

WORKPLACE SAFETY, UNION ENGAGEMENT, AND INTERPROFESSIONAL COLLABORATION IN RURAL SOUTH AFRICAN COMMUNITY HEALTH CENTRES: A SEQUENTIAL EXPLANATORY MIXED-METHODS STUDY

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ABSTRACT

Introduction: Interprofessional collaboration is essential for safe and effective primary health care delivery, particularly in rural and semi-rural Community Health Centers (CHCs). This study explored health professionals' experiences of workplace safety, interprofessional collaboration, and organised labour engagement in rural and semi-rural CHCs across 3 South African provinces. **Methods:** We used a sequential explanatory mixed-methods design grounded in pragmatism. In the quantitative phase, purposive non-probability sampling was used to recruit health professionals from 6 CHCs across Gauteng, Mpumalanga, and North-West provinces. Sixty-nine questionnaires were distributed, of which 42 completed questionnaires were analysed, yielding a response rate of 61%. **Results:** Quantitative findings indicated that 69% of respondents linked staff shortages to workplace conflict, 85.7% reported that shortages of equipment and resources strained professional relationships, and 88.1% reported poor interprofessional relations contributing to an insecure working environment. Qualitative findings explained these patterns by illustrating how unsafe infrastructure, inadequate staffing, uneven skill mix, poor communication, professional hierarchies, and limited union visibility collectively undermined workplace safety and interprofessional collaboration. Integrated analysis identified 3 interrelated themes: resource deficits undermining safe collaboration, fragmented interprofessional relationships and status-based divisions, and weak union engagement. **Conclusion:** Workplace safety and interprofessional collaboration in participating rural CHCs were shaped by interacting material, relational, and governance challenges. Strengthening collaboration requires sustained investment in staffing, infrastructure, communication systems, leadership practices, and effective labour-management engagement. These findings informed the conceptual development of the Interprofessional Union and Collaborative Partnership (IPUCP) framework for rural CHCs.

Keywords: Health Professionals, Interprofessional Collaboration, Labour Relations, Rural Community Health Centers, And Safe Working Environment.

INTRODUCTION

Interprofessional collaboration is essential for safe, effective, and person-centered primary health care, particularly in rural and under-resourced settings where service delivery depends on coordination across professional groups. In Community Health Centres (CHCs), health professionals work within interconnected clinical, organisational, and social systems that require role clarity, respectful communication, shared decision-making, and reliable support structures. When these conditions are present, collaboration can strengthen staff morale, continuity of care, and service responsiveness. Conversely, when these conditions are absent, fragmentation, mistrust, and workplace conflict may undermine both workforce wellbeing and patient care (Schot et al., 2020).

In South Africa, these challenges are especially acute in rural and semi-rural CHCs, where staff shortages, weak infrastructure, high workloads, uneven professional skill mix, and fragile management systems complicate the delivery of comprehensive primary health care. The policy direction for primary health care was established in the 1997 White Paper for the Transformation of the Health System in South Africa and later reinforced through the National Health Act 61 of 2003 and subsequent primary health care reforms. These policy frameworks, together with National Health Insurance reforms, emphasise safe facilities, protected health workers, equitable service delivery, and strengthened district health systems (Department of Health, 2015; Naidoo et al., 2020). However, implementation at the facility level remains inconsistent, particularly in rural settings where operational constraints continue to compromise both service quality and workforce wellbeing (Kalonji & Mahomed, 2019).

Health professionals working in CHCs are further protected by Section 24 of the Constitution, the Occupational Health and Safety Act 85 of 1993, and the Labour Relations Act 66 of 1995, which collectively affirm the importance of safe work environments, fair labour practices, and organisational accountability (Republic of South Africa, 1993, 1995). These protections are reinforced by statutory professional councils, including the Health Professions Council of South Africa, the South African Nursing Council, and the South African Pharmacy Council, all of which require ethical practice, professional accountability, and respectful collaboration across professions (HPCSA, 2016; SANC, 2014; SAPC, 2019). However, policy and legislative protection do not automatically translate into safe and collaborative workplace conditions. Many rural and semi-rural CHCs continue to experience structural and relational barriers, including workforce shortages, service fragmentation, inadequate infrastructure, weak organisational safety systems, and poor induction and communication processes (Serchen et al., 2025; Wright et al., 2024).

Existing literature highlights the importance of interprofessional collaboration, workplace safety, and constructive labour relations. However, these issues are often examined separately rather than as intersecting realities within rural primary health care settings. Resource shortages may intensify interpersonal strain, weak leadership may erode trust, fragmented communication may deepen professional silos, and limited union visibility may leave staff feeling unsupported and unsafe. Strong organisational support, mutual trust, shared decision-making, and professional diversity are increasingly recognised as critical enablers of successful interprofessional collaboration (Kebe et al., 2020). At the same time, rural health systems face increasing workforce, policy, and service-delivery pressures that threaten sustainability and equitable access to care (Serchen et al., 2025).

This study was interpreted through four complementary theoretical frameworks: Maslow's Hierarchy of Needs, which provides a lens for understanding how unmet physiological, safety, belonging, and esteem needs may undermine motivation, trust, and collaboration (Maslow, 1943; Karadencheva, 2025); Watson's Theory of Human Caring, which supports interpretation of dignity, empathy, psychosocial wellbeing, and caring workplace relations (Flores, 2022; Watson, 2008); the Interprofessional Education Collaborative core competencies, which provide a framework for role clarification, communication, teamwork, and shared decision-making (Interprofessional Education Collaborative, 2023); and Labour-Management Partnership principles, which help interpret workplace representation, consultation, and collaborative governance between management and organised labour (Bratton et al., 2021; Goudge, 2024). Used together, these frameworks provide an integrated lens for understanding workplace safety, labour representation, and interprofessional collaboration in rural CHCs.

Together, these complementary frameworks enabled interpretation of workplace safety, interprofessional collaboration and labour-management engagement from individual, interpersonal, organisational and systems perspectives, providing theoretical foundation for the development of the Interprofessional Collaborative Union Partnership (IPCUP) model and guidelines.

Despite growing scholarship on collaboration, safety culture, and rural workforce challenges, limited empirical evidence has examined how workplace safety, union engagement, and interprofessional collaboration intersect in rural and semi-rural South African CHCs, particularly from the perspective of frontline health professionals. Addressing this gap is important because fragmented teamwork, unsafe environments, and weak labour representation collectively undermine psychosocial safety, workforce stability, and quality of care in already under-resourced settings. The present study therefore examined workplace safety, union engagement, and interprofessional collaboration in rural and semi-rural CHCs in South Africa using a sequential explanatory mixed-methods design.

METHODS

Data was collected in six CHCs, two in each of Mpumalanga, Northwest, and Gauteng provinces. The selected CHCs were situated in rural or semi-rural areas and provided 24-hour primary health care services, including maternal and child health, chronic disease management, emergency, and preventive health services. Participating health professionals included nurses, medical practitioners, social workers, nutritionists, pharmacists, and psychologists.

The target population is comprised of health professionals with six months or more experience in rural CHC, including union representatives and facility managers. For the quantitative phase, six Community Health Centers were purposively selected, after which all eligible health professionals who met the inclusion criteria were invited to participate. For the quantitative phase, a purposive non-probability sampling strategy was used to recruit health professionals who met the inclusion criteria and were available during the data collection period at the selected CHCs. Inclusion criteria required health professionals to be employed at the selected CHCs for at least six months, to be directly involved in clinical service delivery or labour-management interactions, and to have provided voluntary informed consent. Administrative or support staff not involved in interprofessional or labour-related activities were excluded.

Sixty-nine questionnaires were distributed to consenting health professionals, of which 42 were returned and analysed, yielding a response rate of 61%. This response rate falls within accepted validity thresholds for voluntary health-related survey research (Baruch & Holton, 2022; Holtom et al., 2022). While the sample size limits statistical generalizability, it is consistent with the descriptive-exploratory purpose of the quantitative strand in a sequential explanatory design, where the primary function of the survey is to identify patterns that inform the subsequent qualitative inquiry (Creswell & Plano Clark, 2023). In rural and semi-rural CHCs, the total number of health professionals per facility is typically small, which constrains the achievable sample. The sample was therefore considered adequate for descriptive analysis and for generating meaningful quantitative patterns to be explored qualitatively (Mele & Belardinelli, 2019; Polit & Beck, 2021).

For the qualitative phase, a purposive follow-up sample was drawn exclusively from Phase 1 participants who had completed the questionnaire, met the inclusion criteria, and indicated their willingness to participate further. Selection sought to ensure diversity in professional category, years of experience, and facility. Three focus group discussions involving 16 participants and 10 in-depth interviews were conducted. Data saturation was assessed during data collection. After the second round of focus group discussions and the eighth in-depth interview, no substantively new themes emerged. Additional interviews confirmed and enriched existing themes without generating new categories, indicating informational redundancy (Polit & Beck, 2021).

Data collection

Quantitative instrument

The structured questionnaire was developed from a synthesis of empirical literature, national policy directives, and international guidelines relevant to workplace safety, interprofessional collaboration, and labour-management partnerships. It comprised seven sections: Section A (biographical information), Section B (experiences of workplace safety), Section C (understanding of roles and responsibilities), Section D (perceived impact of limited partnership), Section E (perceived barriers to safety), and Section F (cues to action on promoting sustainable safety). Sections B through F contained closed-ended items measured on a five-point Likert scale (1 = strongly disagree to 5 = strongly agree).

The instrument was pilot tested among nine health professionals at a comparable semi-rural CHC in Gauteng Province that was not included in the main study. The pilot identified language comprehension difficulties among non-professional support staff, prompting refinement of the target population to clinical and allied health professionals only. Ambiguous item wordings were clarified post-pilot for improved neutrality. Internal consistency reliability was assessed using Cronbach's alpha, yielding a coefficient of 0.70, which is acceptable for social-science research instruments (Salleh et al., 2023). The researcher was on-site during questionnaire completion and provided a 2-week return window in sealed, uniquely coded envelopes for participants unable to complete during the allocated period.

Qualitative data collection

Data was generated through three focus group discussions and ten in-depth interviews using a semi-structured interview guide informed by the emerging quantitative results. The guide was structured around a central question on experiences of trade union collaborative partnerships in establishing a mutually secure workplace in CHCs, followed by thematic probes exploring interprofessional collaboration, management-union relations, and suggestions for strengthening partnerships. Focus groups were conducted in secluded boardrooms, and individual interviews were held in private consulting rooms. All sessions were audio-recorded with participant consent, and field notes were maintained to capture non-verbal and contextual observations.

Data analysis

Quantitative data were analysed using SPSS version 26.0. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were used to summarise the data. An independent statistician supported the analysis. Because the quantitative phase aimed to describe rather than test causal relationships, inferential statistical significance tests were not applied. This decision aligned with the sequential explanatory design, in which descriptive results provide an empirical foundation for the qualitative phase (Creswell & Plano Clark, 2023). Missing data was minimal, occurring in non-systematic patterns across fewer than 5% of items. Pairwise deletion was applied to retain maximum available data for each variable (Mirzaei et al., 2022).

Qualitative data were analysed using Braun and Clarke's (2021) 6-phase reflexive thematic analysis. Audio recordings were transcribed verbatim and reviewed alongside field notes, phase 1 involved familiarisation through repeated reading. Phase 2 generated initial codes inductively from the data, supported by colour coding and margin notes, which were then reviewed in relation to the theoretical framework. Phase 3 organised codes into candidate themes and sub-themes. Phase 4 involved reviewing provisional themes for internal coherence, with an independent coder reviewing a subset of coded data and divergent interpretations discussed until consensus was achieved. Phase 5 defined and named each theme, and Phase 6 produced the final thematic narrative linking findings to existing literature and theoretical frameworks. Reflexive journaling was maintained throughout to record analytic decisions and reflections.

Integration

Integration followed a connecting strategy (Creswell & Plano Clark, 2023). Quantitative findings identifying high conflict rates, resource shortages, and low union engagement were used to develop the qualitative interview guide, focusing on why these patterns existed and how they were experienced. During analysis, integration occurred through narrative weaving, a joint display table, and meta-inference synthesis to generate explanations that neither data source could provide alone. Integration examined points of convergence, complementarity, expansion, and divergence between the 2 datasets (Doyle et al., 2019; Fetter & Molina-Azorin, 2020).

Validity, reliability, and trustworthiness

A comprehensive literature review, expert input during instrument development, and pilot testing supported Content validity. Internal consistency was acceptable for this descriptive exploratory study (Cronbach's $\alpha = 0.70$). Construct validity was assessed using exploratory factor analysis on the pilot data (Polit & Beck, 2021). Trustworthiness was established using Lincoln and Guba's criteria. Credibility was enhanced through prolonged engagement, methodological triangulation, and peer debriefing. Transferability was supported through thick description of settings and participant characteristics. Dependability and confirmability were supported through a detailed audit trail, documented analytic decisions, and reflexive journaling. Authenticity was supported through verbatim representation of participant voices across all provinces and professional categories.

Researcher positionality

principal researcher is a health professional with more than 10 years' experience in health care services, education, training, and quality assurance within the Department of Health. While this professional background enhanced the ability to interpret nuanced findings, it also presented a potential source of interpretive bias. To address this, reflexivity was applied throughout the study. A reflexive journal was maintained during data collection and analysis to document pre-existing assumptions and interpretive decisions. Bracketing of personal opinions was practised during qualitative interviews, and peer debriefing with the supervisory panel was used to audit coding decisions, thereby reducing the risk that prior professional affiliations would compromise interpretive neutrality.

Ethical approval

Ethical approval for this study was granted by the University of South Africa Health Studies Research Ethics Committee (HSHDC/687/2017). Permission to conduct the study was also obtained from the National Health Research Directorate (Ref: 2017_RP3_49), the relevant provincial health authorities, and the participating CHCs.

RESULTS

In keeping with the sequential explanatory mixed-methods design, the results are presented in three stages: quantitative findings, qualitative findings that explain and contextualise those quantitative results, and integrated meta-inferences derived from both data sets.

Quantitative findings

Response rate and sample characteristics

A total of 69 structured questionnaires were distributed across six rural and semi-rural Community Health Centers (CHCs) in the Northwest, Mpumalanga, and Gauteng provinces. Of these, 42 were returned and analysed, yielding an overall response rate of 61%. The achieved sample provided a contextual basis for descriptive interpretation of workplace safety, interprofessional collaboration, and labour dynamics in the participating CHCs. The response rate reflected the realities of data collection in rural and semi-rural facilities, where staffing shortages, shift systems, and workload demands constrained immediate questionnaire completion.

1.2 Demographic and professional profile

Participants ranged in age from 25 to 63 years, with a mean age of 44 years, indicating a predominantly mid-career workforce. Most respondents were female, reflecting the gender profile commonly observed in nursing and allied health professions within rural health settings. Educational attainment was concentrated at diploma level, and the distribution of specialist preparation suggested a constrained skill mix within the participating CHCs. These descriptive patterns were later expanded qualitatively through accounts of junior staff placement, limited access to specialists, and role extension beyond formal scope of practice.

Table 1: Demographic and Professional Profile of Respondents

Variable	Category	N (%)
Gender	Female	32 (76.2%)
	Male	10 (23.8%)
Age Group	25–34	8 (19.0%)
	35–44	24 (57.1%)
	45–54	6 (14.3%)
	55–63	4 (9.5%)
Highest Qualification	Diploma/Certificate	30 (71.4%)
	Degree/Postgrad Diploma	12 (28.6%)
Registered for Further Study	Yes	3 (7.1%)
	No	39 (92.9%)
Specialisation (n = 23)	NIMART	13 (56.5%)
	PHC	4 (17.3%)
	Other	6 (26.2%)

Workplace conditions, labour participation, and legislative awareness

The quantitative findings showed high levels of perceived conflict, structural strain, weak legislative awareness, and mixed perceptions of union support. Specifically, 69.0% of respondents agreed that shortage of personnel contributed to conflict among workers, 85.7% agreed that shortage of tools and resources strained relationships between health professionals, management, and organised labour, and 88.1% reported unpleasant interprofessional relations that contributed to an insecure working environment. Legislative awareness was mixed, with self-reported confidence in occupational health and safety knowledge contrasting with weaker item-level identification of labour and safety frameworks. These findings were interpreted as descriptive patterns rather than statistically tested associations.

Table 2: Employment Conditions, Labour Participation, and Legislative Awareness

Variable	Category	N (%)
Union Membership	Yes	32 (76.2%)
	No	10 (23.8%)
Overtime Work	Yes	17 (40.5%)
	No	25 (59.5%)
Conflict Linked to Understaffing	Yes	29 (69.0%)
	No	13 (31.0%)
Tool Shortages Impacting Collaboration	Yes	36 (85.7%)
	No	6 (14.3%)
Workplace Conflict Experienced	Yes	37 (88.1%)
	No	5 (11.9%)
Knowledge of OHS Act	Yes	13 (31.0%)
	No	29 (69.0%)

Awareness of Labour Relations Act	Yes	8 (19.0%)
	No	34 (81.0%)
Perceived Union Engagement (Active Support)	Yes	14 (33.3%)
	No/Uncertain	28 (66.7%)

Qualitative findings

Overview of qualitative themes

The qualitative findings provided explanatory depth to the quantitative results. Thematic analysis generated multiple themes and subthemes, of which 3 higher-order themes were most relevant to the major descriptive patterns observed in the quantitative strand: resource deficits, fragmented professional relationships, and weak union engagement. Communication and leadership emerged as important cross-cutting influences across all 3 themes.

Theme 1: Resource deficits undermine safe collaboration

Qualitative findings showed that shortages of staff, protective materials, water, gloves, consultation space, and secure infrastructure produced frustration, emotional fatigue, role strain, and weakened teamwork. Participants described these shortages not only as service-delivery barriers, but also as sources of moral distress, role confusion, and psychological strain. Accounts of working outside scope, covering for absent specialists, functioning without water or infection-control materials, and delivering care in unsafe infrastructure help explain why quantitative indicators of conflict and resource inadequacy translated into weakened teamwork and reduced psychological safety.

Theme 2: Fragmented interprofessional relationships and status divisions

Qualitative findings showed that professional hierarchies, poor communication, discrimination, segregated spaces, and siloed working arrangements shaped strained interprofessional relationships. Participants described exclusion from decision-making, unequal resource allocation, and inconsistent management responses to conflict. These findings suggest that workplace fragmentation was not merely interpersonal, but also socially and organisationally produced.

Theme 3: Weak union engagement and organisational support

Qualitative findings showed that unions were often experienced as passive, distant, reactive, or poorly visible at facility level. Some participants were unsure who represented them locally, while others described delays in engagement, fear of victimisation, and poor union-management communication. These accounts suggest that formal union membership did not necessarily translate into perceived support, communication, or protection in the participating CHCs.

Integrated findings and meta-inference

Integration of quantitative and qualitative findings

Across both strands, convergence emerged around resource deficits, fragmented professional relationships, weak communication systems, and limited union visibility. The qualitative findings explained and contextualised the descriptive quantitative patterns, while integrated analysis clarified how structural, relational, and governance factors interacted in the participating CHCs.

Meta-inference summary

Table 3: Meta-Inference Summary Table

Theme	Quantitative Support	Qualitative Insights	Integrated Interpretation
1. Resource Deficits	69% cite understaffing, 86% lack tools, 41% unhappy with infrastructure	Unsafe conditions, poor ventilation, absent hygiene materials	Resource scarcity threatens safety, fuels conflict, and undermines collaboration
2. Fragmented Relationships	88% report poor interprofessional relationships, 86% link it to stress	Siloed teamwork, exclusion from decision-making, status-based divisions	Relational breakdowns are culturally and structurally embedded
3. Weak Union Support	High proportion unaware of or unsupported by unions	Unions described as absent, passive, or invisible	Disempowerment and lack of advocacy increase burnout and professional dissatisfaction

Overall, the integrated results showed that the interaction of resource deficits, fragmented professional relationships, weak communication systems, and limited union visibility shaped collaboration in the participating CHCs. Convergence was evident where quantitative indicators of conflict, shortages, and weak labour visibility aligned with qualitative accounts of unsafe workplaces, fragmented professional cultures, and ineffective governance. Expansion occurred where the qualitative strand revealed mechanisms such as moral distress, discriminatory allocation practices, and fear-based silence that were not fully visible in the questionnaire. A limited degree of divergence was also evident, particularly where self-reported legislative knowledge contrasted with weaker demonstrated awareness of specific labour and safety frameworks.

Visual synthesis of integrated findings

Figure 1.1 provides a visual synthesis of the integrated findings by showing how resource deficits, fragmented professional relationships, weak communication systems, leadership challenges, and limited union visibility interacted to shape collaboration in the participating CHCs. The figure supports the meta-

inference that collaboration challenges were not isolated problems, but interconnected structural, relational, and governance conditions.

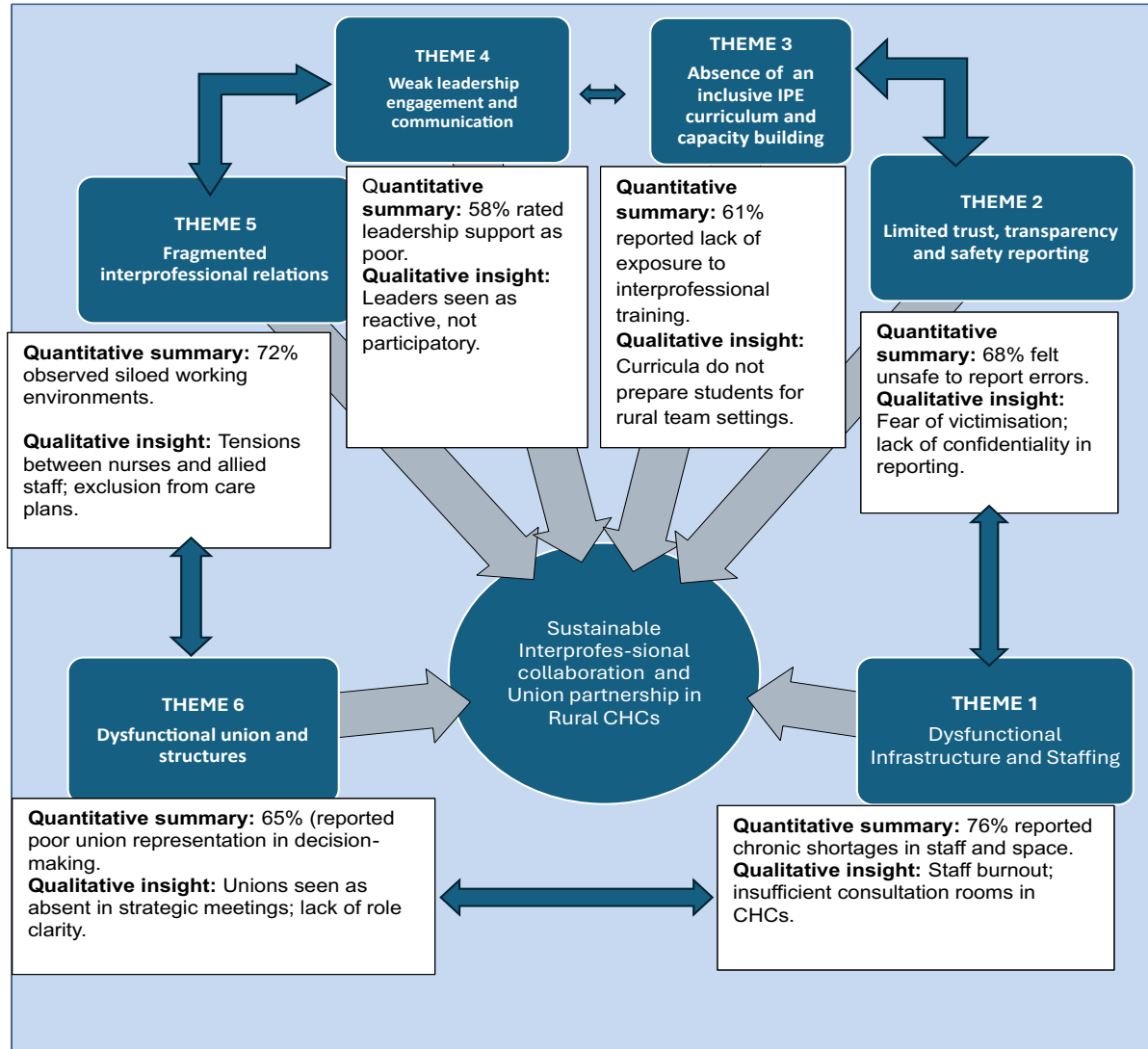


Figure 1.1 Self-generated thematic network diagram structure illustrating integrated

Figure 1.1 illustrates the interaction of resource deficits, fragmented professional relationships, weak communication systems, leadership challenges, and limited union visibility in shaping collaboration in rural Community Health Centers.

Concluding integrated statement

These integrated findings informed the interpretive discussion and the development of the IPUCP model as a contextually grounded framework for strengthening workplace safety, union engagement, and interprofessional collaboration in rural CHCs.

DISCUSSION

This study examined workplace safety, union engagement, and interprofessional collaboration among health professionals working in rural and semi-rural Community Health Centres in three provinces of South Africa. The quantitative findings first identified descriptive patterns of workplace conflict, resource shortages, weak legislative awareness, and mixed perceptions of union support. The qualitative findings then explained and contextualised these patterns through participants' accounts of unsafe infrastructure, fragmented professional cultures, weak communication systems, and limited labour visibility. The integrated findings indicate that the interaction of structural constraints, relational fragmentation, and weak workplace representation shaped collaboration in participating CHCs. Rather than reflecting a single isolated problem, workplace safety and collaborative practice were influenced by overlapping material, organisational, and interpersonal conditions.

More specifically, collaboration challenges in participating in CHCs were rooted in the interaction of chronic under-resourcing, uneven skill mix, weak local governance, dysfunctional communication systems, and fragile labour representation. These interacting conditions form the basis of the thematic discussion below.

Theme 1: Resource constraints and unsafe work environments

The quantitative findings showed high levels of understaffing, inadequate tools of trade, and dissatisfaction with infrastructure. In contrast, the qualitative findings explained how these shortages produced emotional fatigue, role strain, and weakened teamwork. The integrated findings therefore indicate that resource constraints functioned as both material and relational stressors in the participating CHCs.

Shortages of staff, basic tools, protective materials, and functional infrastructure affected not only service delivery but also the perceived safety of the work environment and staff's ability to collaborate effectively under pressure. From an interpretive perspective, Maslow's Hierarchy of Needs and Watson's Theory of Human Caring help explain why unmet physical and safety needs may constrain trust, teamwork, and caring workplace relations.

Quantitative patterns of overtime, inadequate tools, and workplace conflict were explained qualitatively through accounts of role extension beyond competence, lack of infection-control materials, unsafe physical environments, and emotional strain linked to chronic shortages. These findings suggest that unmet physiological and safety needs constrained teamwork and trust, while also pointing to broader

organisational failures in staffing, infrastructure maintenance, and managerial responsiveness. These findings are consistent with evidence showing that under-resourced health environments undermine both staff morale and collaborative functioning in primary health care settings. In this study, resource scarcity was therefore not only a service-delivery challenge, but also a threat to psychological safety and sustainable interprofessional practice. These findings are consistent with previous studies demonstrating that chronic workforce shortages, inadequate infrastructure and constrained resources contribute to occupational stress, reduced teamwork and diminished quality of care in primary healthcare settings, particularly within rural health systems

These findings indicate that resource availability is fundamental to workplace safety and effective interprofessional collaboration. Consistent with Maslow's Hierarchy of Needs and previous research, persistent shortages of staff, infrastructure and essential resources undermine staff wellbeing, teamwork and quality of care. Addressing these structural constraints should therefore be a priority for strengthening collaborative practice in rural Community Health Centers.

Theme 2: Fractured interprofessional relationships and status-based silos

The quantitative results showed high levels of strained workplace relationships and perceived conflict. At the same time, the qualitative findings explained these patterns through professional hierarchies, segregated spaces, poor communication, and exclusion from decision-making. The integrated analysis therefore suggests that both interpersonal and systemic conditions shaped relational fragmentation.

Strained interprofessional relationships, unequal treatment across professional groups, segregated work and rest spaces, exclusion from decision-making, and weak communication structures all contributed to diminished trust and collaboration. The Interprofessional Education Collaborative (IPEC) core competencies provide an appropriate interpretive framework, and competencies provide a useful lens here, as the findings indicate weaknesses in role clarification, communication, shared decision-making, and mutual recognition across professions.

Importantly, the findings suggest that professional fragmentation should not be reduced to individual attitude problems. While hierarchy and power differentials clearly shaped relational strain, some tensions also appeared to be intensified by chronic workload pressure, resource scarcity, and the absence of structured forums for role clarification and collaborative problem-solving. Both interpersonal and systemic conditions therefore sustained professional silos. This interpretation moves the analysis beyond a simple claim that staff did not work well together. Instead, it suggests that organisational practices, unequal workplace arrangements, and inadequate conflict mediation reinforced strained relationships. In such conditions, interprofessional collaboration becomes difficult to sustain even where individual staff members value teamwork in principle. These findings demonstrate that collaborative practice depends on organisational cultures that promote communication, role clarity and mutual respect. Consistent with the

Interprofessional Education Collaborative (IPEC) Core Competencies, strengthening interprofessional relationships requires collaborative leadership, shared decision-making and structured opportunities for role clarification across professional groups.

Theme 3: Weak union engagement and limited workplace representation

The quantitative findings showed uncertainty about union value and inconsistent perceptions of union contribution to workplace safety. In contrast, the qualitative findings described unions as passive, distant, reactive, or poorly visible at the facility level. The integrated interpretation suggests that weak union engagement reflected both individual and structural constraints within rural CHCs.

Although union membership was common, many respondents described uncertainty about representation, low visibility of shop stewards, delayed engagement, and weak local union-management interaction. Labour-management partnership principles suggest that where representation is distant or inconsistent, workers may experience reduced trust, limited advocacy, and weakened procedural protection in relation to workplace safety and staff concerns.

The integrated labour findings further suggest that union weakness was not only an issue of individual inactivity. Rural dispersion, threshold-based representation models, limited facility-level visibility, fear of victimisation, and poor communication infrastructure all appear to have contributed to weak local union functionality. This supports a more contextual interpretation of labour-management misalignment in rural CHCs rather than a simple judgment that unions were ineffective. At the same time, participants' accounts indicate that organised labour still carried symbolic importance. Many respondents continued to believe that unions should play a stronger role in workplace safety, staff communication, and conflict resolution. This suggests that the problem was not the irrelevance of organised labour, but the gap between formal membership and perceived practical representation within the workplace. This finding highlights the need for stronger local labour-management partnerships that promote ongoing dialogue, early conflict resolution and shared responsibility for workplace safety.

These findings suggest that effective labour-management partnerships are essential for creating supportive and responsive workplace environments. Consistent with Labour-Management Partnership principles, improved communication, visible representation and collaborative problem-solving can strengthen staff trust, workplace safety and interprofessional collaboration within rural CHCs.

Integrative interpretation

Taken together, the findings support an integrated interpretation in which unsafe and under-resourced environments intensified stress and reduced staff capacity for teamwork, while fragmented professional

relations and weak union visibility further limited opportunities for trust, support, and collaborative problem-solving. These interacting conditions suggest that workplace safety, interprofessional collaboration, and labour representation should not be treated as separate domains in rural CHCs, but as mutually reinforcing dimensions of organisational functioning.

The findings also suggest that communication and leadership operated as cross-cutting mechanisms across all 3 themes. Where communication systems were weak, leadership inconsistent, and accountability fragmented, resource problems and relational tensions were amplified. Conversely, the integrated evidence indicates that stronger communication, more responsive leadership, and clearer labour-management engagement may provide practical leverage points for improving workplace safety and collaborative practice. These findings further support Watson's proposition that caring organisational relationships depend upon supportive leadership, respectful communication and environments that value both staff wellbeing and collaborative practice. Collectively, the findings demonstrate that adequate resources, effective interprofessional relationships and responsive labour-management partnerships are interdependent requirements for safe and collaborative practice. These interconnected themes provided the empirical foundation for the development of the Interprofessional Union and Collaborative Partnership (IPUCP) Framework.

The findings of this study culminated in the development of the **Interprofessional Collaborative Union Partnership (IPCUP) Framework**, which represents the principal conceptual contribution of this research. Rather than constituting an abstract theoretical model, the framework was developed directly from the integrated quantitative and qualitative findings and subsequently refined through expert validation. It recognises that workplace safety, interprofessional collaboration and labour-management partnerships are interdependent organisational processes that should be strengthened simultaneously rather than addressed in isolation. The framework therefore provides a contextually relevant guide for organisational improvement, future implementation research and adaptation within rural and semi-rural Community Health Centers.

Study limitations

This study was conducted in a limited number of rural and semi-rural Community Health Centers in three provinces of South Africa. Although the findings provide valuable contextual insight, they should not be statistically generalised to all rural CHCs or other resource-constrained settings. The quantitative strand was descriptive and exploratory in purpose and did not include inferential statistical analysis. Participation was voluntary and may have introduced self-selection bias. Some professional categories were less represented in the sample, and the possibility of social desirability bias and researcher influence in qualitative interpretation cannot be fully excluded despite the use of reflexive safeguards. In addition,

incomplete responses for some questionnaire items may have affected the completeness of selected variable-level findings. Finally, although the IPUCP model was refined through expert validation, it was not piloted within service settings during this study.

CONCLUSION

This study examined workplace safety, union engagement, and interprofessional collaboration in rural and semi-rural Community Health Centers (CHCs) in South Africa. Integrated analysis identified three interrelated organisational challenges: resource deficits, fragmented interprofessional relationships, and weak labour-management engagement. Together, these structural, relational, and governance factors shaped workplace safety and collaborative practice within the participating CHCs. Strengthening collaboration therefore requires coordinated investment in staffing, infrastructure, leadership, communication, and effective labour-management partnerships. The study culminated in the development of the Interprofessional Union and Collaborative Partnership (IPUCP) Framework, a contextually grounded framework derived from integrated empirical findings and refined through expert validation. The framework provides a practical foundation for future piloting, implementation, and evaluation within rural CHCs.

Recommendations

To strengthen workplace safety, union engagement, and interprofessional collaboration in rural CHCs, the following context-sensitive recommendations are proposed:

- Implement the Interprofessional Union and Collaborative Partnership (IPUCP) Framework and its validated guidelines to strengthen workplace safety, collaborative practice, and labour-management engagement in rural CHCs.
- Prioritise investment in safe infrastructure, adequate staffing, essential equipment, and infection prevention resources to support sustainable collaborative practice.
- Strengthen collaborative leadership through management development programmes that promote communication, inclusive decision-making, conflict resolution, and organisational accountability.
- Enhance labour-management partnerships through regular facility-level engagement forums, improved union visibility, and workplace safety training for management and shop stewards.
- Integrate interprofessional collaborative practice into undergraduate curricula, clinical training, and continuing professional development to strengthen role clarification, teamwork, and person-centred care.
- Implement routine psychosocial safety and organisational climate assessments to identify barriers to staff wellbeing, trust, and collaborative practice.

- Strengthen monitoring and implementation of occupational health, labour, and professional regulations through regular audits and responsive management systems.
- Foster inclusive organisational cultures by addressing professional hierarchies, discriminatory practices, and barriers to equitable participation in workplace decision-making.

Conflicts of Interest

The authors declare no conflicts of interest.

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