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### Peer Support for Traumatic Injury Survivors: A Scoping Review

## ABSTRACT

**Purpose**: Peers are uniquely able to draw on their lived experiences to support trauma survivors' recovery. By understanding the functions and outcomes of peer support and the factors that impact implementation, evidence can be mobilized to enhance its application and uptake into standard practice. As such, we aimed to review the literature on peer support for trauma survivors to: Examine the role of peer support in recovery; Describe the nature and extent of peer support; Examine the influence of peer support on health and well-being; and Identify the barriers and facilitators to developing and implementing peer support.

Methods: Scoping review methodology as outlined by Arksey and O'Malley.

**Results**: Ninety-three articles were reviewed. Peer support was highlighted as an important component of care for trauma survivors and provided hope and guidance for the future postinjury. Most peer support programs were offered in the community and provided one-on-one support from peer mentors using various modalities. Interventions were successful when they involved knowledgeable peer mentors and maintained participant engagement. Prior negative experiences and stigma/privacy concerns deterred trauma survivors from participating.

**Conclusions**: Peer support fulfills several functions throughout trauma survivors' recovery that may not otherwise be met within existing health care systems.

**Keywords:** Scoping review; Peer support; Trauma; Injuries; Interventions; Implementation Science

### **1. BACKGROUND**

Traumatic injuries are a growing global and public health issue due to the significant impact they have on the health and well-being of trauma survivors worldwide. According to the World Health Organization, traumatic injuries account for 16% of the global burden of disease [1]. Traumatic injuries refer to unintentional physical injuries that are incurred suddenly and with a severity requiring urgent medical attention [2]. Traumatic injuries result from a range of blunt, penetrating, and burn mechanisms including motor vehicle collisions, sports injuries, falls, electrocution, and fires [2,3]. The physical impact of a traumatic injury includes vascular, visceral, nervous, bone, and burn injuries as well as persistent pain that can become chronic [4,5]. In addition to chronic pain and functional impairments, many trauma patients also experience mental health issues such as emotional distress, anxiety, and depression [6]. Recent evidence indicates that trauma patients have a 40% increased risk for a post-injury mental health diagnosis (e.g. substance abuse, depression, post-traumatic stress disorder [PTSD]) [7]. Trauma can also take on aspects of a chronic illness, as patients face ongoing financial hardships, social isolation and strain in their relationships with friends and family [6]. Taken together, these factors demonstrate that trauma recovery is a complex process that can threaten trauma patients' overall quality of life (QoL) [8]. Despite the recognition that functional outcomes and OoL are improved when trauma patients are offered services that address their psychosocial needs [9], patients report an overwhelming focus on physical recovery during acute and rehabilitative care, with a notable absence of formal psychosocial support [10,11].

One way that trauma survivors can receive psychosocial support is from peers (i.e. individuals who have also experienced a traumatic injury). Peer support is emerging as a central part of psychosocial recovery for trauma patients and has been recognized as a way of providing highquality, patient-centered care that complements standard clinical practice [6,12-14]. In other mental health populations, peer support has been associated with fewer hospitalizations, reduced use of outpatient services, less social isolation, and better community reintegration [15]. Peer support for traumatic injury survivors specifically has been shown to lower distress after injury [16], enhance quality of life [17], and improve survivors' ability to cope with depression and sadness [17]. Peers are uniquely able to draw on their lived experiences to help fellow trauma survivors cope with depression and anxiety through the provision of education and social support [15,18]. Peer-led learning is shown to be an effective tool for patient education, knowledge acquisition, disease management, and social support [19]. The personalized support trauma patients receive from peers helps them cope with their traumatic injury [20], adapt to a new way of life [21], and better reintegrate into the community [21]. Support from peers may be sought throughout trauma recovery and can entail: (1) emotional support (expressions of caring, empathy. and reassurance); (2) informational support (advice, suggestions, factual input, and feedback); and (3) affirmational support (affirmation of feelings and behaviors, reassurance that frustrations can be managed) [21,22].

It has been suggested that peer support resources and programming can be optimized by identifying key functional components of effective support and applying them flexibly according to regional needs, specific populations, and varying health systems [23]. This underpins the notion that peer support programming is best standardized by function rather than content. To

this end, Peers for Progress has developed one of few frameworks outlining the functions of peer support. The four functions listed are: (1) Assistance in daily management (2) Emotional and social support; (3) Linkage to clinical care; and (4) Ongoing support [23,24]. By understanding peer support according to these functions, evidence can be more easily mobilized to promote what is known about peer support in specific populations (e.g. trauma survivors) in order to enhance its application and impact [23].

As with any other model of care, the integration of peer support programs into clinical settings can be challenging [25]. Peer support can fail to be optimally integrated into standard practice if stakeholders do not see its value or are unwilling to change their practices to accommodate it [26]. In turn, investigating the factors that can enhance the implementation of peer support programs and optimize their uptake is equally as important as evaluating their effectiveness [27]. The evidence on peer support for trauma survivors has yet to be systematically reviewed for implementation considerations, which limits our understanding of the factors that can enhance uptake and optimize patient outcomes.

In order to increase the relevance of research findings and their ability to inform implementation practice, it has been recommended that conceptual frameworks be used to identify factors that might influence intervention implementation [28]. The Consolidated Framework for Implementation Research (CFIR) is a widely used conceptual framework for identifying factors associated with effective implementation [29]. The CFIR has been used by a number of reviews evaluating the implementation success of various health interventions in the primary care [30], rehabilitation [31], pharmacy [32], and virtual care spheres [33]; and with patient populations that include diabetes [34], mental health [35], and critical illness [36]. This underscores that the CFIR is a well-utilized and evidenced-based framework for conducting reviews on implementation considerations. The application of an implementation framework in peer support research can help organize barriers and facilitators in a more standardized manner, thereby improving the potential to inform implementation strategies [35]. The CFIR is comprised of five major domains which may affect implementation:

- (1) <u>Intervention characteristics</u> (features of intervention, such as stakeholder perceptions, intervention complexity)
- (2) <u>Inner setting</u> (features of the implementing organization, such as implementation climate, leadership engagement)
- (3) <u>Outer setting</u> (features of the external context or environment, such as external policy and incentives)
- (4) <u>Characteristics of individuals involved</u> in implementation (such as individual knowledge and beliefs about the intervention)
- (5) <u>Implementation process</u> (strategies or tactics that might influence implementation, such as engaging appropriate individuals in the implementation and use)

By using the CFIR to evaluate the factors that impact implementation of peer support programming for trauma survivors, our review can inform future efforts aimed at optimizing peer support design and delivery for this patient population.

### 2. RESEARCH GAPS AND OBJECTIVES

Although there is a growing body of evidence pertaining to peer support amongst amputees and SCI survivors, a great deal of literature has disproportionately focused on military and traumatic brain injury (TBI) populations [37,38]. Peer support interventions for military personnel are not widely transferable to all trauma populations given their focus on mitigating combat-related PTSD and offering crisis management support [39,40]. Similarly, peer support research in TBI populations emphasizes the neurological sequelae of injury and the associated psychosocial support needs that peers fulfill [41]. In turn, this evidence may not broadly apply to trauma patients who sustain predominantly physical injuries (e.g. burns, amputations).

In order to address these issues, we conducted a scoping to synthesize the literature on peer support for those who incurred a traumatic injury outside the context of military service and whose injury was not a TBI. A scoping review methodology was selected because it enables a comprehensive review of available literature without restrictive inclusion criteria regarding study design or quality [42]. This was well-aligned with our goal of including a breadth of literature across multiple designs to address our specific objectives, which were to:

- 1. Examine the role of peer support in trauma survivors' recovery
- 2. Describe the nature and extent of peer support programming for trauma patients
- 3. Examine the influence of peer support on trauma survivors' health and well-being
- 4. Identify the barriers and facilitators to developing and implementing peer support programming for trauma patients

## **3. METHODS**

Scoping reviews examine the extent, range and nature of research activity for an evolving body of research [43]. For this review, we followed Arksey and O'Malley's methodological framework which entails five stages: (i) identifying the research questions; (ii) identifying relevant studies; (iii) study selection; (iv) charting the data; and (v) collating, summarizing and reporting the results [42]. Our review protocol is registered with the Open Science Framework (<u>https://osf.io/dsyzc</u>) and our report is written in accordance with the Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist [44] (Appendix A). This review did not require Research Ethics Board approval.

*Framework stage 1: Identifying the Research Question(s)*: The specific research questions that guided this scoping review were: 1) What are the functions of peer support in individuals' recovery after a traumatic injury? 2) What is the content, format, and structure of peer support programs that exist for trauma survivors?; 3) How does peer support influence trauma survivors' health and well-being?; and 4) What are the facilitators and barriers to implementing peer support programming?

*Framework stage 2: Identifying Relevant Studies:* We searched Medline, PsychINFO, Embase, and CINAHL on November 22<sup>nd</sup>, 2019. The search strategy was tailored to each database using key terms that included "peer support", "trauma" and "injury" (See Appendix B for Medline search strategy). A hand-search of included studies' references was conducted to identify additional literature that may not have been captured by the electronic database search.

The database searches produced 3741 studies for consideration. After duplicates were eliminated, 2642 articles remained. A two-phase screening process was undertaken. For Phase 1, one author (JR) reviewed the title and abstracts to determine if they were eligible for full-text review. This resulted in the identification of 218 articles for full-text review. For Phase 2, two authors (JR & MBW) first screened 10% of the articles to establish inter-rater reliability (k=0.793, 91% agreement). Discrepancies were resolved by consensus. JR then proceeded to screen the remainder of the articles, where 71 met the inclusion/exclusion criteria and were included in the review. Our updated search on January 26<sup>th</sup>, 2021 produced an additional 18 articles for inclusion.

*Framework stage 3: Study Selection:* We included English articles focused on some aspect of peer support for adults who sustained a traumatic injury (including musculoskeletal injuries, spinal cord injuries (SCI), burns, and amputations). Research articles reporting both primary and secondary data were included. Articles were excluded if: a) they focused on traumatic brain injuries; b) they focused on military-related traumatic injuries; c) less than 25% of the study sample was comprised of individuals with traumatic injuries; and d) they focused on pediatric populations. We also excluded unpublished dissertations, study protocols, and conference proceedings.

*Framework stage 4: Charting the Data:* This step entailed iteratively identifying and 'charting' key ideas and themes across studies. A data extraction chart facilitated identification of key information related to our research questions, including: (i) traumatic injury population (e.g. burns, amputation); (ii) peer support program's goals, duration, frequency, structure and content; and (iii) main findings (e.g. impact of peer support on health and social outcomes, needs met by support from peers).

*Framework stage 5: Collating, Summarizing and Reporting the Results*: A narrative synthesis of included studies was completed [45]. The narrative approach to 'mapping the literature' enables an analysis of the relationships within and between studies [45,46]. Two authors JR & MBW engaged in this analysis, which was iteratively conducted by comparing information across studies, combining similar concepts, and summarizing overarching ideas in accordance with the frameworks guiding the review (i.e. the CFIR and Peers for Progress Framework). Specifically, we synthesized and described the functions of peer support amongst trauma survivors according to the components of the Peers for Progress Framework and summarized the factors that enable or challenge the implementation of peer support according to the CFIR elements. Analysis occurred through discussion and electronic documentation. In alignment with Arskey & O'Malley [42] and Pham et al [47], we chose not to perform a quality assessment or limit inclusion of studies based on their methodological rigor. Like these authors, we felt that including a breadth of literature (regardless of quality) was best-suited to our goal of producing a complete overview of the growing body of literature focused on peer support for non-TBI and non-military trauma survivors.

#### 4. RESULTS

Of the 90 articles eligible for inclusion in our review (See figure 1 for PRISMA diagram), 58 articles included information about the functions of peer support and the nature and extent of

peer support programming for trauma survivors and 66 articles included information about factors that affect the implementation of peer support programming for trauma survivors. Seventy-nine articles reported primary data (87.8%) while 11 reported secondary data (12.2%). Studies reporting primary data used primarily qualitative methods (n=36), non-randomized/single group trials (n=10), cross-sectional surveys (n=10), and mixed methods (n=6). Most studies were conducted in the USA (n=43), Canada (n=21), and Australia (n=11). Studies focused on various trauma populations including SCI (n=50), burns (n=18), general trauma (n=12), and amputees (n=7). Full study details can be found in table 1. <INSERT TABLE 1 HERE>

### 4.1. Functions of Peer Support in Trauma Survivors' Recovery

Using the Peers for Progress Framework [23], we organized the functions of peer support into the following categories: a) assistance in daily management (e.g. goal setting, skill building, problem solving); b) emotional and social support (e.g. encouragement to use new skills, dealing with stress, talking through emotions); c) linkages or clinical care (e.g. liaison to clinical care, patient activation to ask questions and assert themselves); and d) ongoing support (e.g. flexible, proactive, on-demand as needed over time).

Assistance in daily management: Trauma survivors reported learning a great deal from their peers when it came to managing their injury and navigating post-injury life. This learning took place via education and information-sharing [48-54], advice and feedback from peers [49,53,55,56], observing or witnessing peers (e.g. peers demonstrating practical skills like getting into a wheelchair) [6,21,50,57-59], as well as through conversation and experience-sharing with peers [50,59-63]. Specifically, trauma survivors learned to acquire and master new skills [57,64], and navigate new challenges through problem-solving (e.g. how to eat at a restaurant, how to travel by plane, how to use accessibility devices) [6,51-53,58-61,64-67]. Peers also provided trauma survivors with vocational support [68], motivation and confidence to recover and achieve new goals [50,58,69], and helped them to push their boundaries and realize their potential [6,54,62,64].

*Emotional and social support:* Trauma survivors received a range of emotional and social support from their peers stemming from shared lived experiences [53,59,64]. Emotional and social supports included a sense of belonging and acceptance, which often mitigated feelings of isolation [6,12,50,51,53,57,58,64,70-74]. Peers also helped trauma survivors to cope with challenges [66,75,76] and maintain their well-being [48,58,76-79]. Trauma survivors felt understood [50,51,80], inspired [70], and validated by peers [62]. Peers also provided trauma survivors with hope and insight for the future [54,59,71,80-82], comfort and acceptance of their situation [12,57,58], and a sense of agency and control over their lives [57].

*Linkages to clinical care*: Only two articles mentioned linkages to clinical care, with one highlighting that support from peers motivated amputees to ask questions about their treatments [52] and another indicating that peers helped women with SCIs reengage with the healthcare system in an empowered way after having previously had bad experiences [74]. Information and

support from peers promoted informed decision making and allowed trauma survivors to exercise control over their healthcare decisions.

<u>Ongoing support</u>: Ongoing support from peers can be challenging once trauma survivors leave the hospital setting and return to the community [48]. Sustained access to peer support is valued and needed—with many viewing it as a key aspect of the recovery process and source of continued friendship [6,12,49,83-85]. Flexibility in interaction modalities and scheduling could improve ongoing support from peers (e.g. in-person interaction when peers are geographically close; online interaction when at a distance) [50,59,66].

<u>Mentors' needs met by providing peer support</u>: In addition the functions of peer support for trauma survivors themselves, it was apparent that *providing* support benefited mentors as well. Mentors felt that providing support was fulfilling, gave their life meaning, made them feel valued, and contributed to their own recovery and adjustment to injury [50,57,66,84,86]. Further, providing peer support helped mentors build connections with others and improved their own community competence [87].

## 4.2. The Nature and Extent of Peer Support Programming for Trauma Survivors

<u>Peer Support Interventions Described</u>: Twenty-two articles reported on peer support interventions. Of those, three were randomized controlled trials [88-90], three were non-randomized trials [91-93], fourteen were single groups designs [9,49,60,65,69,74,83,94-100], one was a prospective cohort study [101], and one study was a summary article [102].

The peer support interventions catered to the following trauma populations: SCI (n=13) [49,60,65,69,74,89,90,92,94,96-99], general trauma (specific injury mechanism unspecified) (n=5) [9,88,91,93,101], amputee (n=3) [83,100,102], and burns (n=1) [95]. Most programs were offered in the community (n=11) [69,74,83,88-90,94,96-99] and entailed one-on-one peer visitation (n=16) [9,60,65,69,89-95,97,99-102]. The programs were offered using various modalities including exclusively in-person (n=9) [49,65,83,88,94-96,100,102], telephone (n=5) [69,74,90,97,99], and online (n=1) [98], or a combination of in-person, telephone, and online (n=7) [9,60,89,91-93,101]. The majority of programs entailed researcher-designed components and features (n=13) [53,65,69,83,88-90,94,96,97,99,100,102] followed by programs that were developed with feedback from survivors and other stakeholders (n=9).

The majority of programs were flexibly designed, allowing for trauma survivors and/or peers to determine the nature of interaction and support provision (n=17) [9,60,65,69,88-95,97,99-102]. Other programs were exclusively peer led education sessions (n=3) [83,96,98] or program content was not specified in detail (n=1) [49]. A detailed description of each peer support program's goals and specific content can be found in table 2. <INSERT TABLE 2 HERE>

<u>*Qualitative Findings:*</u> Of the 22 articles reporting peer support interventions, six reported qualitative findings [49,60,74,83,98,99]. Qualitative findings included participant experiences

with peer support broadly (n=2) [60,99], perspectives on peer support programming specifically (n=4) [49,74,83,99], experiences with specific elements of peer support interventions (n=1) [99], perspectives on the quality of support received (n=1) [60], changes to knowledge and behavior related to preventing secondary conditions and living with injury (n=1) [60], participants' peer support preferences (n=1) [98], and suggestions for technology and educational content (n=1) [98].

Overall, participants reported that peer support provided them with hope for the future [49,83], provided psychological support for them [49,60] and their families [49], and provided them with relevant education [49,60,74,83,98].

<u>*Quantitative Outcomes:*</u> Of the 22 articles reporting peer support interventions, quantitative outcomes were reported in 12 articles. Self-efficacy (n=9) [60,88,89,91-94,96,101] and depression (n=3) [91-93] were the most commonly reported outcomes. Significant improvements in self-efficacy were seen post-intervention [88,94,96] and at follow-up in several studies [60,89,93]. A significant association between improvement in self-efficacy and reduced hospital readmissions was reported for the peer support intervention group in one study [92]. Participants in the experimental group of another study rated their likelihood of recovery and of returning to daily activities significantly higher compared to controls [101]. One study reported no change [91]. Lower rates of depression were reported in two studies [91,93] and one study reported no change [92]. Further details pertaining to quantitative outcomes can be found in table 3.

<INSERT TABLE 3 HERE>

<u>User Experience Outcomes</u>: Six articles reported user experience outcomes [65,69,91,95,98,100]. Participant satisfaction was reported in each of the articles. Satisfaction with the peer support program or the match to a mentor was consistently favourable [69,91,95,100]. Satisfaction with the number of peer visits varied, with one study reporting that participants wanted more peer meetings [100] and another study reporting that participants were satisfied with the number of peer meetings that took place [65]. Further details pertaining to user experience outcomes can be found in table 4.

<INSERT TABLE 4 HERE>

## 4.3. Barriers and Facilitators to Developing and Implementing Peer Support Programming

## 4.3.1. Intervention Characteristics:

### Peer Mentor' Skills

Hoffmann et al describe peer mentors as individuals who do not need specific qualifications but are required to have a range of positive personal characteristics [65]. Examples of positive personal characteristics include being a good listener [21,65], sincere [21,65], non-

judgmental [21], empathetic [21], having excellent communication skills [103], and having a good sense of humor [49]. In a study training volunteer peer mentors, training in motivational interviewing and brief action planning was well received and peer mentors reported significantly improved skills and call quality [104].

Research examining two groups of peer mentors, those who were employed as peer mentors versus peer mentors who were not paid employees, revealed that employed peer mentors tended to have higher pre-injury education, were more satisfied with their level of resource knowledge, and were less likely to interpret a lack of knowledge as a barrier to success [87]. Employed peer mentors were more likely to discuss different barriers to accessing community resources with mentees and discuss strategies for maintaining and using the resources available in their community (e.g., rehabilitation hospital, Social Security office, and the participants' medical supply company and wheelchair company) [87].

#### Flexible Intervention Delivery

Many participants preferred programs with flexibility [49,50,64,69]. Participants preferred sessions that were not time-constrained [50] and allowed the use of text messaging [69,99]. Participants felt frustrated by programs that prohibited contact between sessions [105]. As an example, Gassaway et al found that because the intervention allowed for participants to guide interactions, they would initiate contact with their mentor when they had concerns or required emotional support between sessions [89].

Participant engagement in peer support interventions were supported through experienced facilitators who allowed participants to express themselves and created a positive atmosphere [74], the use of personalized support packages [69] and by peer mentors who reported more call attempts to mentees than required by the study protocol [69]. Some trauma survivors reported not being aware of peer support programs or how to access them [105,106], or learning about the programs late in their recovery [71]. One article reported unpredictable program attendance [57]. Participants suggested programs could be incorporated into routine care to raise awareness [71] and strategies to improve advertisement and recruitment efforts were discussed [57].

### Intervention Content

Participants reported a strong interest in sports activities (e.g. swimming, wheelchair sports) [48,51] and creative activities (e.g. theatre, cooking) [51] in a relaxed or informal environment. One study indicated that informal social gatherings could improve peer support group attendance because the program may be perceived as less threatening than structured groups [71]. A peer support intervention co-designed with SCI stakeholders included guest speakers on topics to improve health and well-being [74]. Davis et al suggested educational lectures and an open format group discussion to meet the educational needs of trauma survivors and promote emotional support [57].

### Online Support Delivery

Participants with SCI reported using online resources for emotional support, problem focused support, and to reduce social isolation [66,107,108]. In another SCI study, participants were satisfied with the educational videos and with video chat features to

connect with a peer remotely [98]. A recommendation was made to use technology to reach trauma survivors living in rural communities [71]. However, burn survivors reported that online and telephone resources were the least preferred method of peer support [51] and phone modality was reported to be difficult to use by a person with tetraplegia [74].

### 4.3.2. Inner Setting

#### Organization Resources and Priorities

In resource constrained environments, healthcare professionals provided trauma survivors with information about local support groups as part of their discharge plan [6], use existing materials from nationally available peer support programs [18], and leverage existing hospital resources to improve peer support services [9]. The relative priority of implementing peer support programs was a barrier among institutions. These examples include programs with competing priorities [109], a lack of institutional mandate to implement a peer support program [110], a lack of effort to integrate the program within the institution [111], and not providing program coordinators with necessary support [111].

#### Healthcare Professional Perceptions

Two articles reported healthcare professionals' concerns with peer support. One article reported possible concerns including survivors feeling pressured to disclose information that they are not ready to share, feeling overwhelmed by the emotional responses to sensitive topics, and receiving feedback from peers that are misguided or harmful [112]. A second article reported concerns about group learning including survivor discouragement from comparing their recovery process to others, a need for individual teaching, and the effects of a negative person in the group.

#### Uniqueness of Inpatient Rehabilitation

Hospital units and group therapy programs facilitated the formation of informal support networks [83,107,113-116], and trauma survivors were more likely to have heard about peer support during their hospital stay [61,106]. Trauma survivors reported engaging in peer encouragement and educating their peers on an informal basis [84]. Trauma survivors kept in touch with the friends they made in the hospital once they were discharged to the community and continued to engage in peer encouragement [84].

### 4.3.3. Characteristics of the Individuals Involved:

#### Type of Traumatic Injury

Participants reported that acceptance of peer support was influenced by when it was introduced, and that optimal timing varies according to the type of traumatic injury incurred [55,62,80,81,83,117]. Participants with SCI reported that the acute stage of injury was too early in their recovery phase [55] and participants with burn injuries reported that their hospital stay was a blur and that burn survivors should be approached after acute care or when they have returned to the community [106]. To facilitate acceptance, burn survivors suggested offering the peer support at multiple points during recovery [71]. Conversely, participants who had life-saving amputations were able to prepare for their procedures by seeking support from peers early on [83]. Amputees preferred that the first peer visit take

place one-on-one and that information be shared verbally (rather than in written form) [67]. A third of trauma survivors in a study by Baldwin et al reported that they wished they had heard about peer support programs while they were in the hospital [106].

#### Participant Preferences, Perceptions and Experiences

Trauma survivors reported a number of reasons for declining peer support including the belief that the negativity of others would impact their recovery [66,70], the stigma or feelings of shame and embarrassment with seeking mental health support [71,105], concerns about privacy and confidentiality [105], and believing that their injuries are not severe enough to merit peer support [51]. Papamikrouli et al suggest that trauma survivors may believe that peer support is only suitable for people who are in the greatest need and there may be a stigma associated with attending peer support activities [51]. Three studies examining injury severity and peer support utilization reported that survivors who used peer support services were more severely injured [118], had a larger mean burn size [119], and more peer visits were associated with longer average hospital stay [120].

Many of the study participants reported that establishing a good mentor-mentee match based on similar age, interests, level of injury, and gender was important [49,55,62,70,80,100,107]. Participants mostly preferred and valued one-on-one contact [12,51,57,105,107,121]. When talking to peers, they preferred the informal language they could use [63,64], felt that the educational information they received from peers was more informative and engaging [49,63,67,107,122,123], felt that peers understood them better [54,62,64,70,107,114], and were more helpful than healthcare professionals [50]. Lucke et al reported differences between male and female peer support preferences, with female participants preferring to meet their peers and engage socially whereas male participants used the resources provided by the intervention to find their own peer support [97].

There were instances of trauma survivors reporting negative peer support experiences. Examples of negative experiences includes "need-thwarting" when mentors did not support the needs of the trauma survivor or discouraged a goal [50,100], when mentors were found to be depressed [62], having a mentor who was not a good listener [21], and having a mentor who was interested in dating mentees [21]. A study comparing pressure injury knowledge between mentors and mentees found that although mentors demonstrated greater knowledge, both groups fell below the mean knowledge score (73.4%) to effectively prevent pressure injuries [124].

### Peer Mentor-Related Considerations

Trauma survivors expressed interest in becoming peer mentors [51,52,84,86] a sentiment shared by survivors who did not receive peer support during their recovery [51,86]. Survivors reported that their lived experience put them in a unique position to offer support [64,86] and that helping others was a part of their recovery process [21,62,64,86]. However, mentors also reported specific concerns about providing support such as the emotional cost associated with seeing others in distress [21,86] and being at physical risk due to their disability [86]. Mentors from a study by Houlihan et al found team calls with other mentors to be important for problem solving and for ongoing support [69]. In addition, inconsistencies in training or a lack of training contributed to uncertainty over the peer mentor role [86].

#### Family Involvement

Trauma survivors reported that family presence was an important factor to successful recovery [61] and community reintegration [121]. Trauma survivors who had family present during peer visits reported being more hopeful about the future than trauma survivors who were seen alone [100]. Family members of burn survivors reported benefiting from the peer support visits while in the intensive care unit [71]. Two articles suggested that family should play a role in introducing peer support to trauma survivors [71,84].

### 4.3.4. Outer Setting and Implementation Process

#### Implementation Process Considerations

There were a significant number of barriers to peer support program implementation. Examples included a lack of dedicated funding and start-up costs [9,109,110], and a lack of interdepartmental cooperation [110,111]. In addition, administrative burdens hampered program implementation when staff had difficulty securing dedicated space to run the program [111], difficulty obtaining legal agreements [110], and difficulty obtaining institutional approval for print materials [111]. There was evidence of difficulty with onboarding peer mentors due to issues with improperly screened or trained volunteer peers [110,111]. Moreover, a lack of evidence of the effectiveness of the program being implemented was seen as a barrier [110,111]. A scoping review of peer led interventions for people living with SCI concluded that this area of research was still in its infancy and more rigorous and generalizable research is required [125].

Suggestions for successful peer support implementation include having strong site coordinators who can manage the program [111], increasing staff buy-in by including hospital administrators in training [110], and using community based participatory research to develop programs with relevant stakeholders [126]. Studies reported that some hospitals absorbed peer support program costs after initial implementation and piloting [9] when the institutions identified a need for a psychosocial program for their trauma patients [111] and when the program aligned with the institutions' culture and values [109]. Frey et al suggested that program buy-in would increase from marketing strategies to promote the hospital and differentiate it from other sites [111] and by making peer support programs a requirement for trauma centre certification [111].

### Community-Related Considerations

Peer support was a common unmet need among trauma survivors [64,71,108,127-130]. A survey of community organizations that provided peer support revealed that the programs were operating with fewer than the desired number of peer mentors and that they did not collect outcome data due to a lack of resources and knowledge of which outcomes to collect [131]. Generally, low and lower middle income countries reported fewer peer mentors and higher participant to peer ratios compared to high income countries [132]. The financial cost [107], transportation, and travel distance was a barrier [48,50,91,106] especially among trauma survivors living in rural communities who reported losing peer support when they left urban area hospitals [48].

### **5. DISCUSSION**

This scoping review provides a comprehensive synthesis of existing peer support initiatives for trauma survivors who sustained a non-TBI and non-military injury. In total, we identified 93 eligible articles focused on several physical injury populations including amputees, burns survivors, and SCI. Our review highlights peer support as an important component of care and support for trauma survivors throughout their recovery, with peers providing primarily socioemotional support, assistance in daily management, and life navigation post-injury. Recovery is complex and entails not only physical recovery, but also emotional and psychological recovery. This includes learning to cope with post-injury sequela and adapt to a 'new normal' [116]. Recovery is an ongoing process that may last months to years, often with lifelong aftereffects [133], highlighting the value of ongoing support from peers. We identified several support programs that aimed to connect trauma survivors with peers who could help them manage their recovery. Most programs were offered to trauma survivors in the community and provided them with one-on-one support and coaching from peer mentors using various modalities (e.g. in person, online). Overall, trauma survivors reported that peer support provided hope and guidance for the future after injury and studies indicated that peer support interventions improved self-efficacy amongst trauma survivors. Further, several barriers and facilitators to implementation of peer support programming were identified across all domains of the CFIR. By mitigating these barriers and leveraging the facilitators, there is potential to optimize the provision of peer support to trauma survivors.

### Role of Peer Support for Trauma Survivors

Each function outlined by the Peers for Progress's Framework was mentioned by at least one article included in our review. However, few studies reported peers acting as a source of ongoing support or as a linkage to clinical care. Although peers are a known source of knowledge about when and what to ask of healthcare providers and how to identify community resources [134], this was not explicitly reported as a benefit of peer support by included studies. Only one study found that trauma survivors who participated in the peer support intervention reported significantly greater service awareness and service use [90]. In chronic illness populations, it has been suggested that the link to clinical care be more formalized by having peers involved in every practice/service's care delivery model [135].

Trauma survivors' experiences are also similar to those with chronic illnesses in as far as their peer support needs extend over time, where ongoing peer support can promote sustained health promotion, behavior change, and social support [134]. In chronic illness populations (e.g. diabetes), ongoing peer support has been highlighted as particularly necessary during life and care transitions [136]. Given that trauma survivors experience several post-injury transitions across the continuum of care [13], enhancing the consistent and sustained availability of peer support to this population can be especially beneficial for their recovery journey. Key elements of patient-centered care transitions for trauma survivors can include care coordination across settings and the provision of continuous helping relationships [13]. Peer support programs that are integrated into the care pathway of trauma survivors can achieve these goals but further research and trials of such a model are needed [13].

### Nature and Extent of Peer Support Programming

Like others [137], we found little consistency in the reporting of the peer support intervention details (e.g. design, components, frequency, duration) and evaluations. Some research has suggested that part of the challenge lies in the fact that 'peer support' encompasses various service types and organizational structures, with few overlapping features across interventions [138]. It is possible that the variability in intervention characteristics stems from recommendations to standardize peer support interventions for specific populations by function rather than content [134]. Doing so allows them to be designed and implemented in a way that caters to specific settings and clinical populations. In turn, care must be taken to ensure that standardization of programs and reporting not undermine the unique, flexible and individualized aspects of peer support programing [134]. An added complication with standardization of interventions and reporting arises from the inherently subjective benefits of peer support. Notably, perceptions of support and support quality are more highly correlated with positive health and social outcomes than quantitative measures of frequency and dose (which are far less correlated with recovery indicators) [138]. This underscores that standard reporting of peer support intervention goals, functions, content and outcomes provides important context to compare data across existing studies and with future research. We suggest, at minimum, that studies report:

- 1. The traumatic injury population the intervention is intended for,
- 2. The functions of peer support that the intervention aims to achieve,
- 3. Content details (i.e. what the intervention entails),
- 4. Timing, frequency and duration of peer support interventions (e.g. when intervention started/ended, how often sessions/interactions took place, length of individual sessions),
- 5. Health and social outcomes evaluated and measures used.

### Barriers and Facilitators to Peer Support Programming

*Intervention Characteristics*: Positive perceptions of peer support facilitated uptake, however we noted some discrepancies between patient and provider perspectives. While peer support programs were largely viewed as beneficial by patients, providers had concerns related to patient safety and well-being—with particular emphasis on the appropriate timing of peer support [49]. This is not uncommon, with other researchers suggesting that providers wish to protect trauma patients at the height of their vulnerability [139]. One strategy to overcome these challenges is to co-design peer support interventions with providers and engage them in the implementation (i.e. ensure they are part of developing and facilitating peer support initiatives) [140]. This might be one approach to enhance "buy in" from reluctant providers and address the disconnect between those doing research in this area and those who ultimately provide and facilitate psychosocial rehab [139].

*Inner Setting:* Peer support programs were well-received by organizations when they aligned with their values, whereas implementation was challenged when organizations had other competing priorities and there was little support from senior leaders and administrators. The decision about when and where to implement peer support interventions in the care trajectory has been a long-standing challenge [137]. Strategically aligning the intervention with both organizational goals and access to the target population can help inform when in the continuum of care the intervention is best-introduced and the most appropriate setting [137]. To this end,

our review highlighted that inpatient rehabilitation appears uniquely positioned to facilitate peer support given the organic interaction that takes place amongst patients during their stay, the recovery-oriented nature of care provided, and the ability to transition peer support relationships back to the community. However, skepticism by health care professionals can limit the effective use of peer support interventions in physical medicine and rehabilitation, further underscoring the value and importance of stakeholder buy in and need for 'champions' [137].

*Characteristics of the Individuals Involved*: Prior negative experiences along with concerns about stigma and privacy deterred trauma survivors from participating in peer support. Many peer mentors were available and willing to support programs but managing mentor burden was a notable challenge. As others have pointed out, these issues underscore the importance of education about peer support programing for both trauma survivors and peer mentors, and training specifically for mentors in order to optimize implementation [35].

*Outer Setting and Implementation Process*: Most of the challenges to implementing peer support programing overlapped with outer setting constraints (e.g. costs and resource demands of ongoing peer support in community). This points to the need for higher-quality evaluations of peer support initiatives in order to quantify their impact on key outcomes such as healthcare utilization, hospital readmissions, community reintegration, health-related quality of life, and return to work [137]. Evaluative studies in our review point to the potential for peer support programs to improve health and social outcomes for trauma survivors and qualitative studies provided narrative insight into these benefits. Through the conduct of more rigorous trials and greater standardization in reporting, organizations will have the evidence they require to justify and support the integration of peer support into standard care practices.

# 6. STRENGTHS AND LIMITATIONS

To the best of our knowledge, this is the first review to report on peer support across traumatic injury populations. Our inclusion of both quantitative and qualitative evidence produced a more holistic understanding of how peer support impacts objective health outcomes and is subjectively experienced by trauma survivors. A limitation of our review may stem from our exclusion of articles where the sample composition was unclear. While we did this to ensure we were summarizing evidence based on trauma survivors' experiences specifically, these articles may have findings and conclusions based on our population of interest that were missed. Our review also did not evaluate the quality of evidence for the articles included. Finally, our review represents the first instance of applying the Peers for Progress Framework to a patient population other than diabetes (which it was originally developed based on). Although the application of a theoretical framework can contribute to the goal of enhanced standardization in peer support research, traumatic injury survivors are a distinct population from those who suffer from chronic conditions like diabetes. Thus, the Peers for Progress Framework may be limited in its applicability and future research should endeavor to further explore its utility with this population.

## 7. CONCLUSIONS

This review identified a number of peer support initiatives for trauma survivors that sustained non-TBI and non-military injuries. Peers are an important source of support for trauma survivors,

fulfilling several functions throughout individuals' recovery that may not otherwise be met within existing health care systems. Peer support interventions can be optimally implemented when they are flexible, align with organizations' culture and mission, and have sufficient 'buy in' from key stakeholders. More evaluative research and robust evidence is needed to further establish the value of peer support and garner support for implementation. To this end, standardization of design and reporting of peer support studies would better-enable evidence synthesis and comparison across existing and future studies.

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### **Declaration of Interest**

The authors report no conflicts of interest

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Author (year)	Location	Study Design	Study Objectives	Trauma population	<b>Care</b> setting	Sample size	Mean age (SD)	Sex
Acton et	USA	Summary	No study	Burn	Acute &	n/a	n/a	n/a
al., (2017)		Article	objectives but	Survivors	Commu			
			reports on a scientific meeting that included the burn survivor perspective in relation to community reintegration and future research recommendat ions.		nity			
Amorelli	USA	Qualitative	To examine	Mixed	Commu	n=17	n (age	n=15
et al.,		evaluation	the content of	(military	nity		range):	(male)
(2019)			the Amputees	service			2 (17-26)	n=2
			Unanimous	members,			6 (26-36)	(female)
			(AU)	beneficiarie			4 (37-46)	
			program by	s, veterans,			3 (47-56)	
			participants	local non-			1 (57-66)	
			with limb	military			1 (67+)	
			loss and	citizens)				

healthcare

Mean time since

injury (SD)

n (range): 4 (0-6 months) 1 (7-12

months) 5 (13 months- 3

years) 7 (3+

years)

n/a

# Table 1. Study details (n=90)

									Mean time
Author		Study	Study	Trauma	Care	Sample	Mean age		iniury
(vear)	Location	Design	Objectives	population	setting	size	(SD)	Sex	(SD)
		9	professions. To discover beliefs, opinions, and attitudes regarding the value of AU for the limb loss						
			community.						
Anderson et al., (2017)	USA	Explorator y study	To elicit the past experiences of Deaf individuals with help- seeking and recommendat ions for improving Deaf trauma services.	Deaf individuals who had one or more experiences of trauma in their life (including traumatic injuries).	Commu nity	n=16	n=3 (range: 21-34) n=2 (range: 35-44) n=11 (range: 45+)	n=3 (male) n=13 (female)	n/a
Arya et al., (2016)	Sri Lanka	Cross sectional	To investigate lived experiences and coping mechanisms	Diagnosis of SCI of traumatic cause	Inpatien t rehab	n=23	39.5 years	n=19 (male) n=4 (female)	n/a

Author		Study	Study	Trauma	Care	Sample	Mean age		Mean time since injury
(year)	Location	Design	Objectives	population	setting	size	(SD)	Sex	(SD)
			among the Sri Lankan SCI population						
Badger et	USA	Explorator	То	Burns	Commu	n=324	47years	n=133	n/a
al.,		y study	investigate a)		nity		(14.9)	(male)	
(2010a)			how burn					n=191	
			view peer					(lemale)	
			support, b)						
			what are the						
			associations						
			with						
			perceived						
			value of peer						
			support and						
			variables that						
			indicate						
			successful						
			burn						
			recovery, and						
			c) if there are						
			differences in						
			burn recovery						
			when viewed						
			by burn						

									Mean time
Author		Study	Study	Trauma	Cara	Sampla	Moon ago		since
(vear)	Location	Design	Objectives	nonulation	setting	size	(SD)	Sex	(SD)
		- Donga	survivor groups with low, medium, and high regard for peer support.	population	Jeening				
Badger et al., (2010b)	USA	Explorator y study	To learn from the burn survivors whether peer support was important to them in their recovery and why, and secondarily, if they had volunteered as a peer supporter, if there were any negative consequences or advice they would have for others.	Burns	Commu nity	n=30	41 years (10.9)	n=19 (male) n=11 (female)	14 years (13)

									Mean time
				_					since
Author	<b>T</b>	Study	Study	Trauma	Care	Sample	Mean age	G	injury
(year)	Location	Design	Objectives	population	setting	size	(SD)	Sex	(SD)
Baily et	Canada	Cross-	To explore	SCI	Commu	n=6	n/a	n=3 (male)	Range: 6-
al., (2018)		sectional	the barriers		nıty			n=3	38
		study	and					(temale)	
			facilitators of						
			an anti-						
			inflammatory						
			diet in people						
			with spinal						
Daldurin		Craga	To identify.	Duma	Commu	n = 105	<i>n</i> ( <i>n</i> o <i>n</i> co)	n=72	<i>m</i> =04
baldwin ot ol	USA	Cross-	hum	Burns	Commu	n-103	n (range)	$\frac{n-12}{(mala)}$	11-94 Word 2 or
(2018)		survey	ournivors		mity		12(10-24) 23(25-30)	(Inale)	were 2 of
(2018)		survey	attending				23(23-39) 12(40-54)	(female)	Vears
			support				69(55+)	(ieiiiaie)	from
			groups or				0) (00+)		iniury
			services and						injury
			identify						
			barriers to						
			participation.						
			То						
			investigate						
			QoL among						
			the region's						
			burn centre						
			population						
			over the past						
			10 years.						

									Mean time
Author		Study	Study	Trauma	Cara	Sampla	Moon ago		since
(vear)	Location	Design	Objectives	nonulation	setting	size	(SD)	Sex	(SD)
Barclay et	Australia	Scoping	To report on	SCI	n/a	n=21	n/a	n/a	n/a
al., (2019)		Review	the extent			(articles)			
			range and						
			nature of the						
			research						
			literature in						
			the field of						
			peer-led						
			interventions						
			for people						
			SCI						
Beaucham	Canada	Qualitative	To examine	SCI	n/a	n=15	47.2 years	n=8 (male)	14.5 years
p et al.	Cunudu	evaluation	the nature of	Ser	II u	11 15	(12.9)	n=7	(16)
(2016)			effective peer				(1=1))	(female)	(10)
			mentoring of						
			adults with a						
			spinal cord						
			injury (SCI)						
			from the						
			perspective						
			of mentees.						
Best et al.,	Canada	RCT	To evaluate	Manual	Commu	Experiment	Experiment	Experiment	n/a
(2016)			the effect of a	wheelchair	nıty	al group	al group	al group	
			peer-led	use:		n=16	49.1 years	n=14	
			wneelchair	5CI,		Control	(18./)	(male)	
			uraining	02.3%; Multipla		control		II=2	
			program on	munple		group		(lemale)	

									Mean time
Author		Study	Study	Trauma	Cana	Sampla	Maan aga		since
Aution (vear)	Location	Design	Objectives	nonulation	setting	size	(SD)	Sev	(SD)
(year)	Location	Design	self-efficacy	sclerosis	setting	n=12	Control	StA	(50)
			of manual	12.5%:		11 12	group	Control	
			wheelchair	Cerebral			48.5 years	group	
			use and to	palsy,			(15.2)	n=8 (male)	
			explore	12.5%;				n=4	
			influences of	other				(female)	
			the	(stroke,					
			intervention	Parkinson					
			on manual	disease,					
			wheelchair	amputation)					
			skills, life-	, 12.5%					
			space						
			mobility, and						
			with						
			narticipation						
Boschen	Canada	Mixed	To examine	SCI	Commu	n=100	n=40	Male	n/a
et al	Cuntutu	methods	the factors		nity	(quantitativ	(quantitativ	n=75	11.0
(2003)		study	that influence			e sample)	e sample)	(quantitativ	
			community			n=34	n=37	e sample);	
			reintegration			(qualitative	(qualitative	n=24	
			1 to 6 years			sample)	sample)	(qualitative	
			after a spinal					sample)	
			cord injury.						
								Female	
								n=25	
								(quantitativ	
								e sample);	

Author (year)	Location	Study Design	Study Objectives	Trauma population	Care setting	Sample size	Mean age (SD)	Sex	Mean time since injury (SD)
								n=10 (qualitative sample)	
Bradford et al., (2011)	USA	Brief Report	Briefly describe the development and implementati on of the Trauma Survivors Network (TSN)	Trauma	n/a	n/a	n/a	n/a	n/a
Bradford et al., (2013)	USA	Implement ation	To assess the initial implementati on effort of the Trauma Survivors Network (TSN) to inform future efforts to replicate the TSN nationwide.	Trauma: General trauma, specific injury group not specified	n/a	n/a	n/a	n/a	n/a

									Mean time
									since
Author		Study	Study	Trauma	Care	Sample	Mean age		injury
(year)	Location	Design	Objectives	population	setting	size	(SD)	Sex	(SD)
Carroughe	USA	Literature	To identify	Burns	n/a	n=125	n/a	Case study:	n/a
r et al.,		review and	significant			(publicatio		n=2 (male)	
(2020)		case study	contributions			ns)		n=1	
			to the field of			n=3 (case		(female)	
			burn care			study)			
			from 25 years						
			of National						
			Institute on						
			Disability						
			and						
			Rehabilitatio						
			n Research						
			funding and						
			to use case						
			study						
			methodology						
			to highlight						
			specific Burn						
			Model						
			System						
			contributions						
			that have had						
			a significant						
			impact for						
			individuals						
			living with a						
			burn injury.						

									Mean time
				-	~				since
Author	Location	Study	Study	Trauma	Care	Sample	Mean age	Sav	injury (SD)
(year)		Design	Teleterreire		setting	size	(SD)	Sex Malar	
Castillo et $(2012)$	USA	INON-		I rauma	Acute	n=123	38 years	Male:	n/a
al., (2013)		randomize	TSN as he	(upper/lowe		(control);	(control);	11-01	
		d trial	I SIN can be	rextremity		n=120	30.9	(control);	
			successfully	injury)		(experimen	(experimen	n=95	
			in aligical			tal)	tal)	(experiment	
			sites and if it					Econolo:	
			sites and if it					r = 14	
			natient					(control)	
			outcomes					n=31	
			reduce costs.					(experimen	
			and increase					(enperment	
			satisfaction						
			with care.						
Chaffrey	Australia	Scoping	To bring	SCI	n/a	n=8	n/a	n/a	n/a
et al.,		Review	together			(articles)			
(2018)			existing						
			evidence						
			about the						
			various types						
			and content						
			of programs						
			involving						
			peers, aimed						
			at health						
			education for						
			adults with						
			SCI.						
									Mean time since
-------------	----------	-----------	-----------------	------------	---------	--------	-------------	------------	-----------------------
Author		Study	Study	Trauma	Care	Sample	Mean age	~	injury
(year)	Location	Design	Objectives	population	setting	size	(SD)	Sex	(SD)
Chemtob	Canada	Cross	То	SCI:	Commu	n=13	49.3 years	n=9 (male)	15.3 years
et al.,		sectional	understand	Traumatic	nity			n=4	
(2018)			SCI peer	(77%)				(female)	
			mentorship						
			through a self-						
			determination						
			theory lens						
			by gathering				P		
			mentees'						
			perceptions						
			of their						
			experiences						
			with their						
-			mentors.						
Cimino et	Canada	Cross-	To explore	SCI	Commu	n=30	61.9 (13.9)	n=19	26 years
al., (2020)		sectional	experiences		nity			(male)	(12.9)
		study	of perceived					n=11	
			social					(female)	
			isolation;						
			and, to						
			explore the						
			factors that						
			contribute to						
			perceived						
			social						
			1solation.						

									Mean time
									since
Author		Study	Study	Trauma	Care	Sample	Mean age		injury
(year)	Location	Design	Objectives	population	setting	size	(SD)	Sex	(SD)
Coghlan	Australia	Cross-	To gain an	Burns	Commu	n=15	Range: 24-	n=8 (male)	Range: 3-
et al.,		sectional	understandin		nity		60	n=7	19
(2019a)		study	g of the					(female)	months
			patient						
			experiences						
			associated						
			with wearing						
			compression						
			garments post						
			burn injury						
			and to						
			identify						
			reasons that						
			patients						
			remove their						
			garments and						
			discontinue						
			their wearing						
			schedules.	-					
Coghlan	Australia	Cross-	To explore	Burns	commu	n=15	Range: 24-	n=8 (male)	Range: 3-
et al.,		sectional	patient and		nity		60	n=7	19
(2019b)		study	therapist					(female)	months
			perspectives						
			on the						
			strategies and						
			recommendat						
			ions that						
			1mprove the						

									Mean time
Author		S4m day	S4 d	Тирите	Carro	Samula	Maanaga		since
Author	Location	Study	Study	I rauma	Care	Sample	Mean age	Say	injury
(year)	Location	Design	Objectives	population	setting	size	(50)	Sex	(5D)
			experience of						
			garments						
			after-burn						
			and the						
			feasibility of						
			implementing						
			the suggested						
			recommendat						
			ions.						
Davis et	USA	Explorator	To explore	Burns	n/a	n=6	44 years	n=3 (male)	n/a
al., (2014)		y study	how					n=3	
			participants					(female)	
			make						
			meaning of						
			their .						
			experiences						
			in a burn						
			survivor						
			group						
DeMario	USA	Retrospecti	To measure	Trauma	acute-	TRS	TRS	TRS	n/a
et al.,		ve	the impact of	(Penetratin	commu	n=362	46 years	n=238	
(2020)		database	trauma	g trauma	nity	No-TRS	No-TRS	(male)	
		analysis	recovery	22.9%)		n=149	34 years	n=124	
			services	· ·				(female)	
			(TRS) on our					No-TRS	

									Mean time
Author		Study	Study	Trauma	Care	Sample	Mean age		iniury
(year)	Location	Design	Objectives	population	setting	size	(SD)	Sex	(SD)
			hospital and health system by examining the relationship between TRS, patient encounters, and hospital					n=112 (male) n= 37 (female)	
Dillon et al., (2019)	Australia	Narrative	charges. To describe the lived experience of people who have undergone sequential partial foot amputation (PFA) and transtibial amputation (TTA).	Amputees	Rehab	n=10	52.5 years (SD 15.9)	n=8 (male n=2 (female)	6.6 years (SD 9.7)
Divanoglo u et al., (2017a)	Australia	Systematic review	To assess consumer perceptions on the effectiveness	SCI	n/a	n=4 (articles)	n/a	n/a	n/a

									Mean time since
Author		Study	Study	Trauma	Care	Sample	Mean age		injury
(year)	Location	Design	Objectives	population	setting	size	(SD)	Sex	(SD)
Divanoglo u et al., (2017b)	Iceland	Prospectiv e cross- sectional study	of community peer-based programmes in SCI management. To explore and describe: 1) the profile of institutions that use components of Active rehabilitation (AR), 2) international variations in the type and focus of AR, and 3) characteristic of the participants	SCI	Commu nity	n=22 (institution s)	n/a	n/a	n/a
			involved						
Divanoglo u et al., (2019)	Botswan a	Single group trial	To measure the effects of the Active	SCI	Commu nity	n=19	31 years	n=9 (male) n=10 (female)	Mean: 4 years

Author		Study	Study	Trauma	Care	Sample	Mean age		Mean time since injury
(vear)	Location	Design	Objectives	nonulation	setting	size	(SD)	Sex	(SD)
(j cui )	Location	Design	Rehabilitatio	population	seeing	SILC	(52)		(50)
			n (AR)						
			training						
			program in						
			terms of						
			physical						
			independence						
			, wheelchair						
			mobility and						
			self-efficacy.						
			The						
			secondary						
			aim was to						
			explore the						
			satisfaction						
			level of						
			physical						
			activity and						
			community						
			participation.						
Dorstyn et	Australia	Case	To discuss	Trauma:	Commu	n=1	30 years	n=1 female	n/a
al., (2020)		report	how peer-	Cycling	nity				
			based	accident					
			interventions						
			might be						
			used to						
			supplement						

Author	Location	Study	Study	Trauma	Care	Sample	Mean age	Say	Mean time since injury (SD)
	Location	Design	formal return-to- work services and contribute to positive job- seeking outcomes.		setting	SIZE			
Fitzgerald (2000)	USA	Summary Article	To discuss the development of a peer visitation program for the preoperative amputee patient.	Preoperativ e amputee	n/a	n/a	n/a	n/a	n/a
Frey (2017)	USA	Dissertatio n – implement ation evaluation	Chapter 4: To identify the barriers and facilitators to implementati on of the Trauma Survivor Network (TSN) in six	Trauma: General trauma, specific injury group not specified	n/a	n=37 (clinical staff)	n/a	n/a	n/a

									Mean time since
Author		Study	Study	Trauma	Care	Sample	Mean age		injury
(year)	Location	Design	Objectives	population	setting	size	(SD)	Sex	(SD)
			level I trauma centers.						
Gainforth et al., (2015)	Canada	Feasibility	To test the feasibility of training peers with spinal cord injury to learn brief action planning to promote physical activity to mentees with SCI.	SCI	n/a	n=13	52.77 years (9.16)	n=7 (male) n=6 (female)	18.46 years (14.51)
Gassaway et al., (2017)	USA	RCT	To investigate the effect of intensive peer mentoring on patient- reported outcomes of self-efficacy and unplanned hospital readmissions	SCI	Commu nity	n=77 (experimen tal); n=81 (non- experiment al)	35.38 years (experimen tal); 39.59 years (non- experiment al)	Male: n=62 (experimen tal); n=59 (non- experiment al) Female: 15 (experimen tal);	n/a

Author (year)	Location	Study Design	Study Objectives	Trauma	Care	Sample	Mean age (SD)	Sex	Mean time since injury (SD)
	Location	Design	for persons with spinal cord injury within the first 6 months after discharge from inpatient rehabilitation.		setting			22 (non- experiment al)	
Gassaway et al., (2018)	USA	Editorial	To describe the importance of peer mentorship for person with SCI	SCI	n/a	n/a	n/a	n/a	n/a
Gassaway et al., 2019	USA	Multiple- baseline, quasi- experiment al design	To determine if patient engagement in self- management education classes could be improved by incorporating several	SCI	inpatien t rehab	n=81	36 years (15.6)	n=58 (male) n=23 (female)	n/a

									Mean time since
Author		Study	Study	Trauma	Care	Sample	Mean age		injury
(year)	Location	Design	Objectives	population	setting	size	(SD)	Sex	(SD)
			changes in class format and structure (nurse with didactic instruction vs peer instructor with blended learning						
Goodridge	Canada	Descriptiv	To identify	SCI	Commu	n=23	Range: 23-	n=16	Range: 1-
et al.,	Cunada	e	and classify	(traumatic)	nity	n-23	68 years	(male)	45 years
(2015)		qualitative	perceived					n=/	
			gaps in access to					(Telliale)	
			healthcare						
			and support						
			services and						
			to compare						
			differences in						
			perceptions						
			of access						
			between						
1			lurban and						
			urban and						

									Mean
									since
Author		Study	Study	Trauma	Care	Sample	Mean age		injury
(year)	Location	Design	Objectives	population	setting	size	(SD)	Sex	(SD)
Grieve et	USA	Cross-	To determine	Burns	Commu	n=596	40.5 years	n=269	n=154
al., (2018)		sectional	the		nity		(15.4)	(male)	(<3 years)
		survey	associations					n=326	n=164 (3-
			of peer group					(female)	10 years)
			attendance						n=278
			with societal						(>10
			reintegration.						years)
Haas et	UK	Qualitative	To evaluate	SCI	Rehabili	n=14	52 years	n=5 (male)	n/a
al., (2013)		evaluation	the		tation	n=5 (with			
			Community		(general	SCI)			
			Peer Support		hospital	n=4			
			Officer			(relatives)			
			(CPSO)			n=5			
			provided by			(therapists)			
			Ine Spinal						
			Association						
			IK to						
			natients in						
			general						
			hospitals in						
			the south						
			west UK.						
Hannah	Canada	Original	To describe	Trauma	n/a	n/a	n/a	n/a	n/a
(2011)		article	the impacts						
			of a traumatic						
			hand injury						
			from a						

									Mean time
Author		Study	Study	Trauma	Care	Sample	Mean age		injury
(year)	Location	Design	Objectives	population	setting	size	(SD)	Sex	(SD)
			psychological						
			perspective.						
Hoffmann	Denmark	Feasibility	То	SCI:	Rehabili	n=52	Median	n=33	Median
et al.,			investigate if	Trauma	tation		age: 50	(male)	years
(2019)			organizing a	(44.2%)				n=19	since
			nationwide					(female)	injury:
			cross-						0.34
			organizationa						
			I peer						
			mentoring						
			system for in-						
			SCL in a						
			SCI III a						
			rehabilitation						
			supplement						
			to high level						
			professional						
			neuro-						
			rehabilitation						
			would be						
			feasible in a						
			nationwide						
			hospital						
			setting and if						
			it would be						
			acceptable						

									Mean time
Author		Study	Study	Trauma	Care	Sample	Mean age		since
(year)	Location	Design	Objectives	population	setting	size	(SD)	Sex	(SD)
		8	for patients to becoming mentees.		3				
Houlihan et al., (2016)	USA	Qualitative evaluation	To develop and assess the feasibility of My Care My Call intervention for individuals with SCI using peer health coaches.	SCI	Commu nity	n=7	Range: 24- 64 years	n=4 (male) n=3 (female)	Range: 9- 27 years
Houlihan et al., (2017)	USA	Single- blinded RCT	To evaluate the impact of the My Care My Call (MCMC) intervention in adults with chronic SCI.	SCI	Commu nity	n=42 (control); n=42 (interventio n)	45.7 years 47.5 (control); 44 years (interventio n)	Male: n=32 (control); n=30 (interventio n) Female: n=10 (control); n=12 (interventio n)	Mean: 9.9 years; Range: 1- 66 years

									Mean time
Author		Study	Study	Trauma	Care	Sample	Moon ogo		since
(vear)	Location	Design	Objectives	population	setting	size	(SD)	Sex	(SD)
Jalovcic et	Canada	Qualitative	To capture	SCI	Commu	n=7	48.2 years	n=7	13 years
al., (2009)		phenomen	women's		nity		(5.8)	(female)	(12.9)
		ological	experiences						
		study	of						
			participation						
			in the						
			Telephone						
			Peer Support						
			Group						
			its main						
			characteristic						
			s and						
			structure as			r			
			perceived by						
			participants.						
Johnson et	Australia	Qualitative	To explore	Burns	Commu	n=9	Range (21-	Patients:	n/a
al., (2016)		study	the		nity	(patients)	48	n=7 (male)	
			beginnings of			n=9	(patients)	n=2	
			emotional			(family	Range: 23-	(female)	
			recovery after			members)	52 (family		
			burn injury				members	Family	
			and describe					members:	
			now people					n=9	
			bogin to soch					(iemaie)	
			and redefine						
			normality.						

									Mean time
Author		Study	Study	Trauma	Care	Sample	Moon ogo		since
(vear)	Location	Design	Objectives	population	setting	size	(SD)	Sex	(SD)
Jones et al., (2019)	USA	Non- randomize d trial	To evaluate effectiveness of peer interventions on self- efficacy, unplanned hospital readmissions, and quality of life for patients with SCI undergoing inpatient rehabilitation.	SCI	Rehabili tation	n=1117	38.2 years	n=860 (male) n=257 (female)	n/a
Kelly (2007)	USA	Mixed- method, multiple case study	To examine how employment as a peer role model at a rehabilitation hospital affects the development of community competence	SCI	n/a	n=20 n=10 (peer employees) ; n=10 (non- employees)	24 years (peer employees) ; 24 years (non- employees)	Male: n=9 (peer employees) ; n=9 (non- employees) Female: n=1 (peer employees) ; n=1 (non- employees)	6.7 years (peer employee s); 7 years (non- employee s)

									Mean time
Author		Study	Study	Trauma	Care	Sample	Mean age		iniury
(year)	Location	Design	Objectives	population	setting	size	(SD)	Sex	(SD)
			among a group of young people with violently acquired SCI.						
Keszler et al., (2020)	USA	Review	To provide an overview of key concepts in rehabilitation of those with traumatic limb loss for clinicians to consider using in clinical practice.	Trauma: Injury group not specified	Pre- operativ e- commu nity	n/a	n/a	n/a	n/a
Kornhaber et al., (2014)	Australia	Integrative review	To systematicall y synthesize the literature focusing on personal perceptions and experiences of adult burn	Burns	Rehabili tation	n=14 (articles)	n/a	n/a	n/a

									Mean time
									since
Author		Study	Study	Trauma	Care	Sample	Mean age		injury
(year)	Location	Design	Objectives	population	setting	size	(SD)	Sex	(SD)
Kornhaber et al., (2015)	Australia	Cross- sectional study	survivors' rehabilitation and to identify factors that influence their rehabilitation. To explore burn survivors' experiences of providing and receiving inpatient peer support to develop an in-depth understandin g of the influence during the	Burns	Commu nity	n=21	44 years	n=20 (male) n=1 (female)	Range: 6 months - 8 years
			iourney.						
Lamontag	Canada	Sequential	To a) explore	SCI	Commu	Objective	27% (18-	Objective	n/a
ne et al.,		cross-	the context in		nity	1:	35 years)	1:	
(2019)		sectional	which the			n=18	33% (36-	EBPAS	
		design	implementati			(EBPAS)	45 years)	n=6 (male)	

									Mean
									time
Author		Study	Study	Trauma	Cara	Sample	Maan aga		since
(vear)	Location	Design	Objectives	nonulation	setting	size	(SD)	Sex	(SD)
(jear)	Location	Design	on process	population	setting	n=11	27% (46-	n=12	(50)
			will be			(ORCA)	55 years)	(female)	
			conducted b)			(oncorr)	12% (56-	ORCA	
			identify			Objective	65 years)	n=2 (male	
			barriers and			2:	oe jenze)	n=9	
			facilitators			n=10		(female))	
			that influence						
			the			Objective		Objective	
			implementati			3:		2:	
			on process,			n=34		n=2 (male)	
			and c)			(DIBQ)		n=8	
			measure the					(female)	
			influence of						
			the					Objective	
			implementati					3:	
			on process on					DIBQ	
			implementati					n=22	
			on behaviour					(male)	
			of peer					n=12	
			mentors.					(female)	
Latimer-	Canada	Single	To determine	SCI	Commu	n=12	42.9 years	n=5 (male)	23.1 years
Cheung et		group trial	it a peer-		nıty		(15.6)	n=1	(18.5)
al., (2013)			mediated,					(temale)	
			home-based						
			strength-						
			training						
			intervention						
			would						

									Mean time since
Author		Study	Study	Trauma	Care	Sample	Mean age		injury
(year)	Location	Design	Objectives	population	setting	size	(SD)	Sex	(SD)
			increase self- efficacy, action planning, and strength- training behavior						
Letts et	Canada	Oualitative	To explore	SCI	Commu	n=16	52.4 years	n=14	15.87
al., (2011)	Culludu	study	the		nity		(13.97)	(male)	vears
, (_011)		2000	perceptions				(10077)	n=2	(9.3)
			of people					(female)	()
			with spinal						
			cord injury						
			regarding						
			preferred						
			messengers						
			and methods						
			for obtaining						
			physical						
			activity						
Liungherg	1 IS A	Single	To describe	SCI	Rehabili	n= 5	3/ 8 years	Male	11 8 years
et al	USA	group trial	the		tation	(mentor)	(mentor)	n=3	(mentor)
(2011)		Stoup that	implementati			n=37	35.38 years	(mentor)	< 1 vear
(2011)			on of the			(mentee)	(mentee)	n=28	(mentee)
			peer-			( )	( )	(mentee)	( )
			mentoring					Female:	
			programme						

									Mean time
Author		Study	Study	Trauma	Care	Sample	Mean age		since
(vear)	Location	Design	Objectives	population	setting	size	(SD)	Sex	(SD)
	Location	Design	and describe the experiences with the mentoring process, including its effects on self-efficacy beliefs and medical complication					n=2 (mentor) n=9 (mentee)	
Lucke el at., (2004)	USA	Single group trial	s. To evaluate patient response to a professional and peer intervention in addition to standard follow-up care.	SCI	Commu nity	n=10	34 years	n=7 (male) n=3 (female)	n/a
McAween ey et al., (1996)	USA	Cross sectional	To explore the unmet needs for independent living	SCI	Commu nity	n=122	31.5 years	n=98 (male) n=24 (female)	3.5 years

Author (year)	Location	Study Design	Study Objectives	Trauma population	Care setting	Sample	Mean age (SD)	Sex	Mean time since injury (SD)
			services that persons experience.						
METRC (2019)	USA	Prospectiv e, multicenter , cluster clinical trial	To evaluate the impact of the Trauma Collaborative Care (TCC) program's early intervention components on 6-week outcomes.	Trauma Motor vehicle - occupant (41%); motor vehicle – cyclist /pedestrian (14%); motor vehicle – motorcyclis t (20%); fall (15%); firearm (3%); other (7%)	Acute - rehabilit ation	n=896	38.2 years (12.5)	n=585 (male) n=311 (female)	n/a
Mortimer et al., (2002)	UK	Cross sectional	To explore patient experiences and perceptions of the information	Amputees	Commu nity	n=31	70.5 years (3.54)	n=18 (male) n=13 (female)	Group 1: 63 months Group 2: 25 months

									Mean time
									since
Author		Study	Study	Trauma	Care	Sample	Mean age		injury
(year)	Location	Design	Objectives	population	setting	size	(SD)	Sex	(SD)
			on phantom						
			pain that they						
			received						
			before and						
			after						
			amputation,						
			improving						
			this						
			information.						
Munce et	Canada	Descriptiv	То	SCI	Commu	n=7	Range: 39-	n=6 (male)	Paraplegi
al., (2014)		e	understand	(traumatic)	nity		68	n=1	a: 5 years
		qualitative	the perceived					(female)	Quadriple
		_	facilitators						gia: 2
			and barriers						years
			to self-						
			management						
			to prevent						
			secondary						
			complication						
Nerrowan	LICA	Interretie	S.	SCI	Commu				
newman	USA	merventio	ro describe a	SU	Commu	n/a	n/a	n/a	n/a
(2014)		II developme	based		muy				
(2014)		nt	narticipatory						
		111	research						
			(CBPR)						

									Mean time
		G ( )		The second se	C				since
Author	Landian	Study	Study	Trauma	Care	Sample	Mean age	Sarr	injury
(year)	Location	Design	approach to	population	setting	size	(5D)	Sex	(5D)
			the						
			development						
			and pilot						
			testing of an						
			intervention						
			using						
			community-						
			based Peer						
			with SCI to						
			provide						
			health						
			education to						
			individuals						
			with SCI.						
Newman	USA	Single	To develop	SCI	Commu	n=10	Median:	n=8 (male)	Median
et al.,		group trial	educational	(traumatic)	nity		48.5	n=2	years
(2019)			content and				(range: 36-	(female)	since
			pilot test the				70)		injury: 24
			computers						(1ange. 11-46)
			online						11-40)
			content						
			management						
			platform, and						
			video						
			conferencing						

									Mean time
Author		Study	Study	Тгапта	Care	Sample	Mean age		iniury
(vear)	Location	Design	Objectives	population	setting	size	(SD)	Sex	(SD)
		Dosga	for delivery of a peer supported, spinal cord injury self- management intervention, using a community- engaged research		Setting				
O'Rilev et	USA	Explorator	To identify	SCI	Commu	n=9	n=1 (18-40)	n=8 (male)	n=3(1-2)
al., (2014)		y ethnograph ic design	and categorize themes and concepts related to Internet- based emotional and problem- focused social support for individuals with SCL		nity		n=4 (40-59 years) n=4 (60+ years)	n=1 (female)	years) n=3 (8-12 years) n=3 (20+ years)

									Mean time
		~ •	~ .	_	~				since
Author	T 4 <sup>9</sup>	Study	Study	Trauma	Care	Sample	Mean age	<b>S</b>	injury
(year)	Location	Design	Objectives	population	setting	size	(SD)	Sex	(SD)
Papadimit	USA	Exercise in	To enhance	SCI	Commu	n=24 (SCI	n/a	n/a	n/a
riou et a.,		empirical	researchers		nity	participants			
(2011)		philosophy	and			)			
			rehabilitation			n=12occup			
			clinicians			ational and			
			ways of			physical			
			doing and			therapists)			
			thinking						
			about						
			rehabilitation						
			by revealing						
			and						
			articulating						
			the role of						
			human						
			temporality						
			in recovery						
			and						
			renabilitation						
			in the case of						
			traumatic						
			spinal cord						
Demonsiler	Noth or lo	Cross	mjury.	Duma	Commerci	m=264	10.8 110000		n = 1.12
rapamikr	nda	Cross	the perceived	Durns	Commu	n=204	49.8 years (16.00)	$\frac{n-121}{(m+12)}$	n=143
(2017)	nus	sectional	ne perceived		muy		(10.09)	(IIIale)	(<10 Veera)
(2017)			need for peer					II=143	years)
			support,					(lemale)	
			perceived						

									Mean time
									since
Author		Study	Study	Trauma	Care	Sample	Mean age		injury
(year)	Location	Design	Objectives	population	setting	size	(SD)	Sex	(SD)
			benefits of						n=91
			peer contact,						(>10
			and perceived						years)
			barriers to						
			participation.						
			Secondary						
			objectives						
			were to						
			examine						
			differences						
			between burn						
			survivors						
			who reported						
			a need for						
			and						
			experienced						
			peer support						
			and those						
			who reported						
			no need and						
			who have ho						
			with poor						
			support						
Payne	1 IS A	Ex post	то	SCI	Commu	n=60	30 7 years	n=12	12 years
(1991)	USA	facto study	understand if	501	nity	n=00	(11)	(male)	(93)
			demographic		inty		(11)	n=18	().)
			variables					(female)	

									Mean time since
Author		Study	Study	Trauma	Care	Sample	Mean age		injury
(year)	Location	Design	Objectives	population	setting	size	(SD)	Sex	(SD)
Reichman n et al., (2018)	USA	Integrative review	influence the perception of the contribution of group learning to rehabilitation programs.; To examine the body of evidence regarding amputee peer support and develop a reasonable clinical practice recommendat	Amputees	n/a	n=10 (articles)	n/a	n/a	n/a
			ion, based on the totality of the evidence,						
			the potential for harm, and cost.						
Richardso n et al., (2020)	UK	Cross sectional study	To exploring the experiences	Amputees	Commu nity	n=8	60.6 years	n=3 (male) n=5 (female)	24.9 years

									Mean time since
Author		Study	Study	Trauma	Care	Sample	Mean age		injury
(year)	Location	Design	Objectives	population	setting	size	(SD)	Sex	(SD)
			of individuals with						
			amputation delivering						
			peer support.						
Rocchi et al., (2018)	Canada	Cross- sectional study	To determine whether participation in peer mentorship programs is related to an increase in the reported use of positive coping strategies for adults with	SCI	Commu nity	n=63 (non- mentees) n=68 (mentees)	20.1 years (non- mentees) 14.1 years (mentees)	Male: n=46 (non- mentees) n=48 (mentees) Female: n=17 (non- mentees) n=19 (mentees)	n/a
Shaw et al., (2019)	Canada	Program evaluation	To operationaliz e and apply each dimension of the RE-AIM framework to evaluate	SCI	n/a	n=9 (organizati ons)	n/a	n/a	n/a

Author (year)	Location	Study Design	Study Objectives	Trauma population	Care setting	Sample size	Mean age (SD)	Sex	Mean time since injury (SD)
			similar community- based public health programs delivered by multiple, autonomous community organizations and present findings regarding the impact of Canadian SCI peer mentorship programs.						
Sherman et al., (2004)	USA	Cross- sectional survey	To compare the impact of two types of social support, past peer- mentoring experience and current live-in	SCI	Commu nity	n=62	30.3 years	n=42 (male) n=20 (female)	11.65 years

									Mean time
Author		Study	Study	Trauma	Care	Sample	Mean age		iniury
(vear)	Location	Design	Objectives	population	setting	size	(SD)	Sex	(SD)
		8	partner, on adjustment after spinal cord injury.						
Shi et al., (2020)	China	Generic qualitative design	To explore how Chinese adults living with spinal cord injury viewed the prospect of inpatient peer support programs within a rehabilitation setting	SCI	Rehabili tation	n=6	37.2 years	n=6 (male) n=0 (female)	1.2 years
Simske et al., (2019)	USA	Prospectiv e cohort study	To evaluate patient satisfaction with TSN services and the impact of these services on patient perceptions about recovery	Trauma: Crush (3.1%), fall (31.8%), gunshot wound (8%), motorcycle collision (14.8%), motor	Acute – commu nity	TSN exposed n=211 No-TSN exposure n=135 Prior to TSN existence	TSN exposed 43 years (17.1) No-TSN exposure 46.3 years (19.9)	TSN exposed n=147 (male) n=64 (female) No-TSN exposure n=91 (male)	n/a

									Mean time since
Author		Study	Study	Trauma	Care	Sample	Mean age		injury
(year)	Location	Design	Objectives	population	setting	size	(SD)	Sex	(SD)
				vehicle collision (32%), pedestrian (8.2%), other (2.1%)		n=139	Prior to TSN existence 44.3 years (17.6)	n=44 (female) Prior to TSN existence n=81 (male) n=58 (female)	
Simske et al., (2020)	USA	Summary and retrospecti ve review	To describe services at our institution and the evolution of programming through time and to report the demographic s and injury patterns of patients using available resources, to target services to	Trauma: Assault (1.6%), ATV/ dirt bike/ snowmobil e (1.8%), burn (0.7%), crush (3.4%), fall (25.3%), motor vehicle collision (31.8%), other (1.8%),	Acute – commu nity	n=2324	45.4 years (18.5)	n=1453 (male) n=871	n/a

Author		Study	Study	Trauma	Care	Sample	Mean age		Mean time since injury
(year)	Location	Design	Objectives	population	setting	size	(SD)	Sex	(SD)
		8	populations who may use and benefit from them.	pedestrian struck (5.6%), penetrating (13.9%), sport related (2.1%)					
Sizoo et	Netherla	Observatio	То	Burns	Rehabili	n=10	44 years	n=8 (male)	63 days
a;., (2021)	nds	nal pilot	investigate the feasibility and acceptability of aquatic exercise therapy in adult burn patients with an indication for supervised exercise therapy beyond discharge.		tation			n=2 (female)	
Skeels et	USA	Process	To a)	SCI	n/a	n/a	n/a	n/a	n/a
al., (2017)		evaluation of a	describe the communicati	(traumatic)					

					6				Mean time since
Author	Location	Study	Study	Trauma	Care	Sample	Mean age	Sov	injury (SD)
(year)	Location	olinical	on tools and	population	setting	size	(5D)	Sex	(5D)
		trial	information						
		titui	delivery						
			strategies						
			used by peer						
			health						
			coaches						
			(PHCs), b)						
			describe the						
			PHC roles						
			and						
			identifying						
			the			)			
			components						
			of each role						
			the interplay						
			of						
			communicati						
			on tools and						
			information						
			delivery						
			strategies,						
			and c)						
			examine the						
			pattern of						
			PHC roles						
			during the 6-						

Author		Study	Study	Trauma	Care	Sample	Mean age		Mean time since injury
(year)	Location	Design	Objectives	population	setting	size	(SD)	Sex	(SD)
			month PHC–						
			peer						
	TTO A	<b>D</b>	relationship.	2	a	115	<b>51</b> 00 ( <b>0</b>		<b>51</b> 00 ( 0
Sproul et	USA	Descriptiv	To determine	Burns	Commu	n=117	71.9% of	n=56	71.9% of
al., (2009)		e study	a) which		nity		participants	(male)	participan
			hum				botwoon 20	n=00	ls
			survivors				and 59	(Temate)	their
			report as				vears of		injury >5
			being				age.		vears ago.
			important to						<i>J</i> ==== = = = = = = = = = = = = = = = =
			their						
			recovery, b)						
			the perceived						
			importance of						
			participation						
			in a peer						
			support						
			program on						
			recovery, and						
			c) if there is a						
			lavels of						
			reported hope						
			between hurn						
			survivors						
			who						
			participants						

Author		Study	Study	Trauma	Care	Sample	Mean age		Mean time since injury
(year)	Location	Design	Objectives	population	setting	size	(SD)	Sex	(SD)
			in peer support programs versus those who did not.						
Standal et al., (2008)	Norway	Qualitative explorative study	To investigate the learning that takes place when people with disabilities interact in a rehabilitation setting.	SCI	Rehabili tation	n=10	42	n=7 (male) n=3(female )	n/a
Stewart et al., (1999)	South Africa	Case study	To describe a brief history of a spinal cord injury group and a description of the process by which the group developed and moved towards assuming	SCI	Commu nity	n/a	n/a	n/a	n/a

									Mean time
Author		Study	Study	Trauma	Care	Sample	Mean age		iniurv
(year)	Location	Design	Objectives	population	setting	size	(SD)	Sex	(SD)
		8	responsibility for group planning, management and control.						
Suckow et al., (2015)	USA	Cross sectional	To better understand what domains determine QoL in vascular amputees.	Amputees	n/a	n=26	64 years	n=19 (male) n=7 (female)	4.3 years
Sweet et al., (2016)	Canada	Secondary analysis of cross- sectional data	To examine the association among peer support, participation and life satisfaction in adults with SCI.	SCI: Traumatic (73.4%); non- traumatic (26.6%)	Commu nity	n=1549	49.6 years	n=1041 (male) n= 508 (female)	18.5 years
Sweet et al., (2018)	Canada	Static group compariso n Study	To examine differences among mentees and non-mentees on	SCI	Commu nity	n=68 (mentees) n=63 (non- mentees)	50 years (mentees) 53 years (non- mentees)	Male: n=48 (mentees) n=46 (non- mentees) Female:	14.1 years (mentees) 20.1 (non- mentees)
									Mean time since
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Author		Study	Study	Trauma	Care	Sample	Mean age		injury
(year)	Location	Design	Objectives	population	setting	size	(SD)	Sex	(SD)
			QoL/particip ation and to test a self- determination theory (SDT) model where the psychological needs mediate this					n=19 (mentees) n=17 (non- mentees)	
Thurston et al., (2020)	South Africa	Qualitative descriptive study	To explore how individuals living with paraplegia in South Africa experience sex and intimacy and how they perceive the related health services and support they received whilst adapting to	SCI: Traumatic violence (60%), traumatic road traffic accident (20%)	Commu nity	n=10	25.6 years	n=8 (male) n=2 (female)	12.5 years

									Mean time
Author		Study	Study	Trauma	Care	Sample	Mean age		since injury
(year)	Location	Design	Objectives	population	setting	size	(SD)	Sex	(SD)
			life post						
			injury.						
Tolley et	Australia	Scoping	To conduct a	Burns	n/a	n=15	n/a	n/a	n/a
al., (2014)		review	scoping			(articles)			
			review of						
			one-to-one						
			peer support						
			programs for						
			with burn						
			injury to						
			identify any						
			impact						
			resulting						
			from						
			participation						
			as either						
			deliverer						
			(peer) or						
			recipient						
			(patient), and						
			to examine,						
			avaluate the						
			methods of						
			neer-support						
			program						
			delivery.						

									Mean time
Author		Study	Study	Trauma	Care	Sample	Mean age		iniurv
(year)	Location	Design	Objectives	population	setting	size	(SD)	Sex	(SD)
Trezzini et	Switzerla	Cross-	То	SCI	Commu	n=490	55.4 years	n=348	16.5 years
al., (2019)	nd	sectional	investigate	(traumatic	nity			(male)	-
		observatio	how well	76.7%)				n=142	
		nal	existing					(female)	
			support						
			service						
			systems in a						
			highly						
			developed						
			country meet						
			perceived						
			needs after						
			rehabilitation						
			among						
			people with						
			SCI and what						
			the associated						
			antecedents						
			and						
			consequences						
			or potential						
Veith et	USA	Qualitativa	gaps are.	SCI	Innation	Mentee	Mentee	Mentee	Mentee
1 (2006)	USA	guantative	salient		t t	n=7	10 13  years	n=5 (male)	n/a
a., (2000)		study	dimensions		rehabilit	11/	+0.+5 years	n=3 (mate) n=2	11/a
			and outcomes		ation	Mentor	Mentor	(female)	Mentor
			of the peer-		anon	n=6	34 17 years	(ieiiiaie)	11 years
			mentoring					Mentor:	11 years

									Mean time since
Author		Study	Study	Trauma	Care	Sample	Mean age		injury
(year)	Location	Design	Objectives	population	setting	size	(SD)	Sex	(SD)
			relationship					n=4 (male)	
			among					n=2	
			individuals					(female)	
			with spinal						
	TTO		cord injury.					,	,
Vincent et	USA	Narrative	To present	Orthopedic	n/a	n=84	n/a	n/a	n/a
al., (2015)		review	the effects of	trauma		(articles)			
			trauma on						
			nsychological						
			distress						
			potential						
			interventions						
			for distress						
			reduction						
			after trauma,						
			and						
			implications						
			for						
			participation						
			1n						
Vigger at	Couth	Qualitation	To determine	SCL	Dahah:1:	m-71	26.2	m=61	Dangaré
$v_{1}$ isser et	South A frice	descriptive	knowledge	SUI: Traumatia	tation	<u> </u>	(12.3)	(male)	Range: 0
ai., (2019)	Antea	study	beliefs and	(80%)	iation		(12.3)	n=10	5 vears
		study	practices on	(09/0)				(female)	Jycais
			pressure					(ieiiiaie)	
			ulcers (PUs)						

									Mean time
Author		Study	Study	Trauma	Care	Sample	Mean age		iniury
(year)	Location	Design	Objectives	population	setting	size	(SD)	Sex	(SD)
			of persons with SCI that received care at a rehabilitation centre.						
Weitzner (	Canada	Secondary	The	SCI	Commu	n=52	n/a	n=40	n/a
et al., (2011)		analysis of qualitative data	objectives were a) to identify the different ways in which people living with SCI viewed and/or used their disabilities positively, b) to identify what influences an individual with SCI to view and/or use his or her disability		nity			(male) n=12 (female)	

Author	Landiar	Study	Study	Trauma	Care	Sample	Mean age	6 are	Mean time since injury
(year)	Location	Design	and c) to		setting	SIZE		SEX	נשט
			provide best-						
			practice						
			recommendat						
			ions for						
			rehabilitation						
			professionals						
			to facilitate						
			individuals						
			with SCI to						
			view allu/of						
			disabilities						
			positively.			(			
Wells et	Canada	Single	To describe a	Amputees	Rehabili	n=71	60 years	n=40	n/a
al., (1993)		group trial	peer support		tation		5	(male)	
			program					n=31	
			implemented					(female)	
			by social						
			workers in a						
			rehabilitation						
			report on a						
			program						
			evaluation to						
			determine						
			which						
			programs						

Author (year)	Location	Study Design	Study Objectives	Trauma population	Care setting	Sample size	Mean age (SD)	Sex	Mean time since injury (SD)
			elements patients found important.						
Wiechma n et al., (2017)	USA	Summary article	To identify research priorities and addressing two questions: "What are the barriers to an acceptable quality of life?" and "What are the gaps in access to services?"	Burns	Commu nity	n/a	n/a	n/a	Range: 6 months - 20 years
Williams et al., (2002)	USA	Single group trial	To describe and evaluate a peer support visit program in a large burn unit.	Burns	Inpatien t	n=51	32.5 years	n=39 (male) n=12 (female)	n/a
Young et al., (1999)	Canada	Brief report	To report on the peer	SCI	Rehabili tation	n/a	n/a	n/a	n/a

Author (year)	Location	Study Design	Study Objectives	Trauma population	Care setting	Sample size	Mean age (SD)	Sex	Mean time since injury (SD)
			mentor's						
			communicati						
			on between						
			clients and						
			staff and on						
			two						
			initiatives						
			that promote						
			clients						
			perspectives.						

Author (year)	Populati on	Care setting	Program objective	Format	Frequency and duration	Content type	Content creator	Content details
Amorelli et al., (2019)	Amputee	Community	The primary purpose of the Amputees Unanimous program is to help amputees in need, conveying the message of acceptance, courage, and service to others.	In-person group discussio ns	Not specified. Participant s are free to move across the 12 program steps at their own pace.	Program adapted from the Alcoholics Anonymo us 12 steps	Created by the researcher s	Peers lead participants through the 12 step program of 1) Honesty, 2) Hope, 3) Faith, 4) Discipline, 5) Courage, 6) Willingness, 7) Humility, 8) Compassion, 9) Integrity, 10) Perseverance, 11) Spirituality, 12) Service.
Best et al., (2016)	Mixed (62.5% SCI, 12.5% MS, 12.5% CP, 12.5% other)	Community	The goal of the WheelSee intervention was to improve wheelchair use self- efficacy	Peer trained group of two in- person	1-2 sessions per week, for 6 sessions (90 min each)	Peer-led wheelchai r training program	Designed by the researcher s	During the first 4 WheelSee sessions, participants selected goals related to performing activities and negotiating the physical environment. The peer trainer guided the selection of specific objectives that may be required to achieve each goal, such as specific skills, skill sequencing, and overcoming barriers.

## Table 2. Description of peer support programs (n=22)

Author	Populati	Care	Program	Format	Frequency	Content	Content	Content details
(year)	on	setting	objective		and	type	creator	
					duration			
								The final 2 WheelSee
								sessions focused on less
								tangible skills, including
								knowledge and problem
								solving, advocacy,
								managing social
								situations, and controlling
								emotions.
Bradford,	Trauma	n/a	The TSN	In-person	n/a	Peer	Designed	The TSN fosters peer
et al.,			program	peer		support	by the	support through peer
(2011)			prepares	visitation			American	visitation with TSN-
			survivors to	and			Trauma	trained peers, attending
			effectively	trauma			Society	trauma support groups
			manage the	support			and	where participants can
			challenges of	group,			researcher	share mutual aid, and the
			trauma	internet-			s. Focus	TSN web site.
			recovery.	based			groups of	
				peer			patients	
				support			and	
							families	
							provided	
							feedback	
							and	
							direction	
							for the	
							developme	
							nt of the	
							program	

Author (year)	Populati on	Care setting	Program objective	Format	Frequency and duration	Content type	Content creator	Content details
Castillo et al., (2013)	Trauma	Discharge from acute	The TSN program prepares survivors to effectively manage the challenges of trauma recovery.	In-person peer visitation and trauma support group, internet- based peer support	n/a	Peer support	Designed by the American Trauma Society and researcher s. Focus groups of patients and families provided feedback and direction for the developme nt of the program	The TSN fosters peer support through peer visitation with TSN- trained peers, attending trauma support groups where participants can share mutual aid, and the TSN web site.

Author (year)	Populati on	Care setting	Program objective	Format	Frequency and duration	Content type	Content creator	Content details
Divanogl ou et al., (2019)	SCI	Community	The Active Rehabilitatio n program aims to address issues of physical independenc e, wheelchair mobility, fear, shame, isolation, networking and peer support.	In-person group training led by a peer	16 hours over 7 days (10 training sessions, 6 workshops )	Rehab training sessions	Designed by the researcher s	Participants completed training sessions on wheelchair skills, cardiorespiratory fitness, strengthening, and ball sports.
Fitzgeral d (2000)	Amputee	Pre- operative	To provide support and encourageme nt to a person who will have an amputation.	One-on- one (in- person)	Often a single visit	Peer visit	Designed by the researcher s	Peer visitation is structured around three parts: 1) Attempt to establish rapport, 2) respond to the person's feelings, and 3) respond to their questions with factual and practical information.
Gassawa y et al., (2017)	SCI	Rehab and community	The goal of peer mentoring sessions is to meet the needs of	One-on- one, in- person while in rehab; by phone or	1 per week (30 minutes per week) for 90 days	Peer interaction	Designed by the researcher s	Peers opened conversations with open ended questions or asked about concerns from previous sessions. Participants were

Author	Populati	Care	Program	Format	Frequency	Content	Content	Content details
(year)	on	setting	objective		and	type	creator	
					duration			
			each individual participant; mentors are more interested in what a participant is thinking or concerned about than what is on their official rehabilitation	email while in the communi ty or in- person if they were on- site for post- discharge services				encouraged to participate in monthly peer team sponsored activities. Post- discharge telephone or email communication with peers were led by the participant and often included adjustment issues in returning to community living or frustrations with equipment delivery and services
Haas et al., (2013)	SCI	Rehab	scheduleTheCommunityPeer SupportOfficer(CPSO)visitedpeople ingeneralhospitalswho had arecentdiagnosis ofSCI.	In- person, peer supporter visited people in the hospital	n/a	n/a	n/a	n/a

Author (year)	Populati on	Care setting	Program objective	Format	Frequency and	Content type	Content creator	Content details
Hoffman n et al., (2019)	SCI	Rehab	n/a	In- person, one-on- one peer mentorin g	duration 3 sessions; more sessions available with permission from project staff anytime during rehab period	Peer mentoring	Designed by the researcher s	Mentors were instructed not to provide medical advice, whereas they were encouraged to share their personal experiences with the mentees.
Houlihan et al., (2016)	SCI	Community	The My Care My Call peer health coaches support participants with chronic SCI in meeting their	Peers telephon ed survivors (one-on- one)	2 calls per week for 2 weeks	Peer health coaches	Designed by the researcher s	Sessions with the peer health coaches involve supporting skill development, facilitate motivation using consumer-centered goal setting, coaching, resource referral, and support network building.

Author (year)	Populati on	Care setting	Program objective	Format	Frequency and duration	Content type	Content creator	Content details
			health care needs to prevent secondary conditions.			Consumer workbook	Compiled by the researcher s	A resource list of essential, comprehensive informational, and local resources
Houlihan et al., (2017)	SCI	Community	The My Care My Call (MCMC) program is designed to empower adults with chronic spinal cord injury (SCI) in the self- management of their primary health care needs to prevent secondary conditions.	Peers telephon ed survivors (one-on- one)	8 weekly calls, followed by 4 bi- weekly calls, and then 2 monthly calls; Program duration is 6 months	Peer health coach	Designed by the researcher s	Peer mentors tele-coach participants on self- management and health care needs. Calls focused on self-management and unmet health-care needs, peers chose conversation topics and peer mentors had the flexibility to use specific tools and strategies to facilitate and focus conversations.

Author Pop (year) (	opulati on	Care setting	Program objective	Format	Frequency and	Content type	Content creator	Content details
					duration			
Jalovcic SCI et al., (2009)	T	Community	To provide women with SCI, access to the latest health resources and with peer support.	Phone- group teleconfe rence	11 Peer support sessions and 12 guest lectures over 11 months.	Peer support and education	Co- designed by researcher s and stakeholde rs with SCI.	A peer support program with a two components: 1) teleconferences with guest lecturers to support health and well-being on a range of topics (e.g., Long-term SCI, Recent developments in SCI research, Menopause and women with SCI) and 2) Peer support teleconferences. Peer support teleconferences were moderated by an experienced facilitator
Jones et SCI al., (2019)	Ĩ	Rehab	To improve patients' self-efficacy in care management and reduce unplanned hospital readmissions	One-on- one peer mentorin g (in- person and telephon e)	Peer support: 1 visit per week for up to 90 days. Peer education program:	One-to- one peer mentoring	Designed by the researcher s based on previously collected stakeholde r feedback	Patients received an initial introduction to peer support by a member of the peer support team and were assigned a peer mentor.

Author	Populati	Care	Program	Format	Frequency	Content	Content	Content details
(year)	on	setting	objective		and	type	creator	
					Four 1- hour sessions	Peer-led patient self- manageme nt education Peer support	Designed by the researcher s based on previously collected stakeholde r feedback Designed by the	Peer led classes focused on self-management of conditions associated with SCI, bowel, bladder, skin management, and special concerns. A nurse educator was present as a medical content expert.
						team assistance	researcher s based on previously collected stakeholde r feedback	mentors to demonstrate self-management activities or to join patients on community outings.

Author (year)	Populati on	Care setting	Program objective	Format	Frequency and duration	Content type	Content creator	Content details
Latimer- Cheung et al., (2013)	SCI	Community	To strategically address barriers and increase self- efficacy and strength- training behavior	In-person home visit with a personal trainer and a peer.	Single visit	Peer- delivered exercise program	Created by the researcher s	The session began with an introduction to strength training and setting a goal. Next, the peer modeled a set of seven exercises and the participant tried each exercise. Finally, the trainer designed a personalized strength training program.
Ljungber g et al., (2011)	SCI	Rehab	The NRH SCI Peer Mentoring Program was designed to address the prevention of secondary conditions such as pressure ulcers, urinary tract infections, respiratory problems, general health maintenance	One-on- one peer mentorin g (in- person and telephon e)	1 per week for the first 3 months, 2 per month for the next three months, and 1 per month for the remaining 6 months; program duration is 1 year	Peer mentoring	Developed with the SCI Network	Peer mentors were trained to monitor medical complications, secondary conditions, health risk behaviours, emotional well-being, and general health status.

Author	Populati	Care	Program	Format	Frequency	Content	Content	Content details
(year)	on	setting	objective		and	type	creator	
		_	-		duration			
			and					
			community					
			living. The					
			goal of the					
			programme					
			is for peer					
			mentors to					
			pass along					
			knowledge,					
			demonstrate					
			and model					
			skills and					
			initiate					
			referrals to					
			the					
			professional					
			rehabilitation					
			team as					
			needed.					
Lucke et	SCI	Community	The	Peers	From 6	Peer	Designed	Peers provided social
al.,			Professional	telephon	weeks to 6	interaction	by the	interaction and shared
(2004)			+ Peer	ed	months		researcher	experiences including but
			Intervention	survivors	post-rehab		S	not limited to: role
			was an	(one-on-				changes, equipment,
			intensive	one)				transportation, activities,
			individualize					recreation, sexuality,
			d					adjustment, interactions
			intervention,					with friends and strangers,
			designed to					and working with an
			facilitate					attendant.

Author	Populati	Care	Program	Format	Frequency	Content	Content	Content details
(year)	on	setting	objective		and	type	creator	
					duration			
			knowledge			Workshop	Designed	The workshop covered
			acquisition			s	by the	the topics of anatomy and
			and problem				researcher	sequelae of SCI; bowel
			solving				S	and bladder function and
			while					management; pressure
			providing					ulcers; fertility, sexuality
			interpersonal					and relationships; health
			interaction.					promotion and lifestyle;
								Bights of Dersons with
								Disabilities
METRC	trauma	A cute-	The TSN	Deer	n/a	Deer	Designed	The TSN fosters peer
(2019)	trauma	rehab	nrogram	visitor	II/ a	support	by the	support through neer
(2017)		Tendo	program	support		support	American	visitation with TSN-
			survivors to	group.			Trauma	trained peers, attending
			effectively	self-			Society	trauma support groups
			manage the	manage			and	where participants can
			challenges of	ment			researcher	share mutual aid, and the
			trauma	course			s. Focus	TSN web site.
			recovery.	(telephon			groups of	
				e, in-			patients	
				person,			and	
				online)			families	
							provided	
							feedback	
							and	
							direction	
							tor the	
		1	1				aevelopme	

Author (year)	Populati on	Care setting	Program objective	Format	Frequency and duration	Content type	Content creator	Content details
							nt of the program	
Newman et al., (2019)	SCI (traumati c)	Community	The Peer- supported Health Outreach, Education, aNd Information eXchange (PHOENIX) telehealth intervention is designed to promote self- management after SCI.	Peer educatio n (online)	6 online education modules	Education modules	Designed by the researcher s in collaborati on with the South Carolina Spinal Cord Injury Associatio n	Online education modules that cover 1) Introduction to PHOENIX & SCI 101, 2) Getting what you need: Being an empowered consumer, 3) Getting out there: Engaging community resources, 4) Staying healthy: Skin care and preventing pressure ulcers, 5) Staying healthy: Preventing UTI, 6) Staying healthy: Bowel Management
Simske et al., (2019)	Trauma	Acute- rehab	The TSN program prepares survivors to effectively manage the challenges of trauma recovery.	Peer visitor, support group, self- manage ment course (telephon e, in-	n/a	Peer support	Designed by the American Trauma Society and researcher s. Focus groups of patients and	The TSN fosters peer support through peer visitation with TSN- trained peers, attending trauma support groups where participants can share mutual aid, and the TSN web site.

Author	Populati	Care	Program	Format	Frequency	Content	Content	Content details
(year)	on	setting	objective		and	type	creator	
					duration		0 11	
				person,			families	
				online)			provided	
							feedback	
							and	
							direction	
							for the	
							developme	
							nt of the	
							program	
Skeels et	SCI	Community	The My Care	Peers	8 weekly	Peer	Designed	Peer mentors tele-coach
al	(traumati	Community	My Call	telephon	calls	health	by the	participants on self-
(2017)	c)		(MCMC)	ed	followed	coach	researcher	management and health
(2017)	•)		program is	survivors	by 4 bi-	<b>U</b> outen	s	care needs. Calls focused
			designed to	(one-on-	weekly		2	on self-management and
			empower	one)	calls, and			unmet health-care needs.
			adults with		then 2			peers chose conversation
			chronic		monthly			topics and peer mentors
			spinal cord		calls;			had the flexibility to use
			injury (SCI)		Program			specific tools and
			in the self-		duration is			strategies to facilitate and
			management		6 months			focus conversations.
			of their					
			primary					
			health care					
			needs to					
			prevent					
			secondary					
			conditions.					

Author (year)	Populati on	Care setting	Program objective	Format	Frequency and duration	Content type	Content creator	Content details
Wells et al., (1993)	Amputee	Rehabilitati on	The goal of the AMP Reach program was to provide a personal view of how to live effectively with a disability.	In- person, peers visited survivors (one-on- one)	n/a	Peer visits	Designed by the researcher s	Peers promoted a more hopeful attitude by providing a positive role model, reduce patient anxiety by providing information about the rehab program and anticipated life experiences, and to increase patient morale by sharing feelings of concern and fear.
Williams et al., (2002)	Burns	Inpatient	To provide an unstandardiz ed, informal, and personalized form of psychosocial support.	In-person peer consultan t met with survivors one-on- one	One 15-60 min visit per week for as many weeks as the inpatient was interested	Peer support	Designed by the research Team and burn survivors	The peer consultant accomplished at least one of six program objectives: 1) Allow survivor to ask questions about the peer consultant's recovery experience, 2) Allow the survivor to discuss burn- related questions, 3) Inform the survivor of community resources, 4) Encourage survivors to contact the Peer Consultation Service for support after hospitalization, 5) If the survivors discusses concerns that should be

Author	Populati	Care	Program	Format	Frequency	Content	Content	Content details
(year)	on	setting	objective		and	type	creator	
					duration			
								brought to the attention of burn care professionals, the peer consultant asks the survivor for permission to pass that information to appropriate staff members, and 6) identify a staff liaison for
								concern about the peer consultant program.

## Table 3. Quantitative Results (n=12)

Author (year)	Quantitative domain	Outcome measure	Results
Best et al., (2016)	Self-efficacy (wheelchair use)	WheelCon for MWC users version 3.0	• Intervention group had greater wheelchair use self-efficacy scores post-intervention (p<.05).
Castillo et al., (2013)	Self-efficacy	Modified Self-Efficacy Scale; Patient Activation Measure	• There was no significant difference between groups for any of the outcomes (n>0,10) except depression
	Social support	Family, friends, and significant other subscales of the Multidimensional Scale of Perceived Social Support	outcomes (p=0.10) except depression.
	Patient activation	Patient Activation Measure	
	Health status	Physical Components Summary (PCS)and Mental Components Summary (MCS) of the Short Form 12(SF-12) Version 2	
	Anxiety	Anxiety subscale of the Brief Symptom Inventory	
	Depression	Patient Health Questionnaire	• The experimental group had a lower odds of depression (p=.02) at 6 months.
Divanoglou et al., (2019)	Self-efficacy	Moorong Self-efficacy Scale	<ul> <li>There were no significant changes to the total score, the general subscale, and the social construct subscale.</li> <li>Significant improvement were seen in the personal function subscale at post-intervention (p=.004) and follow-up (p=.04).</li> </ul>

Physical independence	Spinal Cord Independence Measure self-report	<ul> <li>Significant increase post-intervention (p=.019).</li> <li>Greatest improvement was in the mobility subscale at post-intervention (p=.011) and changes were maintained at follow-up (p=.005).</li> </ul>
Wheelchair skill and confidence	Queensland Evaluation of Wheelchair Skills practical test; Wheelchair Skills Test Questionnaire version 4.3	<ul> <li>Significant improvement at post-intervention (p=.001). Specifically, improvements were made to their ability to maintain balance on the back wheels (p=.003), ascend and descend a gutter (p=.045), and cover longer distances during a 6 minute push (p=.003).</li> <li>Improvements to wheelchair skill capacity was reported at post-intervention (p=.014) and at follow-up (p=.021).</li> <li>Wheelchair skill confidence increased at post-intervention (p=.003).</li> </ul>
Life satisfaction	Life Satisfaction Questionnaire-11	• There was no significant difference between baseline and follow-up for life satisfaction (p=.109).
Rehab participation	Utrecht Scale for Evaluation of Rehabilitation Participation	• There were no significant differences between baseline and follow-up for rehab participation frequency (p=.083) and rehab participation restrictions (p=.365).

Gassaway et al., (2017)	Self-efficacy	General Self-efficacy Scale; project- developed community integration questions	<ul> <li>Growth curve estimates revealed that group assignment significantly affects self-efficacy growth over time (p=.002). Experimental growth rate was greater than the control group.</li> </ul>
	Hospital readmission	Percentage of patients readmitted to the hospital; cumulative number of days rehospitalized during targeted time intervals	<ul> <li>No statistically significant differences between groups for percent of patients rehospitalized at 30 days (p=.0808), 90 days (p=.095), and 180 days (p=.182).</li> <li>There were significantly more cumulative days rehospitalized for the control group at 30 days (p=.018), 90 days (p&lt;.001), and 180 days (p&lt;.001).</li> </ul>
Hoffmann et al., (2019)	QoL	International SCI QoL Basic Data Set; items 9a–9i from the Short Form SF-36 v1	<ul> <li>SF-36 items showed significant improvement for five of nine depression items: <ul> <li>Did you feel full of pep? (p&lt;.01)</li> <li>Did you have a lot of energy? (p=.01)</li> <li>Did you feel worn out? (p=.03)</li> <li>Have you been a happy person? (p=.02)</li> </ul> </li> <li>Did you feel tired? (p=.01).</li> <li>All three International SCI QoL subscales were significantly different post-intervention, life and personal circumstances (p=.01), physical health (p=.01), and psychological health (p=.01).</li> </ul>
	Pain	Pain score numeric rating scale (11- NRS)	• Reported pain was not significantly different post intervention (p=.86) and reported pain frequency was not different post-intervention (p=.48).

Houlihan et al., (2017)	QoL	SCI standard dataset	• No significant differences between groups at 6 months.
	Health self- management	Patient Activation Measure	<ul> <li>There was a significant difference between groups at 6 months.</li> <li>Scores improved and estimated 1 level of improvement in activation for intervention group at 4 and 6 months.</li> </ul>
	Quality of primary care	Communication With Physicians Scale; Patient Satisfaction Scale	• No significant differences between groups at 6 months.
	Activity limitation	Social/Role Activities Limitation	• Intervention participants reported significantly greater decrease in social/role activities limitations compared to controls (p=.039).
	Awareness of services and resources used	Global Rating of Change	• Intervention participants reported significantly greater service/resource awareness (p=0.25) and services used (p=.024).
Jones et al., (2019)	Self-efficacy	General Self-Efficacy scale	• Significant relationship between self- efficacy and fewer hospital readmissions at all three time points (p<0.001) for peer intervention.
	Hospital readmission	Number of patients readmitted to the hospital; number of days rehospitalized during designated time intervals	<ul> <li>Significant change in level (p=.002) and slope (p=.048) for number of patients readmitted</li> <li>Statistically significant change in level (p&lt;0.001) but not slope (p=0.087) for number of hospital days.</li> <li>The average number of patients readmitted each month decreased from 1.75 pre-intervention to 1.46 post-intervention.</li> </ul>

			• There were also significantly more months with no unplanned readmissions post-intervention (p=0.01).
	Depression	Patient Health Questionnaire	No significant association was found
	Life satisfaction	Satisfaction with Life Scale	with depression and satisfaction with life.
Latimer-Cheung et al., (2013)	Intentions	Three items assessing intentions to engage in at least 30 mins of moderate to heavy intensity physical activity	• Significant improvements at post-test (p=.007).
	Action planning	Four items evaluating whether participants had a detailed plan regarding when, what, where, and how to engage in strength training over the next 2 week	• Significant improvements at post-test (p=.003).
	Goal-setting self- efficacy	Four items assessing confidence over the next 2 week	• Pre-post differences were not significant.
	Scheduling self- efficacy	Four items assessing participants confidence to fit 30 mins of moderate to heavy intensity strength training into their weekly schedule	• Pre-post differences were not significant.
	Barrier self-efficacy	Five items evaluating participants' confidence to overcome barriers to home-based strength training	• Significant improvements at post-test (p=.027).
	Task self- efficacy	Nine items evaluating participants' confidence to physically do moderate and heavy intensity strength training	• Significant improvements at post-test for task frequency self-efficacy (p=.023) but not for duration self- efficacy.

	leisure-time physical activity	Leisure Time Physical Activity Questionnaire for People with SCI – modified to only measure strength training	• Significant improvements to the frequency (p=.011), duration (p=.023), and volume (p=.012) of physical activity post-intervention.
	Intervention fidelity	6-item health care climate questionnaire	• Deviations from the study protocol were related to shortening exercise cool down (4 visits) and not distributing the end of visit survey (5 cases) due to time constraints.
	Acceptability	Six-item questionnaire	• Participants were satisfied with the exercises (average 6.5/7) and felt they could relate to the peer, having a peer at the home visit was helpful, and the visit would help them meet their strength training goals (averages > 6.49/7).
Ljungberg et al., (2011)	Self-efficacy	Generalized Perceived Self-Efficacy Scale	<ul> <li>Score improvements were seen at 6 months but were not significant.</li> <li>Significant differences observed at 6 months between participants with low education (≤12<sup>th</sup> grade) and higher education (&gt;12<sup>th</sup> grade) p=.013.</li> </ul>
	Medical complications	Medical complications tracking form	<ul> <li>Rates of secondary medical complications and doctor visits decreased significantly between 0–6 months and 7–12 months.</li> <li>Decreases were seen in urinary tract infection (p=.001), pain (p=.001), depression (p=.004), pressure ulcers (p=.046), hospitalizations (p=.002), and ER visits (p=.004).</li> </ul>

Lucke et al., (2004)	QoL	Life Situation Survey; MOS SF-36	<ul> <li>Most scores remained stable from 6 weeks to 6 months.</li> <li>There was a non-significant improvement to the mental health subscale score over 6 months.</li> <li>Vitality and role function due to emotional health subscales did not improve over 6 months.</li> <li>Regression analysis revealed a significant change in social functioning over 6 months (p=.036).</li> </ul>
	Норе	Miller Hope Scale; Herth Hope Scale	<ul> <li>Increased largely at 6 weeks and then declined slightly.</li> <li>Regression analysis revealed a significant change in hope over 6 months (p=.024).</li> </ul>
	Adjustment	Positive and Negative Affect Scale	• There was an upward trend for adjustment over six months.
METRC (2019)	Self-efficacy (return to work and managing financial challenges of injury)	Two 10-point self-efficacy scales	• The odds of high self-efficacy increased by 14% for return to work and decreased by 2% for managing finances.
	Pain	11-point pain intensity numerical rating scale	• The intent to treat analysis revealed that odds decreased for pain (18%),
	Depression	Patient Health Questionnaire	depression (23%), and PTSD (12%) compared to the control.
	PTSD	PTSD Check-list, civilian version	
Simske et al., (2019)	Self-efficacy	Two-item, 6-point self-efficacy scale developed by the research team	• Participants in the experimental group reported a higher likelihood of recovery (p=.05) and of returning to

		daily activities (p=.003) compared to controls.
Satisfaction	Two-item, 6-point question	• All participants reported high satisfaction with their hospital experience. Participants in the experimental group were satisfied with the program.
Helpful recovery tools	Select up to 5 program elements that are perceived as helpful to recovery	• The tools that were perceived as the most helpful were an online community (reported by 38.8% of all participants), followed by peer relationships (26.3%), counseling (22.5%), support groups (17.5%), and education materials (6.3%).
Tool utilization	Select program elements that were used	<ul> <li>Participants in the experimental group reported peer visitation as the most commonly used tool (52.6% of participants utilized this service) followed by the TSN handbook (42.1%).</li> <li>Participants in the experimental group were more likely (p&lt;.001) to use the TSN handbook (education material) compared to controls.</li> <li>Participants in the experimental group used peer relationships (52.6% vs 26.3%) and support groups (26.3% vs 17.5%) more than controls, however, these relationships were not significant.</li> </ul>

## Table 4. User Experience Outcomes (n=6)

Author (year)	User Experience Outcomes	Results
Castillo et al., (2013)	Usability/Use of services	• Use of Trauma Support Network resources was low,
		6% attended a support group and 10% met with a peer
	Patient satisfaction – Perceived	visitor.
	helpfulness of program and program	<ul> <li>Of participants who used peer resources, helpfulness</li> </ul>
	elements	was scored $\geq$ 7 pts on a 10pt scale by 50% of
		participants who attended a support group and 79% of
	Whether the participant would	participants who met with a peer visitor.
	recommend the services	86% of participants would recommend the support
		group and 85% would recommend meeting with a peer
		visitor.
Hoffmann et al.,	Number of meetings	• 22% of participants attended one meeting, 26%
(2019)		attended two meetings, 38% had three meetings, and
	Patient satisfaction the number of	14% attended four or more. 64% of participants found
	meetings	the number of meetings to be appropriate while the
		remaining 34% would have preferred more meetings.
	l opics discussed	There was no association with the number of meetings
	Detient active active with mental	and satisfaction with the number of meetings.
	Patient satisfaction with mentor match	• The most commonly discussed topics were "life after
		hospitalization" by 81%, "practical problems" by 73%,
		"accessibility aids" by $62\%$ , and "the disease accident
		that caused my SCI" by 60%.
		• 94% of participants would recommend meeting with a peer mentor and 6% did not know.
Houlihan et al.,	Satisfaction	• High satisfaction with each peer health coach and high
(2016)		performance ratings for the peer health coaches.
	Perceived appropriateness	• Generally agreed the intervention would be beneficial.
		• Participants and peer health coaches expressed
	Intent to continue use	reluctance at study end and planned to continue using
		support materials.
	Actual use	

Perceived demand/need	• Participants demonstrated high levels of engagement and completed almost all their scheduled calls. The resource list was found to be more helpful than the
Expressed interest to use	workbook.
Degree of execution	<ul> <li>Participants felt the intervention would meet a real need.</li> </ul>
Success or failure of execution	• Every participant would definitely recommend the intervention to their peers.
Type of resources needed to implement	• Peer health coaches made 19% more call attempts than the protocol required and completed nearly all online tracking former documenting that they fully appended
Factors affecting implementation ease or	calls
difficulty	<ul> <li>Peer health coaches successfully completed three</li> </ul>
Efficiency of implementation	quarters of attempted calls and completed brief action
Efficiency of implementation	planning goal setting with all but 1 participant. Peer health coaches reported building skill in offering
Positive effects on target participants	support materials over time.
	<ul> <li>Peer health coaches focused much more than anticipated on creating personal support packages after each call. Although somewhat time intensive, this proved critical to participant engagement.</li> <li>Peer health coaches and participants reported that peer health coach's use of texting and flexible call scheduling facilitated engagement. Participants and peer health coaches found that using the resource list separate from the workbook was confusing. Peer health coaches found team calls to be important for problem-solving and ongoing support.</li> <li>Peer health coaches estimated 1 hour of time, including</li> </ul>
	preparation beforehand, documenting call content, and compiling personal support packages. Call length was found to be reasonable.

		• Participants reported three benefits, increased confidence towards achieving their goals, feeling supported by their peer health coach, increased connection to available resources.
Newman et al., (2019)	Usability/Use of services General feedback	<ul> <li>90% of participants preferred the iPad Air 2 due to the larger screen size.</li> <li>Participants with impaired hand function were able to tap the screen with their knuckles and when they were unable to apply enough pressure, an adaptive ring stylus could be used.</li> <li>Results from the Systems Usability Subscale indicated favorable levels of usability and acceptability of the iPad, mean total score 4.47/5. The lowest scored item was "I could use the iPad without having to learn anything new", mean score 3.9/5.</li> <li>Two participants suggested an introductory video to learn how to navigate an iPad.</li> <li>Participants were largely able to navigate the iTunes U platform and were able to move between and within the content modules without difficulty.</li> <li>The majority of participants expressed satisfaction with the online and multimedia aspect of the content and valued the focus on prevention of secondary conditions and found the video length of &lt;5 minutes to be acceptable.</li> <li>Suggestions for improvement included larger font size, more actors in the videos, and having the actors talk directly to the viewer.</li> <li>Holding iPads was difficult during video chat and wheelchair mount recommended.</li> </ul>
		• Participants living in rural environments experienced connection issues.

		<ul> <li>Favorable levels of usability and acceptability for the FaceTime platform.</li> <li>Participants appreciated the opportunity to talk to peers and none reported apprehension to talk to someone remotely.</li> </ul>
Wells et al., (1993)	Patient satisfaction with the program General feedback	<ul> <li>Many participants rated all aspects of the intervention highly.</li> <li>Participants reported that the type of amputation, age,</li> </ul>
	Satisfaction with the information provided	<ul><li>and interests of the mentor were important for matching.</li><li>All program elements were found to be beneficial.</li></ul>
	Hopefulness before and after the program	<ul> <li>Although not significant, people aged under 39 reported the least hope for the future and a higher proportion reported that they were not satisfied with their visit, felt they were not helped with their concerns, and were not satisfied with their visit, and would have liked another visit during their rehabilitation.</li> </ul>
Williams et al., (2002)	Patient satisfaction	• Overall, burn survivors were satisfied with the peer support program. Mean scores for the four-item (1 to 7 Likert) questionnaire were 5.81 (approached appropriately), 6.2 (visit was useful), 6.3 (questions were answered), and 6.18 (like to see again). Higher scores represent stronger agreement.


Figure 1. PRISMA diagram

PRISMA diagram displaying the number of articles identified through screening and the number that were excluded. Of 4,227 articles identified through database searching, 90 were included in the scoping review.