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Resilient, recovering, distressed: A longitudinal qualitative study of parent psychosocial trajectories following child critical injury

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ABSTRACT

Introduction: The psychological distress and risk of mental health problems for parents of children with critical injury is well-established. There has been little exploration, however, of parent experiences and psychosocial trajectories over time following child critical injury. To address this knowledge gap, a longitudinal qualitative study was conducted to explore parent experiences and support needs and identify parent psychosocial trajectories in the 12 months following child critical injury.

Methods: Semi- structured in-depth interviews were conducted with 27 parents at three time points over a 12 month period: the immediate hospital period post-child injury, and 6 and 12 months following injury, resulting in a total of 81 interviews. Data were analysed using a longitudinal within and across-case thematic analysis of patterns emerging over time.

Findings: Three parent trajectory patterns were identified: *resilient* trajectory where parents were temporarily disrupted by the child's injury and hospitalisation, but recovered their mental and emotional wellbeing quickly, which was maintained over time; *recovering* trajectory where parents were initially disrupted at the time of injury but their mental and emotional wellbeing fluctuated over time and had not been fully restored by 12 months; and *distressed* trajectory where parents experienced significant psychosocial disruption due to their child's injury and struggled to adapt and regain their wellbeing over time, remaining emotionally distressed about the circumstances and impacts of the injury on their child and family. Illustrative narratives that represent each trajectory are presented.

Conclusions: This is the first qualitative study to report the psychosocial trajectories of parents of critically injured children. Clinical application of insights provided by these trajectories can assist clinicians to use targeted strategies to help strengthen parental adaptation and prevent adverse mental health outcomes, and address families' psychosocial support needs following child injury. Screening for parent psychological distress and post-traumatic stress disorder is needed from the time of the child's admission, and a dedicated trauma support role can facilitate an integrated care approach for children and families with complex needs across the care continuum.

Introduction

Individuals adapt to acute adversity such as critical injury with a range of psychological (i.e. mental and emotional) responses over time, with varying patterns of outcome [1]. Understanding how people adapt over time to acutely stressful situations has implications for timely intervention to strengthen wellbeing and prevent

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adverse mental health outcomes. Subsequently, there is a growing body of evidence on longitudinal trajectory responses following acute adversities such as injury [2,3] and acute stress [1]. Based on quantitative outcome data, several prototypical trajectories have been identified. These include: resistance [4]; resilient/stable; gradual recovery; delayed response; and chronic distress [5]. *Resistance* trajectories involve minimal or no symptoms of psychological distress at the time of the adversity or following it [6]. *Resilient* or stable trajectories involve few or no ongoing symptoms, with psychological distress limited to the period surrounding the acute adversity [7]. Gradual *recovery* involves symptoms of psychological distress for several months, which gradually (over months-years) return to pre-adversity levels [5]. A *delayed* trajectory involves an initial lack of psychological distress, with later development of symptoms [6]. A *chronic distress* trajectory involves initial psychological distress symptoms which remain symptomatic over time [6].

Being the parent of a child with acute and potentially life-threatening or debilitating injury is highly stressful. While some parents cope and adjust mentally and emotionally [8], others have persistently high or increasing distress over time which negatively affects their wellbeing and that of their family [9–11]. When a child with critical injury is hospitalized, parents are placed under considerable strain. Initially, they worry about their child's survival and may feel guilt and blame about the injury [12]. On discharge, parents take on the role of caregiver, which may require them to make substantial changes to their lives, particularly in terms of employment and social activities [13]. Parents are therefore at substantial risk of developing anxiety, depression and post-traumatic stress disorder (PTSD) [14,15]. Studies indicate that more than half (54%) of parents report acute stress disorder and up to 27% have clinical levels of anxiety and depression [16], with nearly a quarter (23%) reporting clinically significant PTSD symptoms [17].

In the context of adversity such as child injury, personal resilience is a dynamic process of positive adaptation resulting in mental and emotional wellbeing. This involves interaction between personal resources and coping strategies, and the capacity to access available practical and psychosocial resources including social support [18,19]. While there is an emerging body of evidence on psychosocial trajectories (i.e. mental, emotional, and relationship patterns over time) following injury, this remains limited. Studies have explored youth and adult psychosocial trajectories following injury [20–22]. There is minimal reporting on parent trajectories following child injury. Le Brocque et al. [23] reported parent trajectories of post-traumatic stress symptoms in the two years following child injury, with gradual decline of symptoms over time. Most parents (78%) had a *resilient* trajectory, few (8%) had a *recovery* trajectory, and some (14%) had a *chronic sub-clinical* trajectory. However, these findings focus on post-traumatic stress and are based on quantitative outcome data. There is a gap in knowledge on parents' experiences and the contextual factors that may influence their wellbeing and psychosocial adaptation over time. Understanding the range of factors involved in parent adaptation is important for future prevention of adverse parent mental health outcomes and for addressing the psychosocial needs of children and families.

Aim and questions

This study aimed to explore parent experiences and psychosocial support needs and identify parent psychosocial trajectories in the 12 months following child critical injury. Research questions were: What are the psychosocial trajectories for parents of critically injured children in the 12 months following injury? What factors facilitate or hinder the psychosocial trajectories of parents of critically injured children in the 12 months following injury?

Methods

A longitudinal prospective qualitative design was used to follow a cohort of 27 parents over a 12 month period. This approach was chosen as it focuses analysis on both continuity and change over time [24], and provides in-depth personal accounts and insights into the factors and processes that influence parents' adaptation, providing a more comprehensive understanding [25] of parent psychosocial adjustment to child injury over time. Trajectory analysis has typically been based on quantitative data [5] which is not necessarily able to capture the complexity of factors influencing psychosocial adjustment over time [7].

Setting and participants

Twenty seven parents participated in the study over a 12 month period. Eligibility criteria were: (1) aged over 18 years of age; (2) able to speak, read and write English; (3) had a critically injured and hospitalised child 0–12 years with an Injury Severity Score (ISS [26]) > 15 and/or requiring admission to the Intensive Care Unit (ICU).

Data collection

Semi- structured in-depth interviews were conducted with 27 parents (one or both parents of the injured child) recruited from four paediatric hospitals in three states of Australia over three time points: the immediate hospital period post-child injury (face-to-face); 6 months following injury, and 12 months following injury (telephone). This resulted in a total of 81 interviews, which ranged up to 74 min in length with an average of 39 min. Interviews were conducted by two trained researchers. Based on prior literature and emerging patterns in later interviews, topic areas guided discussion at each time point: parent experiences and sense of personal wellbeing; psychosocial factors that influenced their wellbeing (e.g. personal, social and family relationships); the impacts of their child's injury on them, their child, and family members; parent and family main needs; whether these needs were met and by whom, and strategies parents used and resources available to them to address their needs. Interviews were conversational and participants were able to raise issues important to them, allowing for in-depth understanding of the meaning they made of their experiences [27].

Ethical considerations

Ethics approval was gained from each site: HREC/13/SCHN/404; HREC/14/QRCH/149; and 34089 A. Participants provided written informed consent for the audiotaped interview. They were provided with verbal support if they became distressed during interviews and interviews only continued with their consent. No interviews were discontinued and all participants were provided with follow-up psychosocial support information. To ensure anonymity, pseudonyms were used and identifying details removed.

Data analysis

The 81 interviews were audio recorded and transcribed verbatim and data were managed using the QSR International software NVIVO 11. To maintain a systematic process for coding, an adapted version of the longitudinal qualitative coding matrix template by Saldana [28] of descriptive categories (a summary eighth category on enabling and hindering factors was added by the researchers) was used. Child, family, parent and environment factors were coded in each category:

1) What increased or emerged over time (e.g. relationship status, job, income, hospital access, family relationships, parent-child relationships)?
2) What was cumulative over time (e.g. child's physical and mental/emotional recovery, parent experience of child's recovery?)
3) What significant life events (e.g. surges, epiphanies, turning points) occurred over time (e.g. death of a close friend/family, loss of job, relationship breakdown)?
4) What decreased or stopped over time (e.g. when children stopped attending appointments at hospital, change in distance travelled to appointments)?
5) What remained consistent or constant over time (e.g. child's physical health status, parents remained married, child continuing with physical treatment or counselling)?
6) What was idiosyncratic over time (e.g. life events not of magnitude but were inconsistent, unpredictable or distinctive, such as child returning to school or family moving house)?
7) What was missing over time (e.g. parent lack of knowledge on how to manage child's unexpected negative behaviours and/or emotional issues)?
8) What helped or hindered over time (e.g. child, family, parent, environmental factors that facilitated or hindered parents' psychosocial wellbeing, such as emotional support from family, financial difficulties, anticipatory guidance)?

Analysis was conducted in two stages. Initially, a within-case analysis was performed. Each set of interviews (baseline, six months, and 12 months) for each parent were coded for each time point according to the descriptive categories. Codes were then compared across time points for each parent, with a focus on continuity and change processes occurring between time points. Detailed analytic memos of emergent issues and patterns were kept throughout the coding process, with regular research team meetings to discuss and iteratively refine the coding to reach consensus. In the second analytic phase, an across-case thematic analysis of patterns emerging over time across interviews was conducted. Patterns that emerged from the coding across time points for each parent and from the analytic memos were thematically grouped. A summary of each trajectory and its characteristics was developed, with an illustrative de-identified narrative exemplar that represented the experiences of parents in each trajectory group. This constructed narrative included verbatim quotes from parents.

The parent and child demographic characteristics were analysed for associations with parent trajectories: Fisher's Exact Test (FET) was used to see if there was a relationship between trajectory and parental marital status, parental working status and mechanism of injury. One-Way ANOVA was used to compare child age and ISS means across the three trajectory patterns.

Findings

The demographic characteristics of the 27 parents and their children are in Table 1.

There was no significant association between parent trajectory and parental marital status, parental working status, mechanism of injury, child's age, or child injury severity. The parent trajectory typologies corresponded broadly with previous prototypical trajectories: resilient; recovering; and distressed. In each psychosocial trajectory, the presence or absence of family and social support; child's physical and emotional recovery; parents' perspectives of the child's injury and family situation; and parents' emotional responses to the injury and its impacts were included.

Resilient trajectory

Six parents displayed a resilient trajectory following their child's critical injury. These parents were initially shocked and distressed by their child's injury and their lives were temporarily disrupted by the injury and their child's hospitalisation, but they recovered their mental and emotional equilibrium quickly and returned to a state of wellbeing which was maintained over time.

These parents reported mostly positive experiences of care provision by hospital staff during the acute phase of their child's hospitalisation and responded positively to the care and quality of information provided by staff. After their child's discharge, parents' wellbeing and outlook improved as they witnessed improvements in their child's physical and emotional wellbeing. Parents drew on the practical and emotional support (including help with meals, household tasks and childcare, debriefing with family and friends) provided by strong partner and family relationships to help them cope post-injury. Those who were working were well supported financially by flexible and understanding employers who understood they needed to spend time with their injured child. Although these parents were anxious and distressed immediately following their child's critical injury, they considered that their child's injuries could have been far worse and believed they were lucky their child had survived and recovered so well. By 12 months, these parents generally felt they had grown through the experience, no longer took life for granted, and were more appreciative of the value and importance of family relationships. Parents felt positive about the future for themselves and their child and had moved on with their normal family life after their child's critical injury, as illustrated by the following story.

Jonathon's story

Jonathon was 45 years old and married with two children. His 11 year old son Matt was involved in a schoolyard injury which required bowel surgery. Matt was rushed to the local hospital and later transferred to a larger children's hospital where he underwent surgery and had a temporary colostomy. When Matt was admitted to hospital, Jonathon was distressed and uncertain about what the future might hold for him. Jonathon lived near the hospital and with his wife Alana, remained with Matt during admission while his mother cared for their younger son Jock (9 years). Jonathon had strong family and practical support, and although he was concerned about being separated from his younger son, he knew Jock would be well looked after by his grandmother.

Jonathon had a good relationship with Matt before the injury and a close relationship with his wife who provided emotional support throughout Matt's recovery. Jonathon found Matt's physical care in the hospital "utterly fantastic" and that staff had provided him with good practical information about Matt's injuries as well as caring support "I mean we've just had so much attention it does make a difference". In relation to his emotional wellbeing, before Matt's injury Jonathon had sought counselling when he was struggling with job stress. After Matt's injury he was willing to seek follow up counselling if he felt he needed it.

When he came home, Matt progressed well physically and emotionally. After four weeks he was readmitted for a reversal of the colostomy which went smoothly. By six months, all Matt's medical visits and follow up appointments had ended. Jonathon considered that life had returned to normal for the whole family and Matt was feeling "a hundred percent" both physically and emotionally. By 12 months Jonathon reported everyone in the family was doing well. Matt was "fit and strong" and had "just moved on". Jonathon had felt no need to seek counselling and considered he was "better off just getting on with it and marching forward". In reflecting over the past year, Jonathon considered that his own wellbeing was linked with that of Matt's, who had "coped incredibly well" both physically and emotionally and was back to his normal sports and school activities.

Matt's injury had made Jonathon reflect on the fragility of life and realise how quickly things could change and go downhill. The hospital experience made him realise how "life can be tough" for parents of children with long-term illness and how essential support networks were for these families. Jonathon had continued supportive friendships with parents he met when Matt was in hospital, which helped him recognise that "life needs to be nurtured and not taken for granted". Jonathon felt his family had been lucky and he was optimistic about the future for Matt and the family as a whole. He felt grateful for the hospital care Matt received and that Matt's injury and recovery had been a "surprisingly positive experience" for the family.

Recovering trajectory

Thirteen parents displayed a recovering trajectory following their child's injury.

Similar to that of resilient trajectory parents, the mental and emotional wellbeing of these parents was initially disrupted at the time of injury and they were distressed by their child's injuries and subsequent hospitalisation. Although they experienced some ongoing improvement in their mental and emotional wellbeing over time, they had not fully regained their wellbeing by 12 months. Recovering parents fluctuated mentally and emotionally over the months as they came to terms with the impact of their child's injury on themselves, their child, and family. Some parents had ongoing concerns about legal or financial issues associated with the injury, for example about police investigations of the injury event, or insurance claims. This meant that the effects of the injury on their lives did not end, but continued to have an ongoing influence.

In the early months, these parents tended to focus on their child's physical recovery and meeting the child's needs rather than on their own emotional wellbeing. While their child may have physically improved over time, they were unprepared for how the injury would impact their child emotionally and behaviourally, and in turn, themselves and siblings. Most recovering parents held lingering blame in relation to the injury incident, directed either at themselves for being responsible for the injury (e.g. being the driver of the car, or not supervising the child closely near cars), or towards others (e.g. the other driver in car collisions). These parents had signs of PTSD, for example repeatedly replaying the injury event in their head or being triggered by aspects of their environment to think about the injury, which impacted on their day to day mental and emotional wellbeing.

As the practical and emotional demands of their child's injuries and recovery reduced over time, these parents were gradually able to focus on their own wellbeing and start to address their need for emotional support. They began to make sense of what happened to them and their child in terms of acknowledging the injury incident and the impacts that had had on them and the family. Even though they did not feel they were back to their state of wellbeing prior to the injury, these parents felt they were moving forward and were hopeful life would get better. By 12 months, parents had started to take active steps to improve their mood, for example, by focussing on exercise or reading for pleasure. Some also recognised they were not coping well and sought help from their general practitioner (GP) or a social worker or psychologist. Some also sought help for their child's emotional wellbeing with a child psychologist. These parents were mostly well supported by partners, family and friends during hospital admission and over time. Some parents preferred to discuss emotional problems with professionals and friends rather than family members. Their child was supported by a range of outpatient services including physiotherapy, occupational therapy, and speech therapy, but parents felt they would have benefitted from more information about the psychological impact of injury on themselves and their children as this had caused them considerable anxiety and stress. Access to support services was easier for those living in metropolitan areas, but more difficult for families in regional areas. Victoria's story highlights the main characteristics of the recovering trajectory.

Victoria's story

Victoria was 39 years of age and married with two children. Victoria and her children were involved in a motor vehicle collision. Harry (8) and Victoria broke an arm and leg, and Fiona (6) had fractured ribs, perforated bowel and lacerated spleen. Harry and Fiona were admitted to a children's hospital and Victoria to an adult hospital. Victoria found it very difficult emotionally being separated from her children and being unable to support them and her husband Rob. Although her family did not blame her for the crash, as the driver she felt guilty for causing the collision and her children's injuries. She was especially worried that Fiona, who had sustained the most injuries, would blame her. Victoria's sister provided practical and emotional support to her while Victoria was in hospital and Rob's mother supported him and helped care for Harry and Fiona. Victoria found their support "priceless". Harry was discharged after a few days, but Fiona's injuries meant she was in hospital for a month.

When the family returned home, life was busy. Victoria coordinated the follow up medical and allied health appointments for herself and the children while also recuperating from her broken arm and leg. Both Harry and Fiona recovered physically, but emotionally Fiona began having nightmares and had constant fears she would be killed. Victoria was unsure how to cope with Fiona's fear and nightmares and the resulting lack of sleep affected her ability to function and cope with caring for her children. She didn't know who to ask for help and felt anxious about whether her concerns for her daughter's emotional wellbeing were legitimate. Victoria looked online for information and used her local networks to find a child psychologist for the children. The psychologist said Harry was fine and did not require ongoing assistance but Fiona was diagnosed with PTSD.

By 6 months, the demands of all Fiona's appointments had decreased but Victoria "began to feel the weight" of the consequences of the car collision. She found the collision and all that had happened "caught up with her" and felt upset, sad and withdrawn. Her relationship with Rob was "shaky", he was drinking more alcohol and the tension in their relationship seemed to impact the children, making them "very quiet, upset and looking for some stability". While her family had provided strong support, Victoria decided to get professional counselling, taking the suggestion of a friend to see a psychologist because "you don't want to burden your family and friends". By 12 months Victoria was physically healed following her injuries but she was still working with her psychologist toward reaching her previous state of mental and emotional wellbeing and continued to worry about Fiona's nightmares and the future.

Distressed trajectory

The final trajectory comprises eight parents who experienced significant disruption following their child's injury and who struggled to regain their wellbeing over time. Distressed parents found it difficult to adapt psychosocially after their child's injury. This was often related to the child's slow physical and emotional recovery process. By 12 months, these parents remained emotionally distressed and anxious, were not optimistic or hopeful about the future, and had not regained emotional stability. Their child's injury had overwhelming and far-reaching consequences on them as parents and their family. For most, the injury had substantially

changed their life circumstances and future outlook in terms of what they enjoyed doing personally and as a family. For instance, their lifestyle had completely changed because the family could no longer enjoy physical pursuits due to the repercussions of the child's injury on their physical functioning, or could no longer socialise with other families due to their child's unsociable behaviour. They were unsure and concerned about whether the child would return to their pre-injury level of physical and emotional wellbeing. While parents may have taken the initiative to investigate treatments for their child or embark on counselling for themselves, these had not yielded positive outcomes as yet.

Distressed parents often had negative emotions which impacted on their wellbeing. They felt sadness about what their child had lost, for example, the now paraplegic child who had loved to run and cycle and enjoyed outdoor life, or the child who went from being academically gifted to struggling with learning and behavioural difficulties. They also felt angry and frustrated towards the person perceived to have caused the injury, for example when the burden of care and responsibility for working fell on a mother when her husband blacked out at the steering wheel (not for the first time) injuring himself, their child and others, and who remained involved in court proceedings about the car collision.

For these parents, their expectations and hopes for themselves and their life had been dashed, and they struggled to integrate their new reality into daily life. They felt hopeless and helpless in their situation and concerned about an uncertain future. They grieved for who the child was before the injury, but also felt angry that the injury had occurred and had changed the course of their and their family's life. Despite strong support from family and friends, these parents had been unable to overcome the overwhelming negative impact the child's injury had on their lives. While they had made some progress in their personal wellbeing over the 12 months, for example, feeling better at particular time points such as when their child left hospital or made small gains, they remained affected by their concerns, as seen in Maggie's story.

Maggie's story

Maggie was 48 years old, married with two children; James (9) and Lucy (7). Both children were passengers in a car driven by their father Phillip when he ran off the road while travelling home from a weekend away. Philip and Lucy were uninjured, but James sustained spinal injuries, fractured both arms and had multiple lacerations. Maggie was interstate for work at the time. The extent of James' injuries was initially not clear and Phillip felt there was no need for Maggie to return home. By the third day, Phillip began to realise that James's injuries were more significant than he'd first thought and told Maggie to fly home. Both parents stayed with James in hospital and Lucy went to stay with her aunt. Maggie found the separation from Lucy difficult and worried how she was coping - "she's trying to protect us by saying look after James, but of course her needs are being ignored". Maggie felt self-blame because she didn't come home immediately following James's hospitalisation: "My burden is that I put my job in front of my family".

Maggie found the hospital staff caring, but felt on weekends and public holidays that James lost momentum with his recovery: "so on weekends you're in hospital but you've got no physios, there's no occupational therapists, so all you're doing is just biding time in a holding pattern". By three months James returned home. This was challenging for Maggie as they "didn't have the support team behind you". She felt frustrated no one would "tell us exactly what's going on". They lived several hours away from the hospital and local healthcare services were not always available and access was difficult. James still needed lots of help, especially with personal care as he hadn't fully recovered his ability to extend his fingers. Maggie took time off work to make James' transition to home easier and to take him to appointments. Maggie was well supported by her husband and family, but she was very concerned about James's mental health and his struggle to readjust to his changed self-image after the injury. Always sporty, cricket and running were his passions but now he couldn't be physical in his usual way. He had trouble walking, using his arms, and extending his fingers, and Maggie was anxious about his future. She continued to worry that James's physical limitations affected his mental and emotional health and found a local psychologist for herself, Phillip and James to see.

By 12 months, James's physical improvements (leg, arm and finger mobility) had slowed. Maggie's and the family's life had changed considerably after the injury and the outdoor physical activities previously enjoyed by them were replaced by indoor activities. Maggie felt extremely angry about James's injuries but also sadness about their changed family life. Her anger sometimes came out as frustration and she found herself yelling at the children, "I feel like I'm louder, angrier and I don't respond the way I'd like" which made her feel even worse. She continued to struggle emotionally, and felt "broken" and "helpless" at not being able to "fix" her son.

Discussion

This is the first qualitative study to report on parents' experiences and trajectories of psychosocial wellbeing and adaptation over time following child critical injury. There were several key factors facilitating or hindering parent wellbeing. The most prominent facilitating *and* hindering factor was that parents' psychosocial wellbeing was closely linked with their child's physical and emotional wellbeing, rather than any demographic factor. We found that as the child recovered physically and emotionally, parents also tended to regain their wellbeing. Parent wellbeing, however, was not completely dependent on their child's recovery. In addition, it was affected by the physical and emotional burden the child's injury had on them; parent appraisal of the injury event; their emotional responses (particularly anxiety, guilt and blame) to the injury and its impacts on their child and family; and the health service and emotional and social support they received.

The finding that parent wellbeing and child recovery was closely linked is supported by some but not all prior literature. Phillips and Rumsey [29] found the severity of child injury was not strongly associated with parent distress, while other follow-up studies report that more severe child injury can place greater physical and emotional stress and burden on parents over time and have a negative effect on parent mental health and family functioning [9,30], with parental stress persisting for several years following acute injury [31]. In this study parents with a distressed trajectory particularly struggled to regain their wellbeing and had children who had not fully recovered functionally or emotionally. A key hindering factor for parents with recovering and distressed trajectories was how unprepared they were for the emotional distress they and their child experienced following injury. Parents with a recovering trajectory deferred attending to their own emotional wellbeing until months after the injury event. Parents with a distressed trajectory struggled to come to terms emotionally with the changes to their child and family life following injury, and continued to blame themselves or others for the injury event. Blame attribution [12,32] and denying or devaluing personal emotional needs [31,32] are risk factors that can lead to poorer parental adaptation following child injury. Similar to major trauma patients being educated to prepare to experience pain and the associated impacts, clinicians should inform parents of injured children about what to expect emotionally, and begin early referral and intervention to mitigate risk of progression of Acute Stress Disorder symptoms to PTSD [33,34]. Parents at risk of emotional distress need to

be identified early and provided with regular ongoing access to social workers and psychologists or other mental health professionals for support and counselling. Screening for parent psychological distress and PTSD is recommended from the time of the child's admission.

A further distinguishing feature between parent trajectories was the presence or absence of optimism and hopefulness about the future. Positive cognitive appraisal and meaning-making of critical events are key factors in individuals' ability to be resilient and to positively adapt to adversity [35]. Being hopeful and having positive expectations for the future can predict emotional wellbeing and help sustain actions towards goals [36]. Parents who lack hope for the future are at risk of poorer emotional wellbeing. The study findings indicate that realistic anticipatory guidance beginning during child hospitalisation and in follow-up appointments is a critical support need for parents to prepare them for the psychosocial impacts of injury over time, and to help prevent adverse mental health outcomes. The findings indicate that key resources from healthcare providers which met parent needs were being given information about their child's treatment and feeling confident in the care provided, and having a positive and supportive relationship with healthcare providers. Parents wanted to feel a sense of control over what was happening with their child and some assurance about how their child's recovery would go. However, parents cannot necessarily control their children's recovery and need to be sensitively supported by healthcare providers to adjust to a new future for their child and themselves when full recovery is not achievable.

Parents in this study generally had strong family and social support. They also had healthcare provider support while their child was in hospital, but once home, were left to fend for themselves in respect to finding psychological support for them and their child. Access to social and psychological support are key resilience resources [6]. The lack of follow-up psychological support in this study is reflective of findings from a 2016 Australia-wide study [37] that identified access to, and coordination of, services for injured children and their families was poor. This could be addressed by introducing a dedicated trauma support role to facilitate an integrated care approach to patients with complex needs across the care continuum. This role would collaborate with other health care professionals to assure timely coordination and communication of care across the state to provide safe, consistent, high quality care [37]. The role would serve as a consistent point of contact for complex cases providing additional support to the family from admission up to two years post discharge, and better support for parents who often have to act as a 'shadow healthcare system' [38] for their children following injury.

Limitations

This study is limited to one group of English-speaking parents from the Australian context. Other parents may have had different perspectives. Future research could include a wider group of parents from varying cultural backgrounds and contexts.

Conclusions

Parent trajectories following child critical injury indicate that many parents continue to experience emotional distress following injury, and can struggle to regain their mental and emotional wellbeing over time. There is a critical need to intervene early to prevent long-term adverse mental and emotional health outcomes for parents.

To address parent and family needs adequately, screening for parent psychological distress is needed from the time of the child's admission, and a family-centred psychosocial approach to care implemented across the care continuum.

Authors' contributions

KF and AY developed the overall concept and design of the study. CV and AY collected the data. AY and KF analysed the qualitative data and CV analysed the demographic data. KF, AY and CV drafted the manuscript and AM, KC and RM critically revised the manuscript. All authors read and approved the final manuscript.

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