to less crime.

Additional researchers have also suggested that crime generation associated with parks is related to the attributes of the park itself, specifically the number of activity options available at the park (Lockwood, 2007; Newton, 2018; Perkins et al., 1993; Wilcox et al., 2004). Other researchers suggest that the income level of the area where the park is located is the stronger determinant of crime (Groff & McCord, 2012). And some theories say that the landscaping is the key factor (Troy & Grove, 2008), while others suggest urban encroachment (Wynveen et al., 2007). Finally, the relationship between crime and poverty is well established. As far back as 1974, the Nobel Prize winner, Becker (1974), posited that all crime is economic. Quednau's (2021) more recent analysis of the American Community Survey Census database found a significant correlation between the poverty rate and the violent crime rate. How income levels transfer to the relationship between neighbourhood parks and crime is less clear.

Using the BRAT-direct observation (BRAT-DO) park assessment instrument and national crime data, we sought to determine if parks were linked to crime in the surrounding area, if the number of activities in the park correlated to the amount of crime in the area, if landscaping played a role in crime generation near parks, or if the income area where the park was located had a stronger correlation to the amount of crime committed in the area.

METHODS

This cross-sectional study used the BRAT-DO reference manual instrument to evaluate recreational parks across the United States of America to determine the following: (1) Are parks crime generators? (2) Does the condition of the park impact the crime rate? (3) Does the number of activity generators within the park impact the crime rate, i.e., do parks with more activity generators have less crime compared to parks with fewer activity generators? (4) Do areas where parks have fields and courts/sports options have less crime than areas where parks do not? (5) Does socioeconomic status have a stronger association with crime than parks? Convenience sampling was used for park selection. Data collection was conducted from October 2019 through March 2022.

The BRAT-DO instrument is widely used in research for measuring overall park conditions, as well as the visible condition of each of the following attributes: overall aesthetics, benches, bike racks, shelters, restrooms, concession stands, drinking fountains, picnic tables, water features, art, monuments, parking areas, green space, features, playgrounds, and sports fields. The BRAT-DO is a validated and accepted method for scoring and evaluating specific characteristics of parks. The BRAT-DO, a paper and pencil instrument, was first converted to the digital format using Qualtrics (Qualtrics^{XM}, UT, USA) for ease of completion. Data collectors were trained on the instrument's use before data collection.

Attributes from the BRAT-DO were based on the overall condition of the park, the number of activity generators, and the availability of sports options.

Condition of the Park

Per the BRAT-DO instrument, park conditions were evaluated using restroom amenities and condition, park signage and policies (such as reservation policies), landscaping attractiveness and condition, shade sources, sound sources, smells, presence of litter, risky litter and/or graffiti, presence and/or condition of benches, presence and/or condition of bike racks, types of shelter available, shelter condition, and the condition of any playground equipment.

Activity Generators

Park activity generators included water features (ponds, lakes, rivers, streams, fountains, waterfalls, boating, swimming, and fishing), playground equipment (swing set, slide, climbing apparatus, merry-go-round, see-saw, rocker, blacktop games, and others), sporting equipment (tennis, basketball, baseball, football, soccer, hiking, golf, and swimming), and other activities (zoo, botanical gardens, stables, and others).

Crime Statistics

Crime statistics were gathered from Crimegrade.org and were compiled based on the zip code of the park. Arrest rates were used to determine the crime level in each area. Crime was calculated as the rate per 1,000 people. Crimes were categorized as violent crime, property crime, or others. Violent crimes included assault, robbery, rape, and murder. Property crimes included theft, vehicle theft, burglary, and arson. Other crimes included kidnapping, drug-related crime, vandalism, identity theft, and animal cruelty.

Income Level

Median-income level as well as percentage of people in poverty were both based on the area code of the park and were determined by using the U.S. Census data.

Data were entered either directly into Qualtrics from the park or recorded on the paper version and entered later. Primary variables of interest included crime rate, BRAT-DO park attributes, and income level of the area.

Correlation analysis was conducted using SPSS (IBM, IL, USA) statistical software. In cases with missing data,

we used the case as long as we could identify the park and its location. For specific analysis with missing values we excluded the data. Correlation results were considered moderate at the 0.3–0.5 level and highly correlated at 0.6 and above.

Levene's test of homogeneity was used to test for equal variance. A Q–Q plot of residuals, along with the Shapiro–Wilk test of normality, was used to determine normal distribution. Results were considered significant at the $p < 0.05$ level with a 95% confidence interval.

RESULTS

Three hundred and fifty-one parks were evaluated across 45 states. The mean poverty level was 13.29%, with a standard deviation of 8. The mean income was $74,000, with a range of $25,421–$242,610.

There was a mean total violent crime rate of 21.8 violent crimes per 1,000 people. Rape had the highest mean rate of 13.23 per 1,000 people. Total property crime had a mean of 20.45 property crimes per 1,000 people, with theft (14.29) being the highest and burglary (3.94) being the next highest.

Total other crime had a mean of 23.56 per 1,000 people, with identity theft (26.75) as the highest and kidnapping (12.73) as the second highest, although there was significant variance in these results.

Park conditions used a Likert scale of 1–5, with 5 being the highest score, and included measures of landscaping attractiveness and condition (mean = 3.98), sounds (3.78), smells (3.94), condition of benches (3.92), condition of shelters (3.63), condition of the playground (3.84), and condition of equipment (1.97).

Measures of litter (1.62), risky litter (1.23), presence of broken playground equipment (1.41), and graffiti (1.16) were also measured on a Likert scale of 1–5, with 5 indicating high levels of the given attribute. It also included an assessment of restrooms, including measurements of toilet functionality (3.0), sink functionality (2.90), restroom cleanliness (2.51), and overall restroom condition (2.61). About half of the parks with restrooms reported not having soap (0.49), and just over half reported having working hand dryers (0.51). Park conditions did not correlate with violent crime, property crime, or other crimes.

Activity generators were evaluated based on being present or not. Activities included tennis (30%), basketball (42%), baseball (36%), football (13%), soccer (34%), hiking (43%), playground (80%), golf (8%), swimming (13%), zoo (0), botanical garden (6%), and stables (1%). Activity generators had no correlation with violent crime ($r = 0.24$), property crime ($r = -0.113$), or other crimes ($r = 0.088$).

Poverty level did not correlate with total violent crime ($r = -0.011$); there was no correlation with total property crime ($r = 0.131$) and no correlation with total other crimes ($r = 0.017$). Burglary had a moderate correlation to poverty level ($r = 0.417$).

Median income did not correlate with total violent crime ($r = -0.004$), no correlation with total property crime ($r = -0.101$), and no correlation with total other crimes ($r = 0.003$). When evaluating specific crime types, burglary had a weak to moderate negative correlation ($r = -0.381$) with median income.

DISCUSSION

Despite prior indications that parks are crime generators, our research did not support that theory. We did not find any correlation between parks and crime, irrespective of the landscaping and condition of the park, the activity generators in the park, or the income level where the park is located.

Factors such as park maintenance, lighting, and amenities did not exhibit any consistent pattern that could be linked to increased crime. This suggests that the mere presence of a park does not appear to be a crime generator. Additionally, the number of activities in the park did not negatively correlate with crime generation. This challenges the idea that an active park environment alone will deter or encourage crime.

Our most notable findings were a moderate correlation between burglary rates and poverty levels in the surrounding neighbourhoods. As poverty levels increased, burglary rates also tended to rise, while higher median incomes correlated with lower burglary rates. This observation supports Newton's (2018) theory that parks can attract opportunistic crime. Parks, by their nature, function as communal spaces that draw diverse groups of people, increasing foot traffic from both residents and visitors. While this promotes community engagement and well-being, it also creates opportunities for crimes like burglary. Importantly, our study did not find a similar relationship between poverty levels and violent crimes. Bjerk (2020), in writing about the relationship between the different motivations of thieves, thugs, and poverty levels, offers a possible explanation, suggesting that thieves, motivated by economic gain, may be more likely to commit property crimes like burglary, while thugs, who engage in violent acts, have different motivations.

The increased number of people in an area creates a more transient environment where individuals with malicious intent may exploit opportunities arising from increased vulnerabilities. Such situations, characterized by a blend of anonymity and the potential for unattended personal belongings, could result in an environment conducive to opportunistic crimes such as burglary. And this was more likely to be associated with the level of poverty in the surrounding area independent of the presence of the park.

These findings may indicate that increased safety and security measures in parks and their surrounding areas, particularly during and after times of high usage, and in low-income or high-poverty level areas, may be warranted. Public education on the risk associated with preventing opportunistic burglary may also be beneficial in areas with active parks. Urban planners should be mindful of associated risks surrounding parks and work to design parks that promote both community engagement and security for the park and the surrounding areas, particularly in low-income areas.

Because of the scope of our project, evaluating multiple states and communities, we used publicly available crime data based on zip code. Additional research that used geospatial mapping to determine the crime data in the immediate vicinity of the park may render different results. Additionally, future studies looking at parks and crime may benefit from correlating the time a crime occurs to known events happening within the park to determine if there is a time correlation between park activities and crime. Finally, focusing on specific crimes of interest may be beneficial for future research.

We also did not consider the population size of the area. The population size of the surrounding community may impact results. For example, parks within a large urban area may have higher crime rates than those in smaller rural settings. Analysis of population size was outside the scope of this project, but population-specific findings could indicate that parks within a specific population size perform differently in terms of crime than those in less populated areas and would warrant further study.

An additional limitation was that COVID-19 occurred during our study, which reduced the number of people using parks in some areas. It could also have skewed crime data as well as park conditions during that time.

Based on these findings, parks do not appear to be crime generators. However, this study represents preliminary findings and additional research which includes geospatial mapping and adjustments for population sizes is needed to qualify these conclusions.

CONFLICT OF INTEREST DISCLOSURES

The authors declare that there are no conflict of interest disclosures.

ETHICS STATEMENT

This study did not include human or animal subjects and therefore did not require IRB or IACUC review.

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ORIGINAL RESEARCH

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Military first responders in Sri Lanka: Post-crisis psychosocial challenges and treatment recommendations by mental health professionals

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ABSTRACT

This research explored perspectives of civilian and military-based mental health professionals regarding mental health challenges, influencing factors, and treatment considerations for military first responders in Sri Lanka, after they have been exposed to crisis events. Twenty-nine mental health professionals from Sri Lanka (14 civilian and 15 military-based) engaged in a semi-structured interview to share their experiences and recommendations in treating military first responders from Sri Lanka army and navy. The thematic analysis yielded two main categories of data: (1) factors influencing the impact of exposure to crisis events and (2) factors influencing effective interventions for first responders in the Sri Lanka military. These two categories were further analysed as themes and subthemes, based on factors which amplify, buffer against, and/or have a variable impact on trauma symptomatology and factors external to military first responders, which could impact their recovery efficiency. This study is one of the first to explore mental health challenges and treatment considerations for military first responders in South Asia, through the perspective of civilian and military-based mental health professionals.

Key Words Mental health; trauma recovery; crisis responders; disaster management; military; Sri Lanka.

INTRODUCTION

Crisis situations occur worldwide, affecting individuals independent of their personal demographics and characteristics. The World Health Organization (WHO, 2011) describes a crisis event as experiencing and/or witnessing, either personally or on a mass scale, an unanticipated or gradually developing conflict or natural disaster, including disease breakouts, and violence/abuse. It is the frontline crisis responders (e.g., law enforcement agencies, paramedics, and fire fighters) who directly manage such crisis events, and therefore may present with an amplified risk of a psychological trauma response to such events. Psychological trauma can be triggered from perceived or actual threat of emotional and/or physical harm (van der Kolk, 2014). An individual can develop varied symptoms of psychological distress, including a range of mental health symptomatology such as anxiety and fear-based symptoms (e.g., Bisson et al., 2015).

In Sri Lanka, frontline crisis responders predominantly include the military as they undertake several roles, in addition to protection against violence and terrorism (e.g., multiple and continuous armed conflicts in modern history from 1971 until 2009 since the independence in 1948, the Easter Attack bombing in 2019). The Sri Lankan military personnel are the first responders for rescue and relief missions during natural disasters (e.g., monsoon flooding, droughts, landslides), disease breakouts (e.g., COVID-19), and other policing matters (e.g., managing public protests during the economic crisis in 2022). These military frontline responders can present with a heightened risk to develop and/or exacerbate mental health difficulties due to their prolonged and/or continued exposure to aforesaid crisis events, arguably leading to a heightened risk of a trauma response and subsequent greater need for professional mental health support, compared to those who are not deployed as crisis responders (Chapman et al., 2014). Overall, public health crises can further increase pressures

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likely to be placed on frontline crisis responders, exacerbating these stressors and amplifying their susceptibility to psychological trauma (Muller et al., 2020).

However, exposure to these crisis events may not always result in mental health pathology. Some crisis responders may perceive crisis situations as a challenge to overcome, and hence, the perceived stress may lead to post-traumatic growth (i.e., resilience) and not manifest as post-crisis difficulties (Dulmus & Hilarski, 2003). Furthermore, the development of a trauma response after exposure to a highly stressful event can be minimised by an individual's ability to cope with adversity as the perception of crisis situations and traumatising events depend on personal characteristics, the type of crisis situation, previous exposure to crisis situation, and one's cultural values (e.g., Reisenzein, 2019; Sherin & Nemeroff, 2022). Yet, some factors can negatively influence recovery, such as disconnection from their families and community and self-stigma in seeking professional help (Adams et al., 2021). This can be further compounded when a need for professional support is not driven independently. For instance, Becker et al. (2009) emphasised the benefits of crisis responders seeking professional support by their own initiative, therefore having autonomy over their treatment choices, and short-term treatment is seemingly more popular as service receivers report a disinterest in long-term treatment approaches, along with budget restrictions imposing limitations on sustainability and accessibility (Lewis & Roberts, 2001) of services.

Of further consideration is the culture of an organisation and challenges imposed by its context, which can restrict crisis responders accessing support for mental health difficulties (e.g. Kellner et al, 2019). This can be especially detrimental when organisations, such as the police, military, or alike, are highly structured and procedural, with cultural nuances as to how such support is arranged. Whilst there is little research on military crisis responders in Sri Lanka, a comparison group would be law enforcement agencies. This is particularly helpful since law enforcement is a role of the Sri Lankan military as well. Research has evidenced how law enforcement culture can result in the stigmatisation of officers in both recognising mental health and accessing support services (Velazquez & Hernandez, 2019), yet contemporaneous research recognises the issue of police officer mental health, in particular cumulative stress/post-traumatic stress disorder (PTSD) amongst officers (see Beckley et al., 2023). There can, however, be concerns amongst law enforcement officers regarding their confidentiality when accessing mental health services, which can provoke fear of threat to their job security and thereby leading to a reluctance to seek treatment/support for mental health difficulties (Yerk, 2024).

The understanding of mental health difficulties in military crisis responders appears to be a particularly valuable and yet under-researched area to explore. There has been a tendency to view mental health symptoms as present or absent, failing to account for the dynamic element of symptom expression, including the progression of symptoms across time and/or developing resolution. Factors that may influence this in those responding to crisis events can be the prior challenges that individuals may bring to an event(s), such as challenges in adaptive coping mechanisms, social support and secure attachments, with other factors more event specific, including repeated exposure to life-threatening danger, pre-existing negative life events, and/or individual factors such as personality and negative temperament (e.g., Barr & Corral Rodríguez, 2023; Blakey et al., 2022; Presseau et al., 2019). Importantly, what is essential is the need to protect and buffer against such mental health risks, as well as management of symptomatology, if it begins to emerge. This is when access to intervention and treatment becomes paramount.

Existing literature is based on English-speaking, middle-aged, Caucasian, male crisis responders from Western countries, and the most commonly assessed crisis situation is combat exposure, where military personnel have been deployed to foreign countries. The impact of crisis situations in responding to combat exposure in one's home country and exposure to multiple protracted crisis situations are scarcely assessed. Majority of these research studies had predominantly used only self-reported psychometric questionnaires and not employed a qualitative approach (De Silva et al., 2022). What current research lacks is an understanding of influencing factors that impact mental health difficulties of military crisis responders and consequently, an understanding of intrinsic and external factors that influence the effectiveness of intervention/treatment approaches that are based on expert views and experiences of mental health professionals treating crisis responders from non-Western countries.

Therefore, this paper aims to address these gaps by qualitatively assessing expert views and experiences of Sri Lankan civilian and military-based mental health professionals regarding factors that impact mental health (of military crisis responders), after exposure to crisis events, and considerations to enhance effectiveness of treatment/interventions for military crisis responders in Sri Lanka.

METHODS

Drawing on a qualitative approach to research, this study adopted the interview method to examine influences on mental health well-being among military first responders (after exposure to crisis events) in Sri Lanka, and influencing factors for treatment/intervention effectiveness to improve their mental well-being.

Procedure

Ethical approval was granted by the University of Central Lancashire (UK), with additional approval obtained from the Ministry of Defence in Sri Lanka. All participants consented to engage.

All civilian practitioners engaged through an in-person interview at their respective workplaces, and military-based practitioners were interviewed via video call due to restrictions imposed by the COVID-19 pandemic at the time of their interviews. After ensuring privacy and assuring confidentiality, all interviews were audio recorded with participant consent, and concluded within one meeting, without requiring multiple days to complete the interview.

Participants

Twenty-nine mental health professionals (i.e., psychologists and counsellors), comprising 14 civilian (registered with the Sri Lanka Psychological Association and/or Sri Lanka National Association of Counsellors; response rate: 77%) and 15 from the Sri Lanka army and navy (response rate: 83%) were interviewed regarding their experiences in treat-

ing military crisis responders. Only certified mental health professionals were recruited in line with the study eligibility criteria, which limited participation from the military-based sample. Consequently, the number of civilian mental health professionals recruited was limited as well to quantitatively complement the number of military-based professionals. Civilian mental health professionals may not have the opportunity to continuously provide services to military crisis responders, and military-based psychologists and/or counsellors are commissioned officers, who proactively and continuously work with crisis responders in the military. Military-based mental health professionals also reflected on their own experiences as crisis responders, if relevant, but through the lens of a mental health service provider. Each participant (P1, P2, etc.) was assigned a code to support anonymity, with the letter "M" referring to military-based and the letter "C" referring to civilian mental health professionals.

Measures

In addition to gathering demographic data (i.e., age, gender, level of qualification and experience, the number of service years) and information on personal exposure to crisis situations, all engaged with a semi-structured interview developed to obtain practitioners views on factors thought to influence mental health and recovery of military crisis responders, after exposure to crisis events. The interview asked professionals explicitly about risk and protective factors that aggravated/alleviated post-crisis mental health difficulties, factors that encouraged/prevented support-seeking behaviour, and strengths and challenges in treatment/intervention delivery.

Data Analysis

Interviews were manually transcribed and explored using thematic analysis (Braun & Clarke, 2006). Five main themes emerged, which were tabulated under two categories and further analysed into 16 subthemes. The number of participants who contributed to these subthemes is reported as a split percentage of civilian ("C") and military-based ("M") samples.

All transcripts were analysed by the lead researcher, and a second researcher analysed every even-numbered participant (50% of the same), thus allowing for consensus to be determined. This was achieved, with 80–95% of the codes reaching agreement, which is within the recommended threshold (e.g., McAlister et al., 2017).

RESULTS

The youngest civilian mental health professional was 26 years and the oldest was 47 years (mean (M) = 35.64, standard deviation (SD) = 5.79). The highest number of practice years was 17, whilst the lowest was three years (M = 9.28, SD = 4.37). Most of the practitioners were females (71%) with a postgraduate qualification (93%) and lived in the Western province (71%). The youngest military-based participant was 28 years and the oldest was 54 years (M = 36.33, SD = 6.93). The highest number of practice years (in the military) was 12, whilst the lowest was one year (M = 3.80, SD = 2.88). The majority of the sample was males from the navy (66%) with a postgraduate qualification (73%) and lived in the Western province (53%). The average interview length was 36 minutes (SD = 18.45) for civilian practitioners and 75 minutes (SD = 26.75) for military-based practitioners.

Two primary categories emerged from the thematic analysis: (1) factors influencing mental health symptomatology of and (2) factors influencing effective interventions for military first responders from Sri Lanka army and navy. Each category yielded main themes and subthemes.

Primary Category 1: Mental Health Professionals' Perceptions of Factors Influencing Mental Health Symptomatology in Military First Responders in Sri Lanka

Within the first category, influencing factors were collated as (1) amplified risks (i.e., factors that could increase the severity of symptomatology), (2) buffers against risk (i.e., factors that could decrease the severity of symptomatology), and (3) factors with variable impact (i.e., factors that could either increase or decrease the severity of symptomatology). These three themes are composed by subthemes presenting said factors.

Theme 1: Factors with amplified risks

Subtheme 1: Loss of Purpose (C: 50%; M: 100%) The ending of a three-decade-long war in the country was observed to have left military crisis responders feeling purposeless, demotivated, and uninterested in other duties considered more routine (e.g., agriculture and construction work). This was then considered to have a detrimental impact on mental health due to reduced self-worth:

> Most of them [crisis responders] joined the army for the war, "*but now the war is over, so what do I do now?*" is a common question they have. They spent the majority of their lives with a weapon, honoring the tasks and responsibilities in the military, and that's all they have. (C, P12)

This then further linked to boredom through this loss of purpose:

> The environment that they [crisis responders] operate in, it's a very confined space and after the war especially, there's a lot of boredom because they are just laying around most of the time now, except for some people who might be doing different things, so that boredom plays a huge role in their emotional health and functioning as well. (C, P1)

Subtheme 2: Lacking Insight into Mental Health Symptomatology (C: 86%; M: 100%) Some military crisis responders would find it difficult to seek help for emerging mental health difficulties due to lack of insight, and attitudinal barriers may further prevent development of such insight. For instance, it was reflected that some military crisis responders have low insight and do not seek psychological services due to concerns of side effects of medication, stigma against mental health difficulties, and lack of interest or knowledge:

> The effectiveness of awareness programmes is low because they [crisis responders] participate in these programmes for the sake of it, simply because they have been nominated by their superior as programmes require a certain number of people to attend. Only a few people

> will understand the message and try to apply it to their lives. (C, P6)

Owing to the lack of knowledge on mental health, barriers were created, which could further be observed by engagement in other practices when trying to understand their symptoms:

> There have been a lot of instances where soldiers reveal that up until the workshop, they were under the impression that they or wives were under some kind of black magic spell and had spent a lot of money on superstitious practices. After they have exhausted all of their other options, like going to religious places and engaging in superstitious practices, then they come for therapy after they are fed up. (C, P14)

This overall lack of insight was further noted when it became apparent that military crisis responders seek professional mental health support, only when their economic status and/or personal relationships are at risk:

> The majority of them seek help when they have family issues or if they start having problems at work. It's very unlikely that they would seek help just because they are personally feeling frustrated. (M, P15)

Subtheme 3: Need to Assert Capability and Hardiness (C: 36%; M: 60%) Military crisis responders attempt to portray a persona to assert themselves as "capable" and "resilient" due to community perception of military persons as "heroes":

> Seeking psychological help or having psychological illness is labelled as a sign of weakness. It does not fit with the military role. "*We [crisis responders] are heroes. We have no drawbacks. We are unharmed*." That male ego, the hero perspective is sometimes a protective factor but on other times, it prevents them from asking for help. (C, P4)

Subtheme 4: Disconnection from Family Support and Social Relations (C: 60%; M: 93%) Due to the nature of their work duties, military crisis responders are often disconnected from their families and communities, which elevate their mental health difficulties:

> The most important thing to them is their families. All of them [crisis responders] were away from their families [during the war]. Sometimes their leave comes like 60-70 days later. This affected their emotional and psychological well-being a lot. The wife's support is very important. There are many wives who complain that their husbands don't get leave on time and don't get a lot of free time to talk with them. (C, P10)

This was further observed when COVID-19 restricted their abilities to gain family support and connectedness, including at times of personal distress, further exacerbating mental health symptomatology:

> Some crisis responders couldn't even attend funerals of their own parents because of COVID restrictions. This could be a turning point in their lives; losing their closest family, their role models. These factors affect their psyche more than the risk of being exposed to crisis situations. (M, P9)

Subtheme 5: Recent Critical Events Triggering Unresolved Traumas (C: 86%; M: 73%) Exposure to various and continuous crisis events as part of their work role, as well as other personal losses could at times trigger unresolved traumas. This could relate to an unresolved trauma response from engaging in past critical events:

> When I hear about similar incidents, I have flashbacks about some of the crisis events that I was exposed to. I remember dead bodies and how those were carried. Then I feel really restless. It's really difficult for me. I can feel my heartbeat rising. With COVID, I am having flashbacks and feelings of restlessness more often. When I see facial expressions of some of these soldiers, it takes me back to when they were responding to the *Meethotamulla* rescue mission. I often remember war stories that soldiers tell me, so the slightest thing startles me. Another time I get flashbacks is when I see distressing footage from news and social media. I get irritated and sweat a lot. I get easily startled by even small noises. It doesn't last for long, but it happens often. The future feels uncertain, especially with COVID. So many people call our hotline. It is so many people that I feel sick now when I hear the phone rings. (M, P5)

Theme 2: Factors buffering against risk

Subtheme 1: Importance of Reliable and Continuing Peer Support (C: 14%; M: 47%) Peer support emerged as an essential and healthy coping mechanism for military crisis responders to buffer against mental health challenges ("They are surviving because of this bond"; M, P5). It was also noted that peer relationships could be time bound and restricted due to workplace conditions. As such, it was not always a long-term or reliable support system, yet it was positive when present:

> When it comes to peers, these friendships are only accessible during duty hours. I mean, they don't get to form long lasting friendships because you only stay for one year in a camp, and then you are transferred again. (M, P11)

Subtheme 2: Sense of Meaning (C: 50%; M: 100%) Reduction in risk of developing and exacerbation of mental health difficulties appeared to be linked with a sense of meaning and understanding in their role as military crisis responders:

> Compared to the western part of the world, the prevalence [of PTSD] is low for some reason. We have to accept that. My interpretation for that is because we had a meaning for our war. They [crisis responders] knew clearly what they were fighting for……here, soldiers have the sense of obligation to protect their nation and family. Sri Lankan soldiers could clearly see the consequences of their fighting, so the guilt is comparatively low. (C, P6)

Theme 3: Factors with a variable impact

Subtheme 1: Religion as a Coping Mechanism (C: 0%; M: 87%) This theme offered a mixed presentation in regard to the relief that religion could offer, to elevate mental health difficulties:

> They used to seek counselling assistance from the temple, but in today's society, religious beliefs themselves can be triggering. For example, the Easter Attack which was religiously motivated. They don't get the same relief as they used to from religion. (M, P8)

In contrast, some mental health professionals regarded religion as a coping strategy for military first responders to manage distress arising from exposure to crisis situations:

> Something I've noted about soldiers who fought in the frontline [of the war] is that they have become really religious now. It's their coping mechanism. They try to accept what happened by convincing themselves that it [the war] was "*meant to happen*". (M, P5)

Subtheme 2: Response from the Community (C: 28%; M: 87%) The response from the community towards Sri Lankan military personnel was considered positively significant and therefore, suggests some potential for a buffering impact against mental health difficulties due to social appreciation:

> Public attitude about the military is very positive. They see them as heroes. Even when they [crisis responders] have gone through terrible experiences and lost their limbs, they are proud about it. Even when life is tough for them, it [social acceptance] gets them going. It is a very strong motivator for them. (C, P4)

However, if this positive response from the community changes due to a crisis event, and the response from the community becomes less favourable, this could then impact negatively on social appreciation, and ultimately mental health of military crisis responders:

> Acceptance from society and how they are portrayed by the media matters to them a lot. This was very present during the war. Not that it's not there now, but that recognition and respect are less now. With the Easter attack and the pandemic, recognition increased, but now it is low again. They [military crisis responders] go through a lot, so when they come out of it, this acceptance is what makes it worth it for them. When it is not there, the value that they give for themselves also changes. (M, P2)

Subtheme 3: Support from Senior Management (C: 71%; M: 87%) Mental health professionals noted that military senior management would sometimes encourage and support crisis responders to seek professional support for mental health difficulties, but sometimes could be dismissive of the need for such support:

> High-ranking officers with a good level of education have a good understanding of our services and would refer their subordinates to us. They know the importance of psychological support, but those who came into their senior positions from infantry units have a more militarised mindset which only focuses on discipline. They think psychological support is useless. (M, P13)

There were further instances where some senior military leadership would not only discourage junior officers but also instill stigma about seeking psychological support:

> Superiors are one of the main reasons for them [crisis responders] to not seek help. Most of these seniors have the attitude that people who seek psychological services are "*psychos*". So, most of the soldiers are scared to go for counselling sessions. They are worried that they will be called "*crazy*". These seniors sometimes explicitly tell their juniors, "*Don't go for counselling. It's not good for you. You are just trying to be a baby by going to a counsellor*". (C, P10)

Primary Category 2: Mental Health Professionals' Perceptions of Factors Influencing Effective Interventions for Military First Responders in Sri Lanka

Two main themes emerged from category 2, which outlined internal and external factors to mental health professionals, which may impact the effectiveness of treatment/interventions. Subthemes were formulated to present a breakdown of said internal and external factors.

Theme 1: Attributes of service providers in therapeutic support

Individual characteristics and nature of engagement by mental health professionals were recognised as significant factors to influence the recovery process of military first responders presenting mental health difficulties as a result of exposure to crisis events. This theme is composed of two subthemes as well.

Subtheme 1: Approachability, Care, and Empathic Concern by Mental Health Professionals (C: 43%; M: 60%) Personal attributes of mental health professionals, such as their approachability, their ability to relate to military crisis responders, impactful communication skills, and ethical practices were stated as key considerations for effective engagement in intervention. Barriers towards such effectiveness were noted as professionals who were inconsiderate of an individual's distress and held negative attitudes, beliefs, and actions that dismissed military crisis responders' traumatic experiences:

> People who work as counsellors in forces have to be more approachable and not take on the role of an officer than a counsellor. They [crisis responders] don't feel like seeking support because sometimes the counsellor would be someone who's also been to the war so they might look at the person as, "*Oh, I've also gone through this so what are you complaining about?*" or "*It's all in your head. I have gone through this, and I've lost so many people, so why are you complaining?*", which I know that some counsellors have told their clients. This leaves them [crisis responders] feeling very invalidated and most probably not return for help. (C, P1)

Subtheme 2: Need for Continuous Professional Development (C: 36%; M: 67%)

A need for continuous development for mental health professionals was noted as an important factor in effective interventions. It was noted that due to lack of appropriate and sufficient opportunities to develop and/or use existing knowledge through professional courses and peer interactions, which is further compounded by a lack of qualified military mental health professionals, barriers were imposed for continuous professional development. However, a military mental health professional disagreed with the perspective of other professionals by stating that the lack of opportunity to utilise existing knowledge and skills is more concerning than the need for continuous professional development:

> I don't think we need to go for any more courses or training, but if we get exposure from different settings, foreign or local, that's good. I have a basic degree and that has been sufficient for me to work both inside the military and outside civilian settings. I have not had the opportunity yet to use my education of four years, so it makes me wonder why I have to study more. I'm not saying that we should stop learning, but it doesn't make sense to say that the quality of my services entirely depends on my formal education. It's good if we get the opportunity, but it shouldn't be a deciding factor of my capabilities. (M, P2)

Adding to the importance of field and peer learning, a civilian mental health professional emphasised the importance of learning from experiences of military crisis responders and their treating military-based mental health professionals to better understand the impact of exposure to protracted crisis situations. The lack of contextualised and culturally appropriate trauma literature and psychometric assessments was also noted as a significant limitation for continuous professional development:

> The language barrier is also there because most of the readings and worksheets are in English. Some counsellors may not be able to read, comprehend, and deliver from English to Sinhala. Sometimes [they] may not even have the interest to read because it is not a language that they are familiar with. It's a major limitation to deliver up-to-date interventions. (C, P12)

Theme 2: Aspects of service delivery

The influence of factors that are external (out of their control) to mental health professionals and military crisis responders was noted as an overall theme and split into the following four subthemes.

Subtheme 1: Accessibility to Services (C: 93%; M: 100%)

There is a high possibility for crisis responders to be undiagnosed and/or untreated for their mental health difficulties due to reduced access to mental health services in the military. This is further impeded by factors such as stigma and hierarchical structure in the military:

> There is a certain amount of politics involved when it comes to rank, status, and family background, so it is difficult for some military personnel to get help, but for some, it is easily accessible. (C, P8)

However, some professionals reported that accessibility had improved as a response to COVID:

> I wore PPE kits and spoke to COVID patients when they needed psychological help. It was a big deal for them during a time that they were distanced and isolated from others. We established a 24-hour service for them which they found really helpful. (M, P10)

The lack of agency to decline services was viewed as a positive factor by some of the professionals:

> When you have been referred to go for counselling, they [crisis responders] don't have the choice like in the private sector. They are given a date and then on the day, they are sent from the camp to the hospital with a note. After your appointment, the hospital gives you back that note to handover to the camp office, with the next visit date. Wherever you are in the country, you will somehow be sent for your appointment on that day. They are sent even if they like it or not. (C, P12)

Subtheme 2: Quality of Service Provision (C: 64%; M: 100%)

Several negative factors were recognised to have reduced the quality of mental health services provided to military crisis responders. In addition to the highly militarised therapeutic settings, this relates to the lack of culture-specific knowledge on trauma and psychological measures adapted to the Sri Lankan context and differing standards in providing evidence based, person-centred, and trauma-informed therapeutic interventions through a multidisciplinary team:

> Assessing trauma for military personnel is different. There are different scales. Most of the European psychological interventions are focused on one-time trauma, but Sri Lankan military personnel go through multiple traumas. Addressing this trauma and delivery of psychological interventions are not that easy. (C, P5)

> We [mental health professionals] are not part of recruitment, but it should be made essential because we will then be able to identify individuals who are struggling. Like signs of self-harm and check their background details for any risk factors, like parents who have committed suicide. Individuals like this get easily depressed during military training, so it's important to identify them early. Because we get priority in situations like this, some people in senior administration don't like to have us involved. (M, P12)

In contrast, some professionals stated that certain components of militarised settings could enhance psychological support:

> There are good things about the system as well. For example, every officer selected for foreign missions must talk to a counselling officer before their departure. We

discuss family concerns, risk of sexually transmitted infections, and coping strategies before they leave for foreign missions. (M, P4)

Subtheme 3: Limited Availability of Resources (C: 86%; M: 100%) The quality of interventions and the willingness to seek professional support could be impacted due to lack of resources. For example, lack of qualified practitioners with limited experience, comprehensive and regular research, systematised follow-up procedure, physical resources (e.g., transport, stationery, building facilities), and restricted access to external resource personnel. Professionals emphasised that the situation further exacerbated during the pandemic:

> With the pandemic, we realised that we lack a lot of resources. We didn't have the technology to offer services remotely. If we have a system like that, we can even continue it after the pandemic. We can talk to someone in Jaffna from Colombo, so they don't have to travel 10 hours for one session. It takes about three days. One day to travel, one day for the session, and then another day to travel back. It's just not a good use of time and resources. Just because of how difficult it is, they [crisis responders] may be reluctant to seek help then." (M, P2)

> There are not enough counsellors and psychologists to support the strength of the army. There have been times that I am sick of my job…tired of having to continuously support so many soldiers. Sometimes I think to myself, "*What the hell am I doing! What am I trying to achieve by doing all this?*" (M, P5)

> We [psychologists] join the army after completing our first degree. If I take myself as an example, by the time I joined the army after completing my bachelor's, I didn't have enough clinical experience to treat a client. I learned it on the job. Before the first batch of psychologists was hired, the army didn't have an understanding about a psychology degree, so they had hired persons with philosophy degrees, and this is concerning because we have to question if they provide a quality service to our clients. (M, P5)

Subtheme 4: Challenging Workplace Conditions (C: 57%; M: 100%) Lack of privacy and confidentiality due to hierarchy in the military setting, mixed role expectations on military mental health professionals, a primary focus on psychiatric drugs over psychological support, an appraisal process that discriminates against crisis responders who seek psychological services, and dismissive attitudes of senior management towards mental health professionals were noted to hinder effectiveness of interventions:

> We [mental health professionals] have a 24/7 hotline, and they [crisis responders] can call us anytime, but to meet us in person, they have to go through a lengthy and complicated process. The whole platoon will get to know if someone wants to see a counsellor because the soldier has to talk to so many people to get permission. In the army system, soldiers cannot just come to see us, even if they are willing to. They have to come through their managers. Otherwise, there will be consequences. (M, P13)

> Since therapists were not part of active battlefields, some senior officers tend to be dismissive about the capacity of psychologists by saying things like, "*what do you know about these people [military crisis responders]? We know best how to handle them*". They [officers] are under the impression that therapists should also undergo the same experiences to know what it's like. The attitude towards psychological services is still very negative. When I tried to introduce new psychological measures, they [military leadership] rejected by saying, "*We had a war for 30 years. We never assessed people for recruitment while we had the war, so we don't need it now.*" (C, P6)

DISCUSSION

By considering the perspective of mental health professionals who support military crisis responders in Sri Lanka, this research was able to capture several factors that could influence the emergence and maintenance of mental health symptoms in military first responders, after exposure to crisis situations. These included factors that could amplify risk, those that could potentially buffer against it, and those that have a more variable impact. The analysis also identified several factors that could potentially impact effectiveness of interventions/treatments offered to military crisis responders in Sri Lanka. Subthemes emphasised on the importance of competence and accessibility of mental health professionals, alongside workplace conditions. In contrast to the majority of current literature which has assessed Caucasian, male, crisis responders from Western countries, who were exposed to combat in foreign countries (De Silva et al., 2022), the current research focused on non-Caucasian crisis responders from armed forces, who were deployed within their home country as first responders. Civilian participants mostly included female professionals whilst military-based participants mostly included male professionals, which is representative of gender distribution in mental health services and the military in Sri Lanka. The two samples were not distinctly different in their other demographic variables. Independent of participants' gender and context they work in (civilian or military-based), professionals expressed balanced views, providing supportive statements for different hypotheses under the same themes.

Findings from this present research support existing literature that being disconnected from their families and community, negative experiences in the past including continuous exposure to crisis situations, self-stigma in seeking professional help, restricted access to mental health services due to toxic organisational values, the type of crisis situation, and one's cultural values amplify mental health difficulties for crisis responders (Barr & Corral Rodríguez, 2023; Beckley et al., 2023; Blakey et al., 2022; Miles et al., 2023; Presseau et al., 2019; Reisenzein, 2019; Sherin & Nemeroff, 2022). The current study adds to the existing literature that this amplified risk further exacerbated during the COVID-19 pandemic due to isolation, yet a considerable number of crisis responders from the Sri Lanka military sought professional support

during the pandemic due to fear of losing their jobs, and/or because of the negative impact on their families. Lack of free will to approach and/or engage with mental health services was viewed by some of the military-based professionals as a positive aspect of the military setting to ensure treatment compliance, opposing the recommendation by Becker et al. (2009) that seeking professional support on one's own initiative and being actively involved in the treatment process improves recovery.

A novel finding from the present research is that though military personnel in Sri Lanka generally report a very strong sense of pride and receive a positive response from the community, it had diluted since the end of the decades-long war in 2009. Engaging in non-defence work (e.g., agriculture and construction) has negatively affected their motivation and social image of being viewed as "masculine and resilient". Though the nature of their work changed as crisis responders due to the pandemic, it in turn negatively impacted themselves and their families due to high infection rates reported from the military. Another novel finding from the current research is the role of religion and/or superstitious faith in trauma recovery. Military-based professionals shared mixed views regarding benefits and the frequency of engagement in religious and/or superstitious practices as a coping mechanism by military crisis responders. The present research emphasised that peer support and assistance from the government and/or military leadership are of utmost importance for recovery, which increased during the COVID-19 response; though resources were minimal and some experts lacked familiarity in using technology, it was positively viewed by military-based professionals as a way forward.

The importance of qualified and experienced practitioners and opportunity for their continuous professional development were other themes that strongly emerged during this research, which had not become apparent through previous research.

According to Lewis and Roberts (2001), short-term treatment is preferred by service recipients, and it has become the way forward also due to reduced budget allocations. The current research is not able to support or challenge these findings as 'treatment preference' did not explicitly emerge as a theme, but frequent transfers of both mental health professionals and crisis responders were noted to hinder recovery progress. Similar to Lewis and Roberts (2001), the present research findings emphasise on the importance of using standardised assessments with strong psychometrics. Unique to the current research, the importance of culture-specific trauma knowledge and the use of culture-sensitive psychometric assessments were emphasised by professionals.

Implications for Practice and Policy

Findings from the present research will improve insight of both civilian and/or military-based mental health professionals, military leadership, and the Sri Lankan government to consider anticipatory actions to prevent, mitigate, and/or respond to risks of development and/or exacerbation of mental health difficulties of military first responders, after exposure to crisis situations. This insight will also be helpful for practitioners and policymakers alike to revise/develop and implement evidence-based, trauma-informed, culturally appropriate, and context-responsive interventions/treatment pathways and organisational policies through a multidisciplinary team for the wider community of crisis responders beyond the Sri Lankan military.

Strengths and Limitations of the Current Research

The current research is one of the first to specifically consider military crisis responders in a South Asian sample; and to qualitatively assess lived experiences and professional views of civilian and military-based mental health professionals regarding influencing factors in trauma recovery and effective mental health intervention for crisis responders in the military. The current research offered only an introduction of understanding in this area and did not assess the impact of other factors, such as severe physical injuries and/or disabilities, suicide ideations and/or attempts, and criminal convictions/dishonourable discharges of military crisis responders. Therefore, future research should assess this in more detail, with a larger cohort of mental health professionals and military crisis responders themselves, allowing the possibility to generalise findings and to conduct advanced statistical analyses to complement qualitative findings. However, the pathway to become a registered mental health professional is not regulated in Sri Lanka and hence, it may be difficult to recruit a large number of suitable practitioners.

The Sri Lanka Defence Ministry did not grant permission to share interview data due to concerns regarding sensitivity of information, which impacts the study's validity and reproducibility. Regardless, a strength of this study is the diverse sampling of mental health professionals and the use of a qualitative approach, as such an approach offers a richer exploration of expert views and field experiences, providing more detailed insights than a standardised quantitative approach.

CONCLUSIONS

The present research consolidates existing literature and presents new findings regarding a military crisis responder sample in South Asia through experiences of mental health professionals. The authors believe that new findings presented through this research further improve current understandings in trauma literature and provide a snapshot view from the Global South, in the aftermath of exposure to protracted, continuous, and multiple crisis situations, including the COVID-19 pandemic.

The findings from this study illustrate the importance of considering psychological trauma in crisis responders and factors that may hinder a true reflection of distress. This study illustrates that there are several factors restricting engagement in discussion of distress and in seeking support. For instance, crisis responders' self-stigma, a need to assert a sense of resilience in order to meet expectations of their protector role, and variable support for them to engage in treatment/intervention to manage mental health difficulties. Of particular importance is the sense of identity that a crisis responder can gain from their role and the sense of loss of self and identity if this is no longer present for them. The importance of accounting for this and placing the individual at the forefront of the professional response is paramount. The latter will require increased organisational support at a senior level and one that avoids a 'detached spectator'

approach, which fails to appreciate lived experiences of crisis responders or account for unique cultural, religious, and/or political differences that may arise in a context needing improved understanding in trauma to determine person-centred treatment/interventions.

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CONFLICT OF INTEREST DISCLOSURES

The authors have no conflicts of interest to declare.

DATA AVAILABILITY STATEMENT

Sri Lanka Defence Ministry did not grant permission for data to be shared publicly. Consequently, supporting data is not available.

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ORIGINAL RESEARCH

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An analysis of patterns and predictors of self-reported common mental disorders in Ibadan Metropolis, Nigeria

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ABSTRACT

Common mental disorders (CMDs) have been on the rise in developing countries. This study set out to unravel the pattern of CMD prevalence in a traditional African city, Ibadan. The study, in addition to socio-economic and demographic variables, takes into cognisance the effect of some peculiar environmental variables. The Self-Reporting Questionnaire-20 was used for CMD screening, and the questionnaire was administered to 1,200 respondents in a cross-sectional survey approach. The results showed that the overall pattern of CMD prevalence is random (Global Moran's I ($P = 0.78$, $I = 0.00$ and $Z = 0.29$)). Respondents without education reported the highest cases of CMD (48.6%). When combined together, migrants reported 52.5% of the CMDs. The significant variables are food security (β = −0.198), green space (β = −0.057), migration status (β = −0.054), flood-prone residence (β = 0.453), low-quality housing (β = −0.061), frequent recreation participation (β = −0.071), experience of spousal violence (β = 0.199), positive self-rated health (β = −0.134) and positive quality of life (β = −0.205). The predictors of CMD explained about 35.8% of the variation (R^2) and an R value of 59.9%. The study showed that CMDs occur among most of the urban population. Adequate media sensitization will have significant ameliorating effects on urban residents.

Key Words Urban; self-rated; mental disorders; predictors.

INTRODUCTION

Common mental disorders (CMDs), also called minor or non-psychotic psychiatric morbidity, present as anxiety and depression and are frequently reported in the general population (Kuruvilla & Jacob, 2007). The expression "common mental disorders" was created by Goldberg and Huxley in 1992 due to the high frequency in the community, thereby creating a public health challenge.

The concept of "health" comprises not only the physical component but also the social and mental components according to the World Health Organization's (WHO) definition of health. However, the Nigerian medical geography literature is well concentrated with studies based on the physical component of health; examples include measles, malaria, pneumonia, tetanus, dysentery, tuberculosis, to mention a few, but the geographic studies of CMD are very scanty. CMDs are classified according to the International Classification of Disease (ICD-10) as neurotic, stress-related somatoform disorders and mood disorders (Patel & Kleinman, 2003).

City residents are predisposed to mental health risk (Gruebner et al., 2017), and urbanization is one of the predisposing risk factors of mental health problems in Nigeria, with a prevalence rate up to 20–30% (Suleiman, 2016). In low-income countries, depression, which is a type of CMDs, has become almost as prevalent as malaria, with 3.2% as against 4% of the disease burden, and this has been projected to increase to approximately 5% in 2030 (Mathers & Loncar, 2006).

Despite the burden of CMDs, it has not been extensively researched in developing countries. Approximately 90% of all mental health problems can be classified as CMDs (Blue et al., 1996; Goldberg & Huxley, 1992). In Nigeria, it is estimated that between 20% and 30% of the population experience mental health disorders (MHLAP, 2012; Onyemelukwe, 2016; Suleiman, 2016; WHO, 2006). This study in its exact context

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becomes very necessary as the health of urban residents is gaining increasing attention in the literature without a corresponding attention in the Nigerian context. The living and working conditions in most cities often have adverse effects on residents' health. Thus, this present study examined the spatial pattern of CMDs with a view to describing the distribution and identifying the significant correlates like socio-economic, demographic, lifestyle or behavioural and environmental factors.

LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

In the city of Ouagadougou, Burkina Faso, Duthé et al. (2016) conducted a study in the urban area. The prevalence of major depressive disorder was 4.3%; the study observed that the disorder is highly prevalent among urban residents in Burkina Faso and the case is likely the same in other urban centres in sub-Saharan Africa. This study did not take into cognisance the rural areas and the need to understand the prevalence of other types of mental health problems apart from depression. The study by Zhang et al. (2019) found that stigmatizing attitudes towards mental illness are highly prevalent in central Mozambique. The results showed that males; urban residents; divorced or widowed individuals; respondents aged between 18 and 24 years and individuals with low literacy levels, with no religion and in lower socio-economic strata have high levels of stigmatizing attitudes towards mental illness. This study, however, failed to consider the various types of mental illness and if stigma applies to all categories of mental health problems.

The spatial distribution of depression was examined in South Africa by Cuadros et al. (2019); the study identified a spatial structuring of depression at a national scale and clearly mapped out the geographical hotspots of concentration of individuals with depressive symptoms. The study did not consider the political ecology of diseases which is applicable to most African countries. The study also did not explore the advantages inherent in small-area studies, as they often provide deeper insights into the patterns of disease prevalence. According to Patel and Kleinman (2003), earlier studies found strong associations between correlates of poverty and mental disorders, with low levels of education being the most consistent. Other predictors are income levels, insecurity, hopelessness, social change, violence and physical ill-health. Of all the explanatory models of CMDs, poverty and socio-economic disadvantage have been the most cited and the most important.

The study by Charlson et al. (2014) showcased the need to increase the mental health workforce in sub-Saharan Africa by 2050 and up to about 45 million YLDs (years lived with disability). The study identified the huge gap in the mental healthcare workforce in African countries and calls for huge investment in mental healthcare. There is need for a periodic review of the mental health workforce across various countries and to also unravel the patterns of migration of mental health workers across sub-Saharan African countries.

Gruebner et al. (2012) observed that mental health problems are a serious issue in developing countries and have not been adequately addressed in the rapidly urbanizing megacities. The study found that mental well-being was significantly associated with factors such as the natural environment, flood risk, sanitation, housing quality, sufficiency and durability. Thus, it was concluded that the factors determining mental well-being were related to the socio-physical environment and individual-level characteristics. The findings of this study are in agreement with those by Melis et al. (2015).

In the study by Weich et al. (2003), a multi-level approach was used to determine CMD prevalence. Adults aged 16–74 years living in private households within the 642 electoral wards in England, Wales and Scotland were recruited into the study. The findings showed that individual-level risk factors explained 19.8% of the prevalence. Similarly, Delaney et al. (2007) used an Irish population to examine the distribution and determinants of mental well-being. The findings showed that the distribution of well-being is mostly explained by education and social capital variables. Generally, the review of extant studies showed a major gap in the studies of pattern and predictors or correlates as well as methods of screening CMDs in the context of the sub-Saharan cities. Largely, more studies are conducted in the Global North than in the South, thus implying that there is need to understand the pattern of mental health problems in the developing countries.

The human ecology of disease model (Figure S1) guided the study. Here, ecology refers to the interactions that exist among the living organisms within the environment. The interaction and relationship between human beings (as living organisms) and the surrounding ecosystem is the major concern here especially as it relates to mental health outcomes. This model has three vertices, namely the habitat, population and behaviour, all of which determine the state of human health (mental health inclusive). Habitat refers to where people live (environment). The habitat is made up of three sub-sections or types (the social, built and natural habitat). Built habitat refers to the man-made parts of the environment, e.g., road network, buildings, transport amenities, etc. The natural habitat refers to the nature-made components of the environment such as climate, air and landscape forms. Green areas like gardens and parks have been established to positively influence mental health. The social habitat refers to how the society is organized in terms of relationship between people, among groups or entire communities/neighbourhood and the society at large. The availability of trusted persons and membership of social groups can either affect mental health tremendously. Population is made up of genes, age and gender, refers to human beings as biological organisms who are the potential hosts for diseases, in this case mental ill-health. The extent to which a population can cope with different types of stressors depends on a lot of factors like genetic make-up, nutritional status, immunity level, immediate physiological status and biological components (Meade & Earickson, 2000). Also, certain disorders like substance-abuse disorders are related to young people than other cohorts of the population. Women of different ages are affected by premenstrual disorder, pre-natal and post-partum depression and depression at menopause. Behaviour represents the most observable aspect of human culture. It includes mobility, practices in various cultures and technological interventions. Behaviours like alcohol consumption/substance use, recreation, domestic violence, exercise or physical activity can also be linked to mental

health and consequences of disease production. The disease triangle seeks to explain human health as a function of three variables, namely population, habitat and behaviour.

The three variables of the disease triangle can be jointly applied in different forms to explain the state of health at any point in time (Meade & Earickson, 2000). This model is useful in understanding the pattern of interaction between human beings and social and physical environments. The subject is more interesting especially when developing countries with high inequality, many people living under abject poverty, deteriorating living environmental conditions and high levels of infrastructure decay are considered. Prevalence of CMDs can also be explained by considering the relationships between these variables as mental health can vary widely in different dimensions due to the habitat, population of interest and behaviour. The relevance of this concept is to identify and provide explanations on the different social, demographic, behavioural/lifestyle and environmental factors and how these can impact the mental health outcome of different categories of individuals.

METHODOLOGY

Description of the Study Area

This study was carried out in the ancient metropolitan area of Ibadan (Figure S2) which lies between latitudes 7° 15′ and 7° 30′ north of the equator and longitudes 3° 45′ and 4° 00′ east of the Greenwich meridian. Ibadan, which is acclaimed to be the largest metropolis in sub-Saharan Africa, has expanded significantly to include adjacent towns and villages. Based on the percentage of the urban area covered, five local government areas (LGAs) that constitute the Ibadan city covering an area of 128 km^2 were selected and are as follows: Ibadan North, Ibadan North-east, Ibadan North-west, Ibadan South-east and Ibadan South-west. A total of 104 localities were selected from the 5 LGAs using the state valuation map. The study adopted the classification of residential localities in the city of Ibadan, which was classified mainly into three areas based on residential density, namely high-, medium- and low-density areas (Ayeni, 1982). The localities selected for this study cut across the three types earlier identified, and the localities and their residential density characteristics are further provided in the Results and Discussion section.

The Source of Research Data

Primary data were collected using a cross-sectional survey approach. The research design for the study is the survey method which entails a one-time collection of information from samples of population elements, in this case household. Questionnaire was administered to individuals in the households selected for the survey to collect data on the socio-economic and demographic characteristics of the respondents, lifestyle of respondents, environmental characteristics, quality of life (WHO-5) and symptoms of CMDs (Self-Reporting Questionnaire-20 (SRQ-20)). The data obtained were from a one-time survey of respondents, and the entire data were collected over a period of 2 months. Health data can either be obtained by patient records or by self-reported diagnosis. Due to the nature of CMDs, which are usually under-reported and not easily detected, the self-rated approach is adopted in this study.

Data Collection and Procedures

A sample size of 1,200 respondents was selected from the study area using the Neumann's probability sampling formula. This sample size was selected at the confidence level of 95% and 3% margin of error/confidence interval. Thereafter, the 1,200 respondents were selected proportionally to the population of the communities. Ibadan is purposively selected for this study. This is because of the prevalence rate reported in the earlier studies of mental illness (21.9%) in this traditional city as carried out by Amoran et al. (2005). To collect the data for this present study, the multi-stage sample method was adopted. The first stage entails the selection of the 11 LGAs in Ibadan, followed by the selection of 104 communities within the 11 LGAs and a classification of these communities according to residential densities and a random systematic selection of households per community. The focus is on adult population above 18 years who are heads or members of households for questionnaire administration. The questionnaire was administered according to the samples selected from the projected population in each of the communities within the metropolis. The street layout of each of the locality was adopted in selecting the respondents from the households. The data were collected over a period of 2 months with the help of university students as field officers. The questionnaire was translated for the sake of those without adequate knowledge of formal English. The translation was done by the researcher with special consultation with a psychiatrist to ascertain accuracy of translations.

Data Preparation and Analysis

The study analyzed the data from the field using SPSS 2017 (version 25.0, IBM Corp. Released 2017. IBM SPSS Statistics for Windows, Armonk, NY, USA) together with geographic information system methods that evaluate the existence of clusters in the spatial arrangement of a given variable. Here we have Global and Local Moran's statistics. To determine the pattern of CMD, the Moran's I statistic was employed. The multiple regression method was used to predict the observed values of the dependent variable using a linear function of the observed values of two or more independent variables. The study posited that CMD is determined by income, educational, age, gender, employment status, household size, alcohol consumption, recreational pattern, perception of housing satisfaction, persons per room ratio, migration status, social capital, perceived neighbourhood crime rate, household food security, domestic violence, flood-prone residence, housing quality, exposure to mobility stress, access to green space and personal health. Among the many tools that can be used for CMD screening, this study adopted the main tool which has been validated for use among general populations in developing countries, SRQ-20. The SRQ-20 has earlier been validated in Nigeria in the studies by Adebowale and James (2018), Ola et al. (2011) and Osasona and Koleoso (2015). The tool has also been used in other countries like Ethiopia, South Africa, Brazil and Mexico (Parreira et al., 2017). The Cronbach's alpha, which is an indicator of scale reliability and internal consistency for SRQ, in this study is 0.77. The respondents were classified based on the cut-off or threshold into dichotomous outcomes "case" (7 and above) and "non-case" (below 7). The reported CMD cases were treated as continuous outcome. The total number of CMD

cases for the locations was aggregated to explain the spatial distribution.

Ethical Consideration

The study obtained ethical clearance from the Social Sciences and Humanities Ethics Review Committee of the University of Ibadan with the assigned number UI/SSHEC/2017/0012. During the survey, the respondents were assured of the confidentiality of the information gathered and that the information collected would be for research purposes only and would not be shared with a third party. The data were collected with all sense of professionalism and ethical conduct. The respondents were given adequate knowledge of the purpose of the research and also informed of their right to withdraw from the study at any stage or decline providing any information considered to be discreet, which was strictly adhered to.

RESULTS AND DISCUSSION

Socio-economic Characteristics

Here is the summary of the demographic and socio-economic characteristics of the respondents, as depicted in Tables S1 and S2. The sample is predominantly male (52.3%), Yoruba (84.6%) and married (94%). Seventy-four percent of the respondents earn between ₦18,000 and ₦59,999, 38.8% of the respondents had a secondary education and 62.7% were self-employed. With respect to the environmental and behavioural characteristics of the respondents, to a large extent, most respondents reside in flats (43.6%), followed by face-me and face you (33.4); 53.1% have experienced crime cases more than once in their locality; 65.2% feel their housing infrastructure is satisfactory; 67.8% have no green space around their housing and 73.2% do not visit green spaces like park and gardens.

The Distribution of CMDs

The SRQ-20 adopted the cut-off score of 7; positive responses to seven items on the SRQ scale represent a "case" and a score below 7 is "non-case". The total number of cases reported was sorted and aggregated by 104 communities in Ibadan metropolis on a continuous scale. From the communities, a total sample of 1,200 respondents was drawn in line with residential densities in this order: low-density communities, 93; medium-density communities, 812; high-density communities, 295. The Global Moran's I statistic of ArcGIS was employed to describe the spatial distribution of CMD. Global Moran's I is a spatial statistic which provides insight into the spatial distribution of different phenomena, in this case CMD. The Global Moran's I statistic is used to probe the nature of relationships that exists between a spatial dataset. Further analyses of the spatial pattern were carried out using the Local Moran's I statistic and the hotspot analysis.

The Pattern of Overall Cases of CMDs

The overall pattern of cases of CMDs across the study area is shown in Figure S3a, b and Table S3. Here, the total number of cases reported for males and females in all the communities in Ibadan was aggregated and mapped according to communities. This is followed by a selection of classification quantities. For the overall and gender pattern, the datasets were classified into five categories with different shades of colours. The highest number of CMD cases, between 11 and 16 cases, was reported at Molete, with 16 cases; Adamasingba had 14 cases (medium-density area); Oje, a high-density residential area in the traditional core areas, had 12 cases and Oremeji had 12 cases (medium-density area). Molete is a medium-density residential area dotted with commercial land use. Other locations in the second category are locations with CMD cases in the range of 7 to 10. These are as follows: Eleyele (8 cases), Ijokodo (9 cases), Oniyanrin (8 cases), Odo Ona (7 cases), Yemetu (9 cases), Ring Road (7 cases), Liberty (7 cases), Odinjo (10 cases), Aperin (9 cases), Oja'ba (9 cases), Eleta (9 cases), Aremo (8 cases), Inalende (10 cases) and Mokola (8 cases).

The third category where most localities fall is locations with about three to six cases of CMDs. These include Apata (6), Alesinloye (3), Okebola (3), Agugu (4), Adekile (4), Abayomi (4), Oluyoro (5), Ashi (5), New Bodija (3), Old Bodija (3), Samonda (6), Sango (5), UI (4), Ojoo by Orogun (4), Agbowo-Orogun Express (5), Olopomewa (5), UCH (3), Adeoyo State Hospital (3), Anfani Layout (3), Odo Oba (4), Academy (6), Oniyere (5), Elekuro (4), UMC (3), Ilupeju (4) and Yambule (4).

The last category is for locations with reported CMD cases of two and below. Most of the low-density residential communities like Moor Plantations, Imalefalafia (2), IAR&T (0), Ago Taylor (0), D-Rovans (0), Alalubosa (2), Idi Ishin (1), NIHORT qtrs (0), Askar Paints (1), Coca-Cola (1), Secretariat (0), Lieutmack Barrack (2), Onireke GRA (2), Iyaganku (2), Osungbade (0), Felele (2), Polytechnic-Emmanuel College (2), Sanyo (1), Holy Trinity (0), Links Reservation (1), Agodi GRA (2), Ikolaba (2), Basorun (2) and Oluwo Nla (2), apart from those listed above, fall into this category.

Most parts of Ibadan are also occupied by mostly migrants who are either Yoruba non-indigenes or people from different parts of the country. Studies have proven that migrants are vulnerable to diseases and mental health problems (Naieni et al., 2018). The results of the Global Moran's I analysis showed that from the datasets, cases of CMD and non-cases of CMD had a random pattern. The above findings are largely in conformity with those of the studies by Tizón et al. (2009) conducted in Barcelona, which found a significantly higher prevalence in the lower socio-economic status (SES) area, and Termorshuizen et al. (2014), who also observed an influence of ethnic density on non-affective psychotic disorder (NAPD) prevalence. The main findings of the analyses of Pignon et al. (2016) in urban France showed that the distribution of cases of NAPDs was associated with economic deprivation. Figure S3a depicts the summary of the results of the Global Moran's I statistic ($P = 0.779$, $I = 0.003$ and $Z = 0.294$). The pattern of CMD is a random pattern. The graphical illustration of the results is as shown below.

The Pattern of Female Prevalence of CMDs

Figure S3b depicts the pattern of CMDs among females in Ibadan metropolis. Here, the gender of the respondents was cross-tabulated along with the cases of CMDs reported in the communities. The scale of classification here is reduced into two categories, with the highest cases of CMD between six and nine cases. The communities include Ring Road, Molete, Inalende, Gbagi, Adamasingba, Yemetu and Oje; of particular concern is Yemetu and Oje, which are communities

in the inner core and occupied by largely indigenous people and mostly of low SES. This tells about the association of CMD with SES. Also, traffic noise, pollution and crowding can be presumed as likely factors responsible for Ring Road and Molete.

Communities with four to five reported cases of CMD include Eleyele, Olopowema, Ijokodo, Oremeji, Sango, Samonda, Aperin, Agugu, Oniyere, Elewura, Liberty, and Odinjo. Two to three CMD cases were reported at Apata, Odo Ona, Adeoyo State Hospital, Anfani Layout, Ilupeju, Kudeti, UMC, Imalefalafia, Idi Arere, Agbokojo, Onireke GRA, Mokola, Old Bodija, New Bodija, Ashi, Ojoo by Orogun, Basorun, Oluyoro, Aremo, Adekile, Eleta and Ilupeju. The last category is communities with CMD cases of one and below. Largely, most other communities which do not fall into any of the above two categories fall here; also a greater proportion of the communities in Ibadan fall here, namely UI, Polytechnic-Emmanuel College, Agbowo-Orogun Express, Oluwo Nla, Yambule, Mokola, Secretariat, Ikolaba, Abayomi, UCH, Lieutmack Barracks, Links Reservation, Askar Paints, NIHORT Qtrs, Jericho GRA, Idi Ishin, Aleshinloye, Alalubosa, Moor Plantations, IAR&T, Ago Taylor, Iyaganku, Oke-Ado, Felele, Osungbade, Sanyo, Academy, Ile tuntun, Academy, Elekuro, Oke Are, Bode and Oke Oluokun.

Figure S3c depicts the summary of the results of the Global Moran's I statistic ($P = 0.481$, $I = 0.021$ and $Z = 0.481$); the pattern of CMD is a random pattern. Also, Figure S3d depicts the cases of CMDs among the females.

The Pattern of Male Prevalence of CMDs

Figure S3e depicts the pattern of CMD among males. Oremeji and Molete stand out with seven to eight CMD cases. Next are locations with reported cases between four and six, namely Elewura, Odo Ona, Eleyele, Ijokodo, Academy, Odinjo, Oje, Aremo, Aperin, Kobomoje, Oja Oba, Oniyanrin, Inalende and Adamasingba. The following locations reported two to three cases of CMD: Alesinloye, Eleyele, Apata, Liberty, Ososami, Felele, Odo Oba, Elekuro, Oluyoro, Abayomi, Ikolaba, UCH, Yemetu, Okebola, Foko, Yambule, Ashi, UI, Agbowo-Orogun Express and Adekile. Most of the other locations had barely one case of CMD. This result further stresses the fact that CMDs are more common among the low-income or socio-economic class of the population.

Figure S3e depicts the summary of the results of the Global Moran's I statistic ($P = 0.79$, $I = -0.02$ and $Z = -0.27$); the pattern of CMD is a random pattern. Figure S3f shows the prevalence of CMDs across the communities.

From the foregoing results, it can be found that the spatial pattern, male, female and overall, is random. The study attempted to examine if no form of clustering exists in the study area. The hotspot analysis and the Local Moran's I statistic were carried out. Figure S4a depicts the results of the Local Moran's I statistic; generally, the pattern of CMD is not significant in most communities except for the high-high cluster observed in Mokola, Adamasingba, Inalende and Oniyanrin. Both Mokola and Adamasingba lie along the modern CBD (Dugbe). Land use is intense there, and the competition for space often leaves migrants in this location, where they can be close to work and business locations. Inalende and Oniyanrin also share the same characteristics – proximity to traditional core areas like Yemetu, Oje and the like. This finding conforms to the fact that cases of CMD can be found around the city centres. Molete is the only community with high-low clusters of CMD. Figure S4b depicts the results of the hotspot analysis. The CMD pattern in most of the communities is not significant. The hotspot locations at the 99% confidence level are Mokola and Oniyanrin, lying very close to both the modern and traditional CBDs. At the 90% confidence interval, Ososami also featured as a hotspot location in Ibadan metropolis. Only Ago Taylor and Oke Bola featured as cold spots of CMD (95% confidence interval).

Figure S4c–f shows the results of the Local Moran's I statistic and the hotspot analysis for the females. Three high-high clusters were noticed; these are Ijokodo, Adamasingba and Inalende. Ring Road and Molete were also seen as the high-low outlier. The pockets of concentration are all scattered around the metropolis. Largely, the pattern of CMD is not significant in most communities. The result of the hotspot analysis is also related to that of the Local Moran's I statistic. Oniyanrin is the only hotspot location identified at the 99% confidence interval. Ijokodo, Mokola and Inalende are also significant hotspots at 95% confidence intervals. Ososami is also a significant hotspot at the 90% confidence interval. Ago Taylor is the only cold spot at the 99% confidence interval. Odo Ona, Idi Ishin and Alalubosa are significant cold spots at the 90% confidence interval. The results of the Local Moran's I statistic for the males showed that Mokola and Oniyanrin are also a high-high cluster of CMD, while Oremeji and Odo Ona are high-low outliers. Only Mokola is a hotspot community going by the hotspot analysis. Elekuro, Aperin and Labiran are all significant hotspots at 90% confidence intervals. Oke Bola is the only cold spot at the 90% confidence interval.

It can thus be asserted that non-psychotic disorders or CMDs are randomly distributed in most populations. The results of the study by Pignon et al. (2016), however, showed a non-random distribution of psychotic disorders in an urban area in France. In the study by Dean and James (1984), the results showed random distribution of people with manic depression. Generally, the literature has established that high concentration of cases of CMDs can be correlated with socio-economic disadvantage, and by implication, individuals with lower SES have higher frequencies of CMDs. Mental healthcare resources can thus be recommended to be randomly distributed over space. In line with the models of urban spatial structures, the inner cities or core areas often present frequent cases of ill-health and in this case CMD (Phillimore, 1993).

Analysis of Correlates of CMDs

Multiple regression analysis revealed that out of the 18 variables considered in the model, only 9 significantly contributed to CMD. The significant variables include food security ($\beta = -0.198$), green space ($\beta = -0.057$), migration status ($\beta = -0.054$), flood-prone residence ($\beta = 0.453$), low-quality housing ($\beta = -0.061$), recreation participation ($\beta = -0.071$), spousal violence ($\beta = 0.199$), self-rated health (SRH) ($\beta = -0.134$) and quality of life ($\beta = -0.205$). Table S3 reveals that the contribution of the independent variables to CMD explains about 35.8% of the variation (R^2) and an R value of 59.9%.

Considering the significant variables in the light of the literature, the following review is presented. In most developing countries, food insecurity has been proven to be strongly

related to CMDs (Weaver & Hadley, 2009). Jebena et al. (2016) examined the effect of food insecurity on mental health and how this can be related with CMDs. The present study found negative and significant relationship between food security and CMD, suggesting that households that are food insecure are more prone to CMDs (β = −0.198). Epidemiological studies noted that food insecurity can trigger CMD onset directly. There is, thus, the need for the government to address food provision as this is a major predictor of metal health outcome.

Also, housing is a major problem in most Nigerian cities with issues such as low-quality housing, overcrowding, slum residence, to mention a few at the forefront. The study showed that there is relationship between low-quality housing and CMD (β = −0.061). Furthermore, the descriptive statistics showed that only 1.3% of respondents who live in high-quality housing reported CMDs. A study observed that there are connections between housing and the mental health of residents. Crowding has detrimental effects on human health in all dimensions of health (Aliyu & Amadu, 2017; Evans et al., 2001). Also, Bankole and Oke (2016) found that overcrowding affects psychological well-being and increases the anxiety level of residents. This study buttresses the fact that a major relationship exists between housing quality and mental health outcome. There is need for the government to target provision of satisfactory housing, and the identified areas of low-quality housing should also be the focus of health intervention.

Ahern et al. (2005) observed that there is need for more studies on how flooding can lead to CMDs like anxiety, depression, post-traumatic stress disorder and suicide in low-income countries as only few studies exist pertaining to these countries. This study found a positive significant relationship between flood-prone residence (β = 0.453) and CMDs, meaning that individuals who reside in areas liable to flooding have higher tendencies of reporting CMDs (Alderman et al., 2012; Eguaroje et al., 2015; Fernandez et al., 2015; Stanke et al., 2012). The residents of flood-prone areas of Ibadan are mainly found along areas around floodplains like areas liable to floods, especially Ogunpa, Orogun, Sapati, Mokola hills, to mention a few (Makinde, 2012). There is need to address the residents of areas liable to flooding and also rehabilitate (through counselling) those affected by flooding.

Furthermore, the negative relationship between recreational participation and CMD is an indication that the higher the time spent on recreational activities (β = −0.071), the lower the likelihood of CMD onset. Also, 80% of individuals who do not participate in recreation reported CMDs. Similar to the study by Harvey et al. (2010) in Norway, regular leisure time activity of any intensity can reduce the likelihood of developing depressive symptoms. There is a need for deliberate public policies to drive in recreational activities in cities. There are very few recreational sites in Ibadan, which includes Agodi Park and Gardens and the Zoological Garden, UI. Largely, there is a restorative role that recreation plays on health. Urban residents are encouraged to be more involved in recreational activities as these have the capacity to reduce mental health problems.

All over the world, domestic violence is a significant threat to public health. The significant effect (β = 0.199) of spousal violence and CMD is an indication that experience of spousal violence can trigger CMDs. About 95.8% of respondents who responded no to the question "Do you fight with your husband/wife and get physical injury?" did not report CMDs. Globally, and in Nigeria, violence against women is largely under-reported. The prevalence of domestic violence in Nigeria was put at between 11% and 79% (Aimakhu et al., 2004; Fawole et al., 2005; Onoh et al., 2013). For domestic violence, personal experience of domestic violence is more likely to develop CMDs. As shown by Ola et al. (2011), experience of physical violence was the strongest predictor of antenatal mental disorder case anddomestic violence triggers other mental health issues like depressive symptoms, anxiety and so on. Married people should avoid spousal violence as this has been shown in previous studies, and this particular one was found to be capable of leading to the onset of CMDs and related problems.

The study found a significant relationship (β = −0.134, p = 0.000) between SRH and CMD, indicating that people with a high self-rated score are less prone to CMD. It is also referred to as self-assessed/perceived health. SRH is strongly correlated with diseases, illnesses and disability (Goldberg & Huxley, 1992; Kaplan et al., 1996). There is a relationship between SRH and CMDs. The need to ensure that individuals are well holistically cannot be overemphasized. The focus of healthcare should not only be to cure a particular disease or infection but should address all facets of health: social, physical and mental. Quality of life (measured by WHO-5) was found to be positively significant to CMD (β = −0.205). Individuals with high quality of life are less prone to CMDs. The result is similar to that of the study by Amoran et al. (2005) in Oyo state. The study called for provision of essential services for the populace as this can be of great impact in improving quality of life and thereby bringing down the rates of psychiatric morbidity in individuals.

The quest for opportunities remains a major driver of migration stream between localities, states and regions (Ikwuyatum, 2016). The process of migration itself entails a lot of risks, stress, threats, discomfort and fear at most times. Migrants are vulnerable to CMDs owing to uncertainties in the process of movement from the source to destination. Migration status (β = −0.054) was significantly related. Mental disorders in migrants caused by stress, prolonged separation from family, financial strain, lack of accommodation and hostility are one of the major problems faced by them (Naieni et al., 2018). Also, 50.3% of the rural-urban migrants reported CMDs. In Ibadan, residents of inner city areas are descendants of migrants who are residents in the central areas because of jobs and business opportunities but poor housing. Makinde (2012) observed that certain areas of Ibadan like Molete, Oke-Ado, Mokola, Eleyele, Agbowo and other recently developed localities are often occupied by people from other Yoruba towns and ethnic groups. The vulnerability of migrants to mental health problems has been established by this study. There is a fundamental need to support the urban migrants and help them settle down.

Studies across the globe have proven that green space areas have mental health benefit for individuals. In fact, exercise and other related physical activities done in green spaces can lead to decreased cases of anxiety and depression. This study found a negative and significant relationship between CMDs and green spaces (β = −0.057). This implies that the more an individual accesses green spaces, the lesser

the likelihood of CMD onset. Respondents were asked the question "Do you have green spaces (garden, parks, trees) around your house?", and 71.8% of those who responded "No" reported CMD cases. Similarly, 76.2% of those who responded "No" to the question "Do you visit green space (garden/parks)?" reported cases of CMD. In fact, between walking in nature and walking in a shopping centre, walking in nature has been proven to be significantly beneficial to health, with reduced risk of depressive symptoms (Barton et al., 2009). The research of Kjellgren and Buhrkall (2010) further demonstrated that natural environments produce greater altered state of consciousness than other types of environments. The rehabilitative and restorative effects of green spaces have been established. There is need to further plan and maintain the green spaces in urban areas and encourage positive attitudinal change to their use in most developing countries.

CONCLUSIONS

The disease triangle presents a ready framework in understanding the explanations for cases or non-cases of CMD. It sees disease production or health outcome as a consequence of human interaction with the environment. The concept provides explanations for the variation in space of human disease and health using three dimensions: habitat (environment), population and culture/behaviour. The likelihood of people's predisposition towards mental disorders consists of different factors like genetics, demographic factors, socio-economic factors, traumatic events, lifestyle and the environment (built, natural and social), which serve as a background factor that can trigger, reduce or amplify the risk of suffering from a mental disorder. The governments of developing countries need to ensure and enhance food security among the populace. There is need to maintain, cultivate and plan green spaces while individuals are encouraged to visit green spaces. Strong legislation has to be put in place to discourage individuals from residing in flood-prone areas, while those already in such settlements should be resettled. Recreation improves mental health, and participation is encouraged for urban residents as it is a buffer against the vagaries of the harsh urban environment. The study identified some limitations, e.g., a few of the variables found to be insignificant in the multiple regression model might be largely due to issues of measurement and calibration. Also, the study did not adopt secondary data (notwithstanding its limitation); this might have some sort of impact on the results as it could have provided more robust data for analyses. Finally, the human ecology of disease model speaks of the combined effect of population characteristics, habitat and behaviour as the major determining factor of the health. These factors are also found to be relevant to explaining the prevalence of CMD as a combination of socio-economic, demographic, behavioural and environmental factors are found to be the correlates of CMD.

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CONFLICT OF INTEREST DISCLOSURES

The authors have no conflicts of interest to declare.

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SUPPLEMENTAL MATERIAL

Supplemental material linked to the online version of the paper at journalcswb.ca/index.php/cswb/article/view/308/supp_material

- Figure S1: The Human Ecology of Disease Triangle
- Table S1: Socio-economic/Demographic Characteristics
- Table S2: Spatial autocorrelation (Global Moran's I) of Common Mental Disorder Cases in Ibadan Metropolis
- Figure S2: The Study Area
- Figure S3a: Global Moran's I of Overall Cases of Common Mental Disorders in Ibadan Metropolis
- Figure S3b: Cases of Common Mental Disorders in Ibadan Metropolis
- Figure S3c: Global Moran's I of Female Cases of Common Mental Disorders in Ibadan Metropolis
- Figure S3d: Females Cases of Common Mental Disorders in Ibadan Metropolis
- Figure S3e: Global Moran's I of Male Cases of Common Mental Disorders in Ibadan Metropolis
- Figure S3f: Males Cases of Common Mental Disorders in Ibadan Metropolis
- Figure S4a: Local Moran's I Analysis of Overall Cases of CMD
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- Table S3: Variables of Multiple Regression Analysis

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SOCIAL INNOVATION NARRATIVE

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The collective safeguarding responsibility model: The 12Cs: Development, evidence base and potential application

Emma Jayne Ball*

ABSTRACT

Multi-agency (also referred to as inter-professional/inter-agency) collaboration is viewed as an imperative way of working to prevent and protect people from harm. The operationalization of multi-agency safeguarding, including the implementation of legislation and guidance, varies widely and there remain areas of ongoing learning in multi-agency safeguarding enactment. In addition to understanding the facilitators of collaborative safeguarding, we must also have tools to evaluate and scrutinize these arrangements, to maximize our effectiveness. This article follows on from a previous article (Ball et al., 2024a) and introduces the collective safeguarding responsibility model: the 12Cs. The 12Cs provides a unique, evidence-based, holistic framework that can demonstrate how safeguarding arrangements are working strategically and operationally, across and within organizations. The framework focuses on the role of practitioners and agencies in responding to safeguarding concerns, and crucially, the framework incorporates understanding the perspectives of those with lived experiences of receiving safeguarding support. The 12Cs can provide both a local and national understanding of what we have in place regarding multi-agency safeguarding. It also explores how this works, whether it is effective and what action is required to improve responses going forward. The multi-agency safeguarding landscape is a dynamic space, and as such, we must be able to continually assess and be assured of our safeguarding effectiveness to provide a robust evidence base to inform future practice.

Key Words Multi-agency; safeguarding; collective; collaboration; multi-sector inter-professional; inter-agency; effectiveness; 12Cs.

INTRODUCTION

Safeguarding has been defined as "protecting people's health, well-being and human rights, and enabling them to live free from harm, abuse and neglect" (Care Quality Commission, 2022). There is an assertion that safeguarding is a multi-agency endeavour and cannot be achieved in silo. However, despite a plethora of legislation for multi-agency safeguarding, understanding its impact upon keeping people safe remains unclear, challenging and highly variable (McGuire et al., 2021; Stanley, 2018). Ball et al. (2024a) argue that while there is much research surrounding multi-agency safeguarding, less is understood about the *effectiveness* of the multi-agency approach. In their previous article, Ball et al. (2024a) note that multi-agency safeguarding should progress from being everyone's responsibility toward establishing a collective responsibility, thus ensuring that all partners engage in a meaningful, active and accountable role to fulfill their safeguarding responsibilities. The collective safeguarding responsibility model: the 12Cs, aims to provide understanding into how multi-agency safeguarding is consistently implemented across organizations. Importantly, it also provides a platform for evidencing how this activity can be assessed for effectiveness. This current article provides evidence base for the development of the model, introduces the core principles of the model itself and details its potential application and impact, using testimonials from practitioners and policy makers.

MULTI-AGENCY COLLECTIVE SAFEGUARDING: EVIDENCE BASE

The 12Cs theoretical model is based upon an array of accumulative research projects relating to multi-agency safeguarding. This has included over 500 interviews with key stakeholders

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such as safeguarding practitioners, managers, policy makers and those with lived experience of the safeguarding system. The specific research focus across projects centred on different thematic areas of interest such as domestic abuse, serious youth violence, child exploitation and county lines. In addition, a thematic analysis was undertaken in relation to 33 child practice reviews in Wales, which included analyzing risk factors and multi-agency practice learning (McManus et al., 2023). The collective findings of these research projects have also displayed synergy with wider findings relating to multi-agency safeguarding, such as a lack of information sharing and barriers to joint working (Child Safeguarding Review Panel, 2024; Home Office, 2014; Shorrock et al., 2019). In addition, the authors highlighted good practice examples when implementing multi-agency safeguarding policy into practice, such as ensuring safeguarding partnerships instill strategic to operational congruence (Ball et al., 2024b). The creation of the 12Cs model itself was initially developed during a research project commissioned by National Independent Safeguarding Board (NISB, 2024). This entailed a national evaluation of safeguarding arrangements in Wales, which aimed to identify what "good" looks like. The study encompasses three workstreams:

- Workstream One: Interviews with 138 practitioners across seven local authorities, involved in both strategic and operational roles, across a wide range of sectors.
- Workstream Two: Interviews and focus groups were undertaken with 10 experts by experience who had lived experience of accessing support from services.
- Workstream Three: Interviews were conducted with 20 individuals with responsibility for data/performance metrics, and a review of safeguarding metrics collected by the local authorities was undertaken.

All interview transcripts were anonymized and coded on Nvivo software (Lumivero, formerly called QSR International, USA, Canada, Singapore and Europe) to identify reoccurring themes and patterns within the dataset, both inductively from the data itself and deductively in consideration to themes identified within the literature. A summary of key themes which were derived across the workstreams is listed in Table I.

Each of the themes were underpinned by evidential quotes, informing the analysis of thematic findings (McManus et al., 2022). The themes identified challenges and barriers to enacting effective safeguarding but also examples of good practice were demonstrated, whereby safeguarding arrangements were demonstrated to be working well. Similar thematic findings echoed previous studies which have explored implementation of multi-agency safeguarding (Ball et al., 2024b; McManus & Boulton, 2020). Discussions and analysis of collective findings across these projects contributed to the creation and development of the collective safeguarding responsibility model: the 12Cs, a model which maps out the key structural processes and practice elements that can effectively facilitate the enactment of multi-agency safeguarding.

THE COLLECTIVE SAFEGUARDING RESPONSIBILITY MODEL: THE 12Cs

Where safeguarding arrangements were noted to be working well, key safeguarding partners had a dedicated and focused workforce who were supported by a resourced and comprehensive system (Ball et al., 2024b; McManus et al., 2022). While practitioners and managers are working tirelessly, often having a significant positive impact upon the lives of those they support, there remain ongoing challenges in consistently working effectively in partnerships. Key learning from previous research has highlighted that there are challenges in working collaboratively within child protection, when a threshold of significant harm has been reacted (Child Safeguarding Review Panel, 2024), but also at the level of sharing routine information between agencies regarding safeguarding concerns (McManus et al., 2023). This can inhibit ascertaining a holistic understanding of what a person potentially at risk may be experiencing. Practitioners and agencies require the appropriate skills and underpinning organizational structures in place to respond to safeguarding concerns, and this must be across the whole system. Crucially, these arrangements must be comprehensively understood and their application must be transparent. The 12Cs model captures safeguarding responses and assesses the effectiveness of these responses. The theoretical model entails 12 components, 4 of which relate to practitioners and agencies and 8 relate to structures and processes, see Figure 1.

A summary of the 12 components is defined below. Full definitions alongside further examples of good practice for each of the components can be found at Ball and McManus (2023).

TABLE I Key themes and subthemes

Theme	Subtheme
1. Governance and guidance	Strategy – legislation, policies, leadership
2. Joined-up safeguarding processes	Structures, systems and procedures
3. Partnership working and collaboration	Practitioner relationships
4. Staff investment, recruitment, retention	Workforce information, resources, employee development, support, well-being
5. Impact of the Covid-19 pandemic	Impact on society, services, staff and those who access service support
6. Data, audit, performance management	Purpose, utilization, logistics, challenges. Safeguarding metrics
7. Lived experience voice and participation	Opportunity to have voice heard, meaningful and accessible opportunities for effective support and feedback into service design

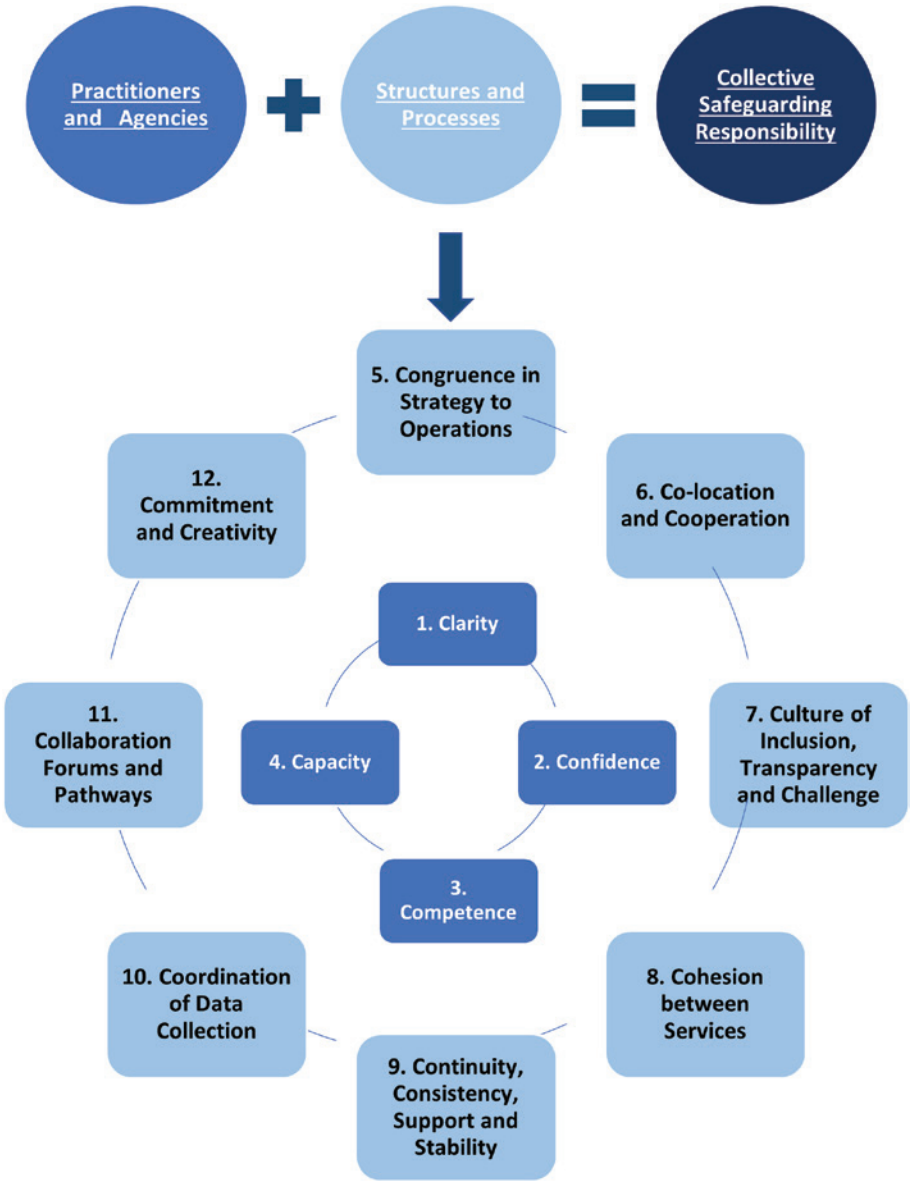

FIGURE 1 Collective responsibility model: the 12Cs

Practitioners and Agencies

It is recognized that practitioners are at the heart of delivering the safeguarding response and that their dedication, tenacious efforts and skilled expertise are vital to ensure that multi-agency safeguarding policy is enacted. Therefore, they should be supported to fulfill this role by ensuring the following components are addressed.

1. **Clarity** of expectations regarding the safeguarding process, responsibilities within own role and partner agencies' remits and timeframes.
    - Practice Example: A regional threshold document was utilized for different sector agencies to clarify safeguarding referral expectations. This enabled clarity, while being cognisant of agency thresholds and processes, to be able to respond appropriately according to their own agency remit.
2. **Confidence:** Practitioners must have belief in their ability to fulfill safeguarding responsibilities and opportunities to develop knowledge and gain confidence.
    - Practice Example: Informal consultations with multi-agency safeguarding hub (MASH) allowed for clarification on safeguarding concerns by offering advice at the point in which it was required. It also facilitated discussions and built confidence regarding what information was necessary from referring agencies, to ensure that a referral had the appropriate level of detail to direct action by the appropriate person/agency.

3. **Competence**: Practitioners must have investment into developing skills, experience and knowledge. Practitioners need the opportunity and space to reflect and make sense of this.
    - Practice Example: Multi-agency training facilitates bringing together practitioners from different sectors and remits to learn about specific safeguarding issues in a collaborative environment, allowing for shared learning, holistic understandings and collective responsibility. This can develop understanding, knowledge and skills.
4. **Capacity**: Practitioners must be provided with adequate and appropriate time and resource to effectively fulfill their safeguarding duties.

Structures and Processes

Practitioners and agencies are governed and reliant upon the systems and processes which underpin their practice. Such factors can help facilitate or inhibit safeguarding responses; therefore, the following components should be addressed.

5. **Congruence in Strategy to Operations:** Congruence and common understanding between the senior leadership level and the frontline workforce is key to policy implementation and should include a fluid exchange of communication between the two.
    - Practice Example: Proactive managers and leaders who are prepared to "roll their sleeves up" and get involved with frontline activities ensure that they have up-to-date knowledge in responding to current safeguarding challenges.
6. **Co-location and Cooperation:** Partner relationships should be established, developed and sustained. Relationships must be continually and actively invested in and not an assumed by-product of "everyone's responsibility."
    - Practice Example: Including domestic abuse practitioners within MASH ensures that appropriate and timely advice and expertise is utilized in decision-making. It also generated shared knowledge and understanding and facilitates relationship development.
7. **Culture of Inclusion, Transparent and Challenge:** All relevant agencies should be meaningfully included. Ongoing, open dialogue should be facilitated, and professional challenge should be promoted and encouraged.
    - Practice Example: Inclusion and representation meetings: Having an inclusive approach, involving both statutory, and voluntary and charity sector agencies, at both operational level and strategy level for multi-agency meetings ensures that unique perspectives and knowledge are meaningfully shared at all stages in the safeguarding process.
8. **Cohesion Between Services**: Alignment in safeguarding processes to enable seamless transitions between services.
    - Practice Example: Aligned forms and protocols can reduce the risk of duplication, fragmentation and ambiguity, such as children's/adults' services and police joint referral forms within safeguarding hubs.
9. **Continuity, Consistency, Stability and Support**: Service delivery should have consistency. There must be investment into recruitment and retention of staff, including appropriate support and supervision.
    - Practice Example: Staff well-being investment should include formal opportunities to participate in therapeutic support and access to specialist support when required. A culture of approachability should be developed, whereby practitioners can access informal support and comfortably approach peers, managers and leaders to discuss concerns or worries.
10. **Coordination of Data Collection**: Practice should be accurately reflected in data and data should meaningfully inform practice. Multi-agency data should be coordinated, collated, analyzed and disseminated.
    - Practice Example: Shared databases allow different sectors to view how different agencies are working with individuals and families. For example, domestic abuse practitioners having access to certain aspects of the statutory system allows them to understand immediately if there is children's services involvement.
11. **Collaboration Forums and Pathways**: Understanding the experiences of individuals and families being supported by services is paramount. Individual, family and carer feedback must be facilitated through accessible pathways.
    - Practice Example: Within youth justice, there are examples of interactive apps being utilized to understand the experiences that young people have working with youth justice practitioners, how they were listened to, how they had helped, in what way and how this could be improved.
12. **Commitment and Creativity**: Creativity, innovation and a progressive approach are integral to collective safeguarding responsibility.
    - Practice Example: Promotion of innovative working through proactive encouragement and the facilitation of new ways of working requires a change from the working norm.

To accompany the 12Cs model, an accompanying self-assessment tool (SAT) has been co-created with stakeholders. The SAT supports the application of the 12Cs to assess safeguarding arrangements across each of the 12 components. Figure 2 provides an example of 1 of the 12 components (component 8: strategy to operations), to highlight the types of information required to undertake the 12Cs SAT. There are various versions of the SAT, Figure 2 is an example aligned to the inspection criteria of the UK His Majesty's Inspectorate of Constabulary and Fire & Rescue Services (HMICFRS).

APPLICATION POTENTIAL OF THE 12Cs MODEL

The National Independent Safeguarding Board (NISB) Wales has a duty to report on the adequacy and effectiveness of

C8: Congruence in Strategy to Operations					
	1	2	3	4	5
HMICFRS Gradings	Inadequate	Requires Improvement	Adequate	Good	Outstanding
	There are causes for concern and recommendations must be made and addressed	Intervention has demonstrated few, if any, of the characteristics of good performance, and substantial number of areas require improvement	Intervention demonstrated some of the characteristics of good performance, areas for improvement identified	Intervention substantially demonstrated all the characteristics of good performance	Intervention substantially exceeded the characteristics of good performance
12Cs Progress	Practice/ Intervention/ Policy identified but not progressed	Practice/ Intervention/ Policy identified and agreed by key partners. Implementation plan finalized, start date agreed	Practice/ Intervention/ Policy initiated, implemented and undergoing review and refinement	Practice/ Intervention/ Policy fully implemented, embedded and functioning well	Practice/ Intervention/ Policy embedded, functioning optimally, sustainably and exceeding expectations
Self-assessment Score			x		
Evidence for Self-assessment Score	*Narrative explaining the evidence for self-assessment score reached? Examples should specifically identify any Policy or Practice interventions/support*				
Accountability, Ownership and Governance	*Who is the lead person/people/agency responsible for coordinating/driving action on this?*				
Stakeholder Partners	*Which stakeholders/partners are part of the delivery/achievement of this component and what is their role?*				
Specific Action Plan	*What is required to implement, improve or sustain work on this component*				
Implementation Timeframe	*What are the timeframes and review points: Strategic Longer-term/ Operational Shorter-term,*				

FIGURE 2 Self-assessment tool (SAT): the 12Cs. HMICFRS, His Majesty's Inspectorate of Constabulary and Fire & Rescue Services

arrangements to safeguard children and adults in Wales (NISB, 2024). In their annual work plan for 2023–2024 (NISB, 2024) in achieving their aim to evaluate the performance and approaches to safeguarding and protection, it states that the 12Cs model will be promoted to regional safeguarding boards.

> *"The 12C's model has been widely welcomed by several key agencies in Wales. In refreshing a critical element of safeguarding policy leadership and thinking, this model adds real value to the way we think about what it means when we say that 'safeguarding is everybody's business'. For those with responsibility for ensuring safeguarding effectiveness, the 12Cs offers a new and well-aimed tool for evidencing collective effort and alerting us all to when 'Working Together' may be at risk of drifting or lacking grip."* (Tony Young, Chair of Independent Safeguarding Board, Wales)

Regarding UK inspection of safeguarding arrangements, the 12Cs featured in a development session for HM Inspectorate of Probation for their inspectors, in August 2024. Additionally, the model alignments to probation have been discussed in a HM Inspectorate Academic Insights article (Ball & McManus, 2024)

> *"The 12 C's framework usefully highlights the key features of effective collaborative multi-agency operational safeguarding arrangements and how practitioners, agencies, structures and processes must all work together"* (Dr. Robin Moore, Head of Research, HMI Probation)

Furthermore, the Care Inspectorate Wales has noted the relevance of the 12Cs in assisting in their duties.

> *"We think the 12C's model has potential to be applied across a wide range of multi-agency working, not only safeguarding, and are considering how we can build it in our performance review work with local authorities and their partners. We can see the development of a self-assessment based on the 12Cs could also be a really helpful tool for safeguarding boards and many other partnerships"* (Vicky Poole, Deputy Chief Inspector, Care Inspectorate Wales)

Within the United Kingdom, traction and potential application of the model have been evident across the police sector, within Public Protection. Force Detective Chief Inspector, Andy Horne, has recognized the value of the 12Cs model and notes parallels within safeguarding objectives and procedures within the police.

> *"In my role I am experienced at working with partners to safeguard vulnerable people. The Collective Safeguarding Responsibility Model: 12Cs helped me visualise and map out complex internal and external processes, and helped me better understand how to work together to address gaps, and identify opportunities to share good practice"* (DCI Horne)

The police are a key statutory partner organization in response to safeguarding. DCI Horne has highlighted that the12Cs model has helped translate strategic objectives into tactical plans and help provide a communications plan to explain key operational priorities to the frontline workforce. It has also helped develop a better understanding on how a flexible problem-solving approach, focused on collaboration and co-production, could ensure excellent partnership progress. Specifically, DCI Horne has identified its potential for alignment with integrated offender management (IOM), which aims to provide a cross-agency response regarding crime and reoffending threats within local communities. The key principals include:

1. All partners manage offenders together
2. A local response to local problems
3. All offenders can potentially be included
4. Offenders face up to their responsibility or face the consequences
5. Best use is made of existing programs and governance arrangements
6. Achieving long-term desistance from crime

While there is direct alignment to the first three principles, the remaining three principles would likely require a multi-agency response to support application. The components of the 12Cs could support activity involving key partners of the IOM programme, instilling and enacting a collective responsibility. Crucially, the model can evaluate and scrutinize how we understand the effectiveness of our multi-agency strategic and operational activity, both from a process level and by understanding the experiences of those receiving support. DCI Horne is incorporating the 12Cs within the syllabus for the IOM and form part of their Continuous Professional Development.

> *"I intend to build the 12Cs into our Continuous Professional Development agenda in Lancashire, to drive "safeguarding is everyone's responsibility" and to highlight the benefits of a collective, collaborative culture, I have shared it across my partnership network and have received excellent feedback from local authorities, prisons and probation, and community safety practitioners"* (DCI Horne)

CONCLUSIONS

> *"To avoid silo working in this area we would need a single accountability tool/model which can be used to review internal decision-making/challenges but also address collective/systemic challenges such as failures around information sharing"* (DCI Horne)

Multi-agency safeguarding requires identifying, understanding and utilizing the individual contributions from partners and ensuring that they are meaningfully included with the safeguarding process, to collectively respond. As Firmin et al. (2022) note, rather than blurring the distinct contributions from different agencies, the aim is "to create a single, mutually agreed set of aims, values, pathways and procedures" (Firmin et al., 2022, p45), and this requires clarity. Everyone has a responsibility to share information and contribute their expertise but there must be appropriate infrastructure to facilitate this. We need consistency in how we ensure accountability, how we establish a collective safeguarding responsibility and how we determine effectiveness. This collective responsibility lies not only across individual practitioner decisions and actions, but it is also embedded within strategic governance and structures, and imperatively, the two must align. If we are to improve safeguarding practice by applying the repeated learning and recommendations from the many safeguarding practice reviews and inquiries undertaken over the last 50 years, then we need a comprehensive system-based approach. This approach must ensure consistency, while also enabling the nuanced variability across localized landscapes. We must build on good practice, evidencing what works well and scrutinizing this evidence, so that we are assured that we are effective at multi-agency safeguarding. The collective safeguarding responsibility model: the 12Cs serves as a versatile tool, which identifies and captures evidence across the components of the complex multi-agency system. It identifies how we enact a variety of multi-agency safeguarding arrangements, providing reassurance and challenge. Ultimately, it ensures coherent oversight and understanding of what effective safeguarding looks like and how to achieve it.

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CONFLICT OF INTEREST DISCLOSURES

The authors have no conflicts of interest to declare.

DETAILS OF POSSIBLE PREVIOUS OR DUPLICATE PUBLICATION

Some of this work summarizes reports completed by the author and is available from the National Independent Safeguarding Board Wales: Shaping the Future of Safeguarding in Wales project: Findings from Liverpool John Moores University – Safeguarding Board Wales and HM Inspectorate of Probation: The "12Cs" collective safeguarding responsibility model (justiceinspectorates.gov.uk).

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