

Mental health needs after injury in Pakistan: a qualitative study of barriers and opportunities for integrated care

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Integrating mental health support into injury care in Pakistan: a qualitative study of service gaps and opportunities

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Abstract

Injuries are a major public health challenge in low- and middle-income countries (LMICs), where access to comprehensive post-injury care remains limited. Psychological distress and mental health conditions may emerge or worsen after injury, affecting recovery and rehabilitation, yet these needs are frequently overlooked within injury care. This study explored stakeholder perspectives on post-injury mental health needs and opportunities for service integration in Sindh, Pakistan. Four focus group discussions were conducted with 30 purposively selected injured patients, community members and healthcare workers from urban and rural settings. Discussions were audio-recorded, transcribed and analysed thematically using a hybrid inductive-deductive approach. Participants described psychological consequences following injury, particularly among people with severe injuries or long-term disability, although recognition of a need for professional support varied. Mental health services were perceived as scarce and poorly integrated into injury care, especially in rural areas. Engagement with formal care was shaped by interacting service, sociocultural and economic factors, including limited availability of professionals, low mental health literacy, stigma, treatment expectations and costs. Family support, religious practices and spiritual healing were commonly used, sometimes instead of formal services. Unmet post-injury mental health needs reflected broader weaknesses in service availability, care coordination, affordability and community engagement. Pakistan and similar LMIC settings should move beyond survival-focused acute care to include psychological need identification pathways, referral and follow-up mechanisms, and culturally responsive community-based support to strengthen continuity, equity, and responsiveness across the broader health system. The success of integration should be assessed through service uptake and continuity of care, rather than referral alone.

Keywords:

Injury care; mental health services; integrated care; qualitative research; health services accessibility; Pakistan.

Introduction

Injuries are a major global public health challenge, accounting for approximately 9% of deaths worldwide and leaving many survivors with long-term disability. (Haagsma et al., 2016; Petroze et al., 2015). Their consequences extend beyond immediate physical harm: injured individuals may experience prolonged functional limitations, loss of employment or social participation, financial hardship and disruption to family life. These consequences are particularly pronounced in low- and middle-income countries (LMICs), where access to timely, high-quality acute care and longer-term rehabilitation remains uneven (Goddard et al., 2024). Improving survival is therefore only one component of an effective injury-care system; supporting physical, psychological and social recovery after discharge is also essential.

Evidence from high-income countries has demonstrated unmet needs for psychological and vocational support following major trauma, even in comparatively well-resourced health systems (Kettlewell et al., 2021). Some trauma systems have introduced psychological screening, referral and collaborative-care approaches within post-injury pathways. Evaluations suggest that appropriately designed psychosocial interventions can reduce symptoms of post-traumatic stress and psychological distress, support engagement with care and improve aspects of longer-term recovery (Beiter et al., 2022; Sinkler et al., 2022; Zatzick et al., 2021). Nevertheless, psychological care frequently remains disconnected from acute trauma services, rehabilitation, primary care and community-based support. Screening alone is unlikely to address this fragmentation if patients cannot access affordable services, navigate referral pathways or receive appropriate follow-up after discharge.

These challenges may be more pronounced in LMICs, where injury-care systems often prioritise survival, stabilisation and surgical management under substantial resource constraints. Mental health is rarely incorporated systematically into trauma-system strengthening, despite the interaction between psychological wellbeing and physical recovery. Shortages of specialist professionals, limited service availability, competing health-system priorities and weak coordination between levels of care can restrict the integration of mental health support into routine services (Le et al., 2022; Petersen et al., 2019; Wainberg et al., 2017). Access may also be shaped by affordability, geographical distance, mental health literacy, stigma and culturally embedded understandings of psychological distress. Family, religious and community-based sources of support may play important roles but may operate separately from formal services. Developing integrated post-injury mental healthcare therefore requires an understanding not only of patients' psychological needs, but also of how existing service arrangements, referral practices and social contexts influence recognition, help-seeking and continuity of care.

Pakistan provides an important setting in which to examine these issues. The country has a young population, a substantial burden of injury and mental health conditions, and high levels of out-of-pocket health expenditure (Hafeez et al., 2023; Hay et al., 2025). Although foundations for injury-care governance and service development exist, access to mental healthcare remains limited, with substantial workforce shortages and an uneven distribution of services between urban and rural areas (Dayani et al., 2024; Equi-Injury Group, 2025). A recent review also identified important limitations in access to quality trauma care in Pakistan and emphasised the need for feasible, sustainable and contextually appropriate service improvements (Atiq et al., 2025). However, limited empirical evidence is available on how psychological needs following injury are understood by patients, communities and healthcare workers, how these needs are currently addressed within injury-care pathways, or what service changes might support better integration.

This study explored stakeholder perspectives on mental health needs following injury in urban and rural areas of Sindh province, Pakistan. Specifically, it examined how injured individuals, community members and healthcare workers understood the nature, timing and duration of post-injury mental health needs; how existing service arrangements influenced their recognition and management; what individual, social and health-system factors affected access to support; and what changes might facilitate the integration of mental healthcare within injury-care pathways. By examining perspectives across stakeholder groups and service contexts, the study sought to generate formative evidence for designing contextually appropriate and equitable models of integrated post-injury mental healthcare in Pakistan and other resource-constrained settings.

Method

Study design:

This qualitative study used focus group discussions (FGDs) to explore stakeholder perspectives on the mental health needs of injured patients in Pakistan and the extent to which these needs are currently recognised and addressed. The study focused on the perceived short- and long-term psychological consequences of injury, barriers and facilitators to accessing mental healthcare, and opportunities for integrating mental health support into injury care pathways.

The study was conducted as an additional qualitative component of the Equi-Injury project, a multi-country study aiming to improve equitable access to quality injury care in Ghana, Pakistan, Rwanda and South Africa. (Equi-Injury Group, 2024) Within the wider project, a high prevalence of mental health conditions was identified three months after discharge among injured patients in Pakistan compared with other participating countries. This qualitative study was therefore undertaken to better understand stakeholder perspectives on the need for integrating mental healthcare into post-injury care in this setting.

Study setting:

The study was conducted in Sindh province, Pakistan, in both urban and rural settings. Karachi was selected to represent an urban setting, and Thatta was selected to represent a rural setting. Karachi is Pakistan's largest metropolitan city and has multiple tertiary healthcare facilities, whereas Thatta is predominantly rural and has comparatively limited health infrastructure. These sites were selected to capture variation in mental health experiences, service availability, healthcare access, and cultural and socioeconomic context across urban and rural injury care settings.

Participants and sampling:

Participants were recruited through the Community Engagement and Involvement (CEI) groups established as part of the Equi-Injury project. These groups included community members, patients and healthcare workers who had contributed to the design, implementation, evaluation and dissemination activities of the wider project. Participants were purposively selected to represent key stakeholder groups, including injured patients, community members and healthcare workers involved in injury care. Recruitment was supported by snowball sampling and collaboration with local community leads. Patients were eligible if they had attended healthcare facilities serving the study areas and were residents of the selected communities. Community members were recruited from the same areas, while healthcare workers were recruited from facilities providing care to injured patients in Karachi and Thatta. The number and composition of focus groups were determined in advance to capture variation by setting and stakeholder group; data saturation was not used as a formal stopping criterion.

Data collection:

Four FGDs were conducted: one with community members or injured patients in the rural setting, one with community members or trauma patients in the urban setting, one with rural healthcare workers, and one with urban healthcare workers. Each FGD was designed to include 7-10 participants to allow sufficient discussion while remaining logistically feasible. FGDs were conducted during summer 2025, with each session lasting around two hours. Meetings were held in meeting rooms at Aga Khan University, or at community halls in rural areas. No repeat sessions were conducted.

Discussions were conducted predominantly in Urdu, the national language and the most widely spoken language in Pakistan. Each FGD was facilitated by an experienced female qualitative researcher (ZW) familiar with the local language and culture, supported by another female researcher who took field notes (NS). Both the facilitator and notetaker were experienced in qualitative interviewing and had no prior relationship with participants. The facilitator and notetaker also kept reflexive notes throughout fieldwork, which were later discussed at analytical meetings and informed interpretation of the data. All discussions were audio-recorded with participants' consent. Participants were reimbursed for travel expenses and compensated for their time.

Before enrolment, potential participants received information about the study purpose, research questions, reasons for conducting the research and what participation would involve. They were given an opportunity to ask questions before providing written informed consent. All enrolled participants attended and completed their respective focus group discussion; no participants withdrew after enrolment.

The facilitator introduced herself and the note-taker, explained their roles in the research team and clarified that they were conducting the FGDs to understand participants' perspectives rather than to provide clinical care or evaluate individual participants. A semi-structured topic guide was developed to guide the discussions, informed

by existing literature on mental healthcare access and trauma recovery following injury, and piloted with 3 participants who were not included in the main study prior to data collection. The first part explored perceptions of mental healthcare needs among injury survivors, including which groups of patients may benefit most from support, when mental health assessment or intervention should occur after injury, and how long support may be needed. The second part explored the availability and accessibility of existing mental health services, participants' awareness and experiences of seeking or using such services, perceived pathways to care, and who typically initiates or recommends mental health support.

Data management and analysis:

Audio recordings were transcribed verbatim in the original language. Transcripts were checked for accuracy and analysed in the original language to preserve meaning and contextual nuance. Relevant extracts were subsequently translated into English for reporting purposes. Transcripts and translations were quality-checked and cross-validated by members of the research team to ensure accuracy and consistency.

Data were analysed using thematic analysis with a hybrid inductive-deductive approach. (Fereday & Muir-Cochrane, 2006) Initial coding was conducted inductively to allow themes to emerge from participants' narratives. In parallel, a deductive coding framework informed by existing literature on mental healthcare access and trauma recovery was used to ensure systematic exploration of relevant concepts. Transcripts were coded using NVivo 14 software. Codes were iteratively reviewed, grouped into themes and subthemes, and refined through discussion among the research team to support analytical consistency and interpretative depth.

Ethical approval:

Aga Khan University ethical review committee granted ethical approval for this study (2025-11199-33917). Written informed consent was obtained from all participants prior to participation. FGDs were audio-recorded with participants consent.

Results

Participant characteristics

Four focus group discussions were conducted with 30 participants from urban and rural Sindh. The two community/injured-participant groups included 14 participants, with seven in each setting. Twelve were men and two were women; both women participated in the urban group. The two healthcare worker groups included 16 participants, with eight in each setting and four women overall. Healthcare workers included nurses, doctors, physiotherapists and technicians. Participant characteristics are presented in Table 1.

Five interrelated themes were developed: (1) psychological consequences of injury were widely recognised, but the perceived need for professional support varied; (2) stakeholders proposed different entry points and models for mental health support; (3) fragmented and geographically unequal services constrained access; (4) multiple interacting barriers constrained engagement with and continuity of mental health care; and (5) family, faith and self-management filled gaps in formal care. Table 2 summarises the themes, subthemes and principal stakeholder and setting differences.

Psychological consequences of injury were widely recognised, but the perceived need for professional support varied

Participants across the four groups described psychological distress as a potentially important and persistent consequence of injury. They associated injury with fear, anxiety, sleep disturbance, emotional shock and disruption to daily functioning, which could continue after physical wounds had healed. A rural community participant described the lasting nature of this distress:

“The trauma of the accident will stay with them. Even while sitting at home, they’ll be equally disturbed; they’ll keep feeling the shock.” (*Rural community/injured participant*)

Perceived need for support was closely related to injury severity, disability and disruption to everyday life. Healthcare workers particularly identified people with amputations, permanent disability, prolonged immobility or hospitalisation as likely to experience difficulty adjusting to changes in their functioning and circumstances:

“For those with permanent disabilities, it’s much more difficult. We can say it’s easy to just stay positive, but for them, it’s really hard. They must receive care.” (*Urban healthcare worker*)

Participants also described psychological consequences among people who had witnessed fatalities or lost relatives, even when they had experienced little or no physical injury themselves. One urban participant described a relative who avoided driving after being involved in a fatal road traffic collision:

“Our relative had deep fear inside, a different kind of fear. He didn’t drive at all for a whole month because that fear stayed in his mind. Every time he passed that road, the same accident came to his mind.” (*Urban community/injured participant*)

Views differed, however, regarding whether all injured people required professional mental health support. Some urban participants supported at least one routine post-injury assessment to determine whether further care was necessary. By contrast, a small number of rural participants regarded professional support as unnecessary when an injury was considered exclusively physical or believed that fear could be managed through personal coping and support at home:

“If it’s a physical wound, they’ll treat it. But fear doesn’t really have a treatment, right? At home, or by doing things to feel better, you can manage it.” (*Rural community/injured participant*)

The findings therefore reflected a tension between support for routine assessment after injury and a more selective approach in which professional care was reserved for people displaying persistent or severe distress.

Stakeholders proposed different entry points and models for mental health support

Participants generally supported identifying psychological distress relatively early after injury, but their preferred timing and model of support varied by setting and stakeholder group.

Rural participants commonly prioritised physical stabilisation before mental health assessment. They suggested observing patients as their physical condition began to improve, with referral considered if behavioural or emotional changes persisted. Some proposed assessment approximately two to six weeks after injury:

“They should go around two weeks after the injury, once their condition starts improving.” (*Rural healthcare worker*)

Rural healthcare workers described an informal process in which physicians or other healthcare providers initially observed how patients talked and behaved, asked relatives about changes since the injury and provided basic counselling. Patients perceived as requiring more specialised care were then referred to a psychologist or psychiatrist:

“First, we observe their condition, how they talk, how they behave. Then we ask the patient or attendant about their history. We compare how they used to be versus now. That’s how we assess them.” (*Rural healthcare worker*)

Urban community participants proposed earlier assessment, often during the first week, while recognising that psychological consequences may become apparent only after the immediate physical crisis has passed. They described patients and families initially focusing on physical treatment, return to work and financial survival, with psychological symptoms recognised later:

“When such an incident happens, at the time the person doesn’t realise how much it affected their mental health. They’re just focused on the physical trauma, like ‘my leg is broken’ or ‘my arm is injured’, so they want to get that fixed first. Especially in low-income households, people don’t think about their mental health first. They just want to get back to work. The signs and symptoms come later.” (*Urban community/injured participant*)

Urban healthcare workers favoured earlier and more structured integration, including counselling during hospitalisation, before major procedures and as part of discharge planning. They considered this especially important when patients faced life-changing treatment decisions, such as amputation:

“This process should ideally start within the hospital, either when the patient’s discharge is being planned or when a procedure is being planned. For example, if someone is being advised to have a limb amputated [...]. Counselling services should go parallel with the medical staff.” (*Urban healthcare worker*)

Urban healthcare workers also proposed a team-based approach involving clinicians, patients, mental health professionals and family members or caregivers. Some recommended using standardised measures and repeated assessments to monitor physical and psychological recovery over time. In contrast with a fixed number of sessions, participants across the groups generally considered the duration and intensity of support to be dependent on injury severity, psychological response and recovery progress. Urban participants were more likely to state that a psychologist or psychiatrist should determine the appropriate duration:

“Only a professional can assess how long treatment is required. They’re with the patient; they understand their coping mechanisms and how much time they might need. It varies from person to person. Some recover quickly; others take time.” (*Urban community/injured participant*)

These accounts identified several possible entry points for support but also revealed the absence of a shared model regarding when assessment should occur, who should provide initial support and when specialist referral was required.

Fragmented and geographically unequal services constrained access

Participants described mental health services as geographically concentrated and poorly connected with facilities providing routine injury care. In rural areas, participants reported few or no psychologists or psychiatrists and limited capacity within existing facilities:

“In our village, there aren’t any such specialists.” (*Rural community/injured participant*)

Rural healthcare workers described situations in which one clinician was expected to manage a broad range of conditions. Specialist referral commonly required travel to an urban centre, creating additional difficulties for patients with limited mobility or financial resources.

Urban participants reported greater availability of psychologists and psychiatrists, particularly in tertiary and private hospitals. However, they described limited provision at primary and secondary levels and in lower-income or peri-urban areas:

“When we talk about basic or primary and secondary level health facilities at the root level, those places don’t have these services.” (*Urban healthcare worker*)

Participants also described organisational disconnection between physical injury treatment and psychological care. Trauma services were perceived to focus on physical stabilisation and surgical treatment, with psychological needs rarely assessed routinely. Urban community participants reported that healthcare providers sometimes dismissed emotional symptoms or did not provide clear guidance or referral:

“Those treating us often don’t acknowledge this issue and put it aside. And because of that, the person carries that trauma with them for the rest of their life.” (*Urban community/injured participant*)

The reported gap therefore concerned not only the number and distribution of specialists but also the absence of clear pathways connecting acute injury treatment, psychological assessment, referral and follow-up.

Multiple interacting barriers constrained engagement with and continuity of mental healthcare

Participants described multiple interacting barriers affecting recognition of psychological needs, initiation of care and continued engagement with services.

Limited mental health literacy was reported in both settings but was considered particularly pronounced in rural areas. Participants described uncertainty about the purpose of counselling, limited awareness of available services and confusion between the roles of psychologists and psychiatrists. Rural healthcare workers reported that counselling without medication could be perceived as ineffective:

“In the villages, there’s no awareness. If someone goes to a psychologist and only gets counselling, they don’t understand it. They’ll say, ‘He wasted our time, he didn’t even give us medicine.’” (*Rural healthcare worker*)

Urban participants also described limited awareness, including among people with the financial means to seek care. One participant reflected that they had not previously recognised post-injury mental health as an issue requiring attention:

“There is no awareness. Let me share my experience, it’s been almost two years, and I didn’t even know this was such a topic. It’s rarely discussed, and no sessions are held about it. So, there’s no awareness about whether I even need this help or not.” (*Urban community/injured participant*)

Stigma further discouraged recognition and help seeking. Participants reported that referral to a psychiatrist could be interpreted as being labelled “mad” or “mentally unstable,” causing people to conceal symptoms or reject professional care:

“People worry that they’ll be labelled as crazy or mentally unstable. To avoid that stigma, people hide these issues.” (*Urban healthcare worker*)

Affordability affected access in both urban and rural settings. Participants described consultation fees, medication costs, travel expenses and repeated follow-up visits as difficult to sustain, particularly for households already affected by loss of income after injury. A rural participant described the monthly cost of medication as unaffordable:

“The medicines are so expensive, Rs. 18,000 to 20,000 per month.” (*Rural community/injured participant*)

Urban participants similarly described specialist services as available but financially inaccessible:

“Mental help is there, but the charges are double or triple what is normal. I felt that I really needed help, but it’s expensive. So, I count this as a bad experience. Maybe I need to save up.” (*Urban healthcare worker*)

Expectations about treatment also influenced engagement. Some rural participants expressed concerns that psychiatric medication caused sedation or dependency and regarded psychological counselling as more acceptable. Other accounts described positive experiences of treatment, including perceived improvement after a small number of counselling sessions. These differing experiences suggested variation in trust in different forms of mental healthcare.

Participants also described instances in which patients stopped medication or discontinued appointments before completing the treatment recommended by providers. This was associated in participants’ accounts with cost, limited understanding of treatment duration, expectations of rapid recovery and limited ongoing communication or follow-up:

“When patients visit a doctor, they often ask how long they’ll take to recover, ‘Is it one week or one month?’ They come for three visits, then say, ‘That’s enough.’ They stop going. That’s a problem.” (*Urban community/injured participant*)

Thus, availability of a referral or initial consultation did not necessarily lead to sustained engagement with care.

Family, faith and self-management filled gaps in formal care

Participants described family members as important sources of emotional reassurance, practical assistance and observation during recovery. In rural settings, relatives often provided continuous support during extended periods at home and were sometimes considered sufficient to help patients manage fear and distress without professional care:

“The patient’s caregivers, for example, a wife, brother or sister, play a role too. They keep comforting the patient, telling them, ‘It’s okay, you’ll get better; you just need some time.’” (*Rural community/injured participant*)

Family members also influenced whether and where care was sought. They could recognise changes, encourage professional help and support adherence, but could also direct patients towards spiritual or traditional sources of care. Urban healthcare workers particularly emphasised involving families in counselling and rehabilitation:

“The counselling sessions should include the family too. Until the family is counselled, no matter how many times you explain things to the patient, or how many sessions you give, the patient cannot cope alone.” (*Urban healthcare worker*)

Religious practices and consultation with spiritual healers were described across all four groups. Participants reported that people sought prayer, sacred water, amulets and advice from religious or spiritual figures. These

sources were culturally familiar and often more accessible and affordable than professional services. Some healthcare workers considered them a cause of delayed treatment, while other participants emphasised that spiritual settings provided listening, reassurance and practical support that formal services did not consistently offer:

“People go to shrines. They say, ‘Give him some sacred water to drink,’ and they keep going back. There must be a reason, no one is here to listen to them. Over there, people at least offer them something to eat and listen.”
(*Rural healthcare worker*)

Participants distinguished personal faith and prayer from experiences with spiritual healers. Religious and spiritual support was therefore described both as a meaningful coping resource and, in some circumstances, as a substitute for professional care.

Talking to friends and family, engaging in hobbies or physical activity and making personal efforts to overcome fear were also described as common coping strategies. Some participants regarded self-management as central to recovery and professional support as supplementary:

“There are different ways people cope. Some people, after going through trauma, just need someone to listen to them... Sometimes, just being heard is therapeutic.” (*Urban community/injured participant*)

Overall, informal support filled important relational and practical gaps in formal care. However, participants’ accounts also showed that reliance on family, faith and self-management could coexist with delayed recognition of needs or limited use of professional services.

Discussion

This study identified a mismatch between broad recognition of the potential psychological consequences of injury and the absence of an organised service response. Participants described gaps across the care pathway, from recognition and initial assessment to referral, affordability, follow-up and sustained engagement. Although psychological distress was considered particularly important after severe injury, disability, prolonged immobility or exposure to fatalities, views differed regarding whether every injured person required professional support. Participants also proposed different entry points and models of care, with rural participants generally prioritising physical stabilisation before psychological assessment and urban healthcare workers favouring earlier and more structured integration within hospital and discharge processes. Mental health services were described as geographically unequal and organisationally disconnected from injury care, while family, faith and self-management frequently filled the resulting gaps. Taken together, the findings suggest that addressing post-injury mental health needs requires not only additional specialist capacity but also clearer organisation of identification, initial support, referral and continuing care. This study extends previous evidence by moving beyond documentation of psychological distress after injury to identify how service organisation, geographical inequality, affordability, treatment expectations and informal support interact across the pathway from recognition of need to sustained engagement with care. The comparison of urban and rural perspectives also indicates that integration models will need to be adapted to differences in service capacity rather than implemented uniformly.

Participants’ recognition that fear, anxiety, emotional shock and disruption to daily functioning may persist after physical injuries have healed is consistent with evidence demonstrating that psychological consequences can emerge or continue throughout injury recovery (de Munter et al., 2020; Visser et al., 2021). However, the variation in perceived need is important. Support for routine assessment coexisted with the view that professional care should be reserved for people with severe or persistent distress. This distinction suggests that routine identification of possible needs should not be equated with universal treatment. A proportionate approach could provide all injured people with basic information about possible psychological responses and opportunities to disclose concerns, while directing more intensive support towards those experiencing persistent distress, functional impairment or difficulty adjusting to disability. Participants also identified possible psychological consequences among witnesses and bereaved relatives, indicating that assessment pathways may need to consider people affected by an injury event beyond the physically injured patient. Acknowledging the seriousness of the problem is an important facilitator of accessing mental health services (Choudhry et al., 2023), and recognition of post-injury psychological effects among both community participants and healthcare

workers may provide an important foundation for developing future support strategies, although recognition alone does not ensure service use.

Differences in the preferred timing of support may be interpreted as reflecting both variations in perceived need and the organisational capacity of different settings. Rural participants often favoured assessment after physical stabilisation, whereas urban healthcare workers proposed counselling during hospitalisation, before life-changing procedures and as part of discharge planning. Rather than identifying a single optimal time, these findings support the provision of multiple opportunities for recognising distress. Psychological needs may be apparent during admission, emerge when the consequences of disability become clearer, or become more prominent after patients return home and attempt to resume family, social and occupational roles. Potential entry points could therefore include hospitalisation, procedural decision-making, discharge planning and early outpatient or rehabilitation follow-up. Repeated opportunities for assessment may be particularly important where patients and families initially prioritise survival, physical treatment and return to work.

Participants' accounts also support consideration of a stepped and task-shared approach to post-injury support. Under such a model, injury-care clinicians could provide basic information, supportive communication and initial identification of psychological concerns. Appropriately trained and supervised non-specialist staff could offer low-intensity psychosocial support and monitor recovery, with psychologists or psychiatrists providing assessment and treatment for persistent, severe or complex needs. Similar collaborative and stepped approaches have been incorporated into trauma services in some high-income settings and have informed broader efforts to integrate mental healthcare in resource-constrained health systems (Sinkler et al., 2022; Zatzick et al., 2021). Task sharing may be particularly relevant where specialist availability is limited, although it requires defined roles, competency-based training, supervision, referral criteria and access to specialist support (Le et al., 2022; Petersen et al., 2019).

The reported service gap extended beyond the absolute shortage of psychologists and psychiatrists. Participants described an organisational disconnection between services providing acute injury care and those providing mental healthcare. Participants perceived psychological needs as rarely assessed routinely, responsibility for initiating support as unclear, and referral and follow-up pathways as poorly defined. Rural participants reported few local specialists and the need to travel to urban centres, while urban participants described services concentrated in tertiary and private hospitals, with limited provision at primary and secondary levels. These findings are consistent with assessments of Pakistan's mental health system that have identified workforce shortages, urban concentration of services and limited integration with general health care (Dayani et al., 2024). Increasing the number of specialists would therefore be insufficient without mechanisms connecting injury services, rehabilitation, primary care, community-based services and specialist mental health providers. Referral processes should specify who initiates referral, where patients are referred, how urgency is determined and how the referring service confirms that care was received.

Geographical inequality also interacted with financial and functional constraints. Travelling to an urban specialist may be particularly difficult for people experiencing impaired mobility, loss of income or dependence on family members following injury. Even where services were geographically available, consultation fees, medication costs and repeated appointments could make continued care unaffordable. Access should therefore be understood as more than the availability of an initial consultation. It also includes whether people can reach services, understand and accept the proposed care, afford continuing treatment and maintain engagement for as long as needed. Indicators of integration should therefore capture whether patients reach services and remain engaged with care, rather than relying on referral counts alone.

Notably, fragmented psychosocial care and poor coordination between acute and community services have also been documented in high-income countries, highlighting that inadequate mental health integration in injury care is a global challenge rather than one confined to LMICs (Kettlewell et al., 2021). These findings reinforce the need for a holistic, system-level approach rather than fragmented implementation of psychosocial services.

The interacting barriers described by participants further demonstrate the importance of distinguishing initiation of care from continuity of care. Limited mental health literacy, stigma, treatment expectations, financial pressures and distrust of some forms of treatment could reinforce one another. For example, limited understanding of counselling could reduce willingness to pay for repeated sessions, while expectations of rapid improvement and insufficient explanation of treatment duration could contribute to early discontinuation. These findings are consistent with research in Pakistan and other LMICs identifying stigma, affordability and limited

awareness as barriers to mental health service use (Choudhry et al., 2023; Wainberg et al., 2017). Service-level responses are also required, including clear explanations of the roles of different mental health professionals, discussion of treatment options and expected duration, transparent information about costs, opportunities to raise concerns about medication, and active follow-up after referral. Flexible follow-up and mechanisms for re-entering care may also be needed because perceived need and readiness to engage may change during recovery.

Family, faith and self-management occupied an important but complex position within participants' accounts. Families and friends provided emotional reassurance, practical assistance, observation and encouragement, while prayer and spiritual settings offered culturally meaningful sources of comfort, listening and social connection. These resources sometimes provided support that participants did not experience within formal services. At the same time, reliance on family or spiritual healing could substitute for or delay professional care. Family involvement may require adaptation of clinical practices and organisational structures to ensure that family members can participate effectively in care processes (Maybery et al., 2021).

Implications for Mental Health Service Organisation and Policy

The findings suggest several components for a post-injury mental health pathway that could be taken forward for co-design and evaluation. First, injury services could provide basic psychoeducation and a brief opportunity to identify psychological concerns during hospital care or discharge planning. Second, trained and supervised trauma, rehabilitation or primary-care personnel could offer initial support and monitor psychological status along physical recovery. Third, clear criteria and accessible pathways would be needed for referral to specialist services when distress is persistent, severe or complex. Fourth, referral should be accompanied by communication between services and follow-up to determine whether care was accessed and whether further support is required. Finally, families and culturally embedded community resources could be involved appropriately as sources of support and potential routes to care.

Implementation would need to be adapted to differences in service capacity. Larger urban hospitals may be able to establish coordinated psychological support within injury and rehabilitation services. Rural and peri-urban settings may require stronger links between injury services, primary care, community-based workers and remotely available specialists. Task-shared and remote models may help extend reach, but they should not be introduced without adequate training, supervision, clinical governance and referral options. Implementation research should examine acceptability to injured people and providers, workforce requirements, fidelity, costs, equity and sustainability, rather than assuming that a model developed for tertiary urban facilities can be transferred to rural settings.

At the policy level, mental health should be incorporated into injury-care and rehabilitation planning rather than treated solely as a specialist concern. Provincial health authorities and service managers could define responsibilities for assessment, initial support, referral and follow-up across levels of care. Indicators of successful integration should extend beyond the number of referrals made to include referral completion, continuity of care, patient experience, functional recovery and equitable access across urban and rural settings. Evidence from PTSD services suggests that strategies such as training and audit may improve provider confidence and treatment availability without ensuring routine use, underscoring the need to address referral processes, treatment adaptability and patient-level barriers alongside workforce development (Gripko et al., 2026).

Strengths and Limitations

This study incorporated perspectives from community members, injured participants and healthcare workers in both urban and rural settings. Comparison across stakeholder groups and settings enabled identification of shared concerns as well as differences in preferred timing, provider roles and models of support.

Several limitations should also be considered. The findings may not be transferable to other provinces in Pakistan or other LMICs. Women were underrepresented, particularly in the rural community group, limiting the study's ability to examine gendered experiences of injury, caregiving, stigma and access to care. Although we sought to include participants from a range of backgrounds and injury types, certain groups, such as survivors of gender-based violence or individuals injured in legally prosecutable or culturally sensitive circumstances, may have been under-represented due to reluctance to disclose their experiences. Participants were drawn from CEI groups already engaged with the wider Equi-Injury project, which may have introduced self-selection bias. Although transcripts were analysed in the original language, translation of extracts into English for reporting

may have resulted in some loss in the meaning. Finally, focus group discussions may be subject to social desirability bias, particularly when discussing sensitive topics such as mental health.

Conclusion

Psychological distress after injury was widely recognised, but participants described no consistent pathway for identifying needs, providing initial support, arranging referral or maintaining engagement with care. The findings support the development and evaluation of context-sensitive, stepped approaches linking injury services with mental health, primary-care and community resources. Although grounded in two settings in Sindh, these considerations may inform research in comparable resource-constrained health systems seeking to integrate mental health within injury care.

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Table 1. Demographic characteristics of focus group discussion participants

Characteristic	Community members/injured participants Urban (n = 7)	Community members/injured participants Rural (n = 7)	Healthcare workers Urban (n = 8)	Healthcare workers Rural (n = 8)
Mean age, years	28.4	30.2	32.5	42.8
Sex, n (%)				
Male	5 (71.4%)	7 (100.0%)	6 (75.0%)	6 (75.0%)
Female	2 (28.6%)	0 (0.0%)	2 (25.0%)	2 (25.0%)
Educational status, n (%)				
Primary education	0 (0.0%)	2 (28.6%)	0 (0.0%)	0 (0.0%)
Secondary education	0 (0.0%)	3 (42.9%)	0 (0.0%)	0 (0.0%)
Diploma/technical education	1 (14.3%)	0 (0.0%)	0 (0.0%)	4 (50.0%)
Higher education	6 (85.7%)	2 (28.6%)	8 (100.0%)	4 (50.0%)
Professional role, n (%)				
Nurse	-	-	4 (50.0%)	5 (62.5%)
Doctor	-	-	1 (12.5%)	2 (25.0%)
Physiotherapist	-	-	2 (25.0%)	0 (0.0%)
Technician	-	-	1 (12.5%)	1 (12.5%)

Note. Values are n (%) unless otherwise stated. Percentages are calculated within each participant group and setting and are rounded to one decimal place. Dashes indicate that the characteristic was not applicable.

Alt text: Table summarising the age, sex, educational attainment and professional roles of 30 focus group participants across four groups: urban and rural community members/injured participants, and urban and rural healthcare workers. Mean ages ranged from 28.4 years among urban community members/injured participants to 42.8 years among rural healthcare workers. Participants were predominantly male; all rural community members/injured participants were male.

Table 2. Overview of themes, subthemes and illustrative quotations

Theme	Subthemes	Summary of finding	Illustrative quotation
Psychological consequences of injury were widely recognised, but the perceived need for professional support varied	Persistent distress after injury; heightened perceived needs after severe injury or disability; consequences for witnesses and relatives; routine assessment versus selective professional support.	Participants described fear, anxiety, emotional shock and disruption to daily functioning as potentially persistent consequences of injury. Severe injury, disability, prolonged immobility and exposure to fatalities were associated with greater perceived need. Views nevertheless differed over whether all injured people required professional support or whether care should be reserved for persistent or severe distress.	"The trauma of the accident will stay with them. Even while sitting at home, they'll be equally disturbed; they'll keep feeling the shock." (Rural community/injured participant)
Stakeholders proposed different entry points and models for mental health support	Support after physical stabilisation; assessment during hospitalisation, procedural planning or discharge; initial counselling and selective referral; team-based care; duration tailored to individual need.	Rural participants generally favoured assessment after physical stabilisation and described informal initial counselling followed by referral when required. Urban healthcare workers advocated earlier, structured support integrated into hospital care and discharge planning. Participants agreed that duration and intensity should reflect injury severity, psychological response and recovery.	"This process should ideally start within the hospital, either when the patient's discharge is being planned or when a procedure is being planned. [...] Counselling services should go parallel with the medical staff." (Urban healthcare worker)
Fragmented and geographically unequal services constrained access	Rural and peri-urban shortages; concentration in tertiary and private hospitals; limited primary and secondary provision; organisational disconnection from injury care; unclear referral pathways.	Mental health services were described as concentrated in major urban institutions and poorly connected with facilities providing routine injury care. Rural participants reported few local specialists, while urban participants identified gaps at primary and secondary levels. Psychological needs were rarely assessed routinely within trauma services, and referral and follow-up pathways were unclear.	"When we talk about basic or primary and secondary-level health facilities at the root level, those places don't have these services." (Urban healthcare worker)

Theme	Subthemes	Summary of finding	Illustrative quotation
Multiple interacting barriers constrained engagement with and continuity of mental health care	Limited mental health literacy; treatment expectations and trust; stigma; financial burden; early treatment discontinuation and loss to follow-up.	Participants described uncertainty about counselling and the roles of psychologists and psychiatrists, stigma associated with mental illness, unaffordable consultations and medication, and concerns about psychiatric treatment. Cost, expectations of rapid recovery, limited understanding of treatment duration and weak ongoing communication or follow-up contributed to interrupted care.	"People worry that they'll be labelled as crazy or mentally unstable. To avoid that stigma, people hide these issues." (Urban healthcare worker)
Family, faith and self-management filled gaps in formal care	Family reassurance and involvement; prayer and spiritual practices; religious and spiritual healers; support from friends; hobbies, activity and self-management; informal support as both resource and substitute.	Family members, friends, faith practices and spiritual settings provided emotional, practical and relational support that participants did not always find in formal services. These resources were culturally meaningful and accessible but could also substitute for or delay professional care.	"People go to shrines. [...] There must be a reason; no one is here to listen to them. Over there, people at least offer them something to eat and listen." (Rural healthcare worker)

Alt text: Table summarising five themes developed from the focus group discussions: variation in perceived need for professional support; different proposed entry points and models of support; fragmented and geographically unequal services; interacting barriers to engagement and continuity; and the role of family, faith and self-management in filling gaps in formal care.