Post-Disaster Social Connectedness in Parent–Child Dyads: A Qualitative Investigation of Changes in Coping and Social Capital of Rural Australian Families Following Bushfires

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Abstract

The increasing frequency of natural disasters, such as bushfires, pose significant challenges for countries like Australia. This research investigates the changes in social connectedness following a bushfire disaster in 2019 in the rural community of Cudlee Creek, South Australia, Australia. Research has repeatedly highlighted the importance of social connectedness, social capital and secure attachment relationships in mitigating post-disaster mental health concerns. This study utilised semi-structured interviews with eight parent–child dyads twenty months post-disaster to understand changes in

parent–child relationships, the quality of extended family ties and the role of the broader community in recovery and coping. Reflexive thematic analysis revealed three themes: (i) differences in children and parents in preferred forms of social support; (ii) a thinning of previously available support and (iii) altered patterns of communication in the parent–child relationships. The findings highlight the complex interactions of multi-systemic and intersectional disadvantages on social isolation and loss of social capital following disasters. The results also highlight the influence of stoic beliefs on patterns of miscommunication in parent–child dyads in rural contexts. Implications for the implementation of community-wide post-disaster supports, sociometric approaches to mental health screening and assessment, and targeted interventions for rural families.

Keywords: attachment, bushfire, disaster recovery, social connectedness, social capital, wildfire

Introduction

Bushfires (or wildfires) pose an immediate threat of death and injury and cause extensive destruction of homes and workplaces. In addition, bushfires are a source of stress and trauma for individuals, particularly children and their families, with the potential of long-lasting repercussions on their mental health and well-being (Krishnamoorthy *et al.*, 2020a,b). Such were the challenges faced by residents of the rural Australian town of Cudlee Creek. The town faced a catastrophic bushfire in December 2019, resulting in substantial property damage, loss of livelihoods and wildlife destruction (Local Recovery Team, 2020). The fire threatened townships, destroying vineyards and orchards, and killing wildlife and stock. The fire burnt 23,253 hectares, destroyed ninety-eight homes and damaged fifty-six homes, and either destroyed or extensively damaged 542 outbuildings (Local Recovery Team, 2020).

Meta-analytic research has found that the pooled prevalence of psychological distress in the Australian general population (fifteen or more years of age) at two to three years post-bushfire is 14% (Zhang *et al.*, 2022). Research has found an increased prevalence of depression, anxiety and post-traumatic stress disorder (PTSD) in affected populations (North, 2016). The psychosocial factors that contribute to coping and post-disaster recovery are complex and multifaceted, often entwining elements such as the severity of the disaster, social and cultural context, individual attributes and pre-existing social supports and psychological resources (Tausczik *et al.*, 2012).

Among these factors, social connectedness, defined as the sense of belonging and the social support provided by family, friends and the

broader community, has been identified as a vital protective factor in mitigating the adverse effects of natural disasters (Cacioppo and Patrick, 2008). Disaster experiences are often conflictingly, characterised by an initial outpouring and mobilisation of received social support and aid followed by a profound loss of perceived social support and community (Kaniasty, 2020). Understanding the influence of natural disasters on social relationships requires further investigation into the interplay of intrapersonal, interpersonal and community-based factors that contribute to the protection and promotion of long-term mental health post-disaster.

The importance of social connectedness for families in a post-disaster context can be understood through social capital theory (SCT). SCT refers to the resources individuals and communities can access through their social networks. Relationships in SCT are categorised into bonding, linking and bridging social capital (Aldrich, 2012). Bonding social capital refers to the strong ties between individuals who share similar characteristics, such as family members or close friends. Linking social capital refers to the connections between individuals who are not necessarily similar, such as relationships between employers and employees. Bridging social capital refers to the relationships between individuals from different social groups, such as people from different ethnic or socioeconomic backgrounds (Aldrich, 2012). Social capital plays a crucial role in disaster risk management, including providing food, initiating debris removal, providing childcare, financial aid and immediate psychological support. Natural disasters have the potential to decrease social capital, as individual members, families and communities' networks get disconnected or weakened (Choo and Yoon, 2022).

For children, arguably the most important source of support in post-disaster contexts may lie in their relationships with their parents and caregivers. Attachment theory, introduced by Bowlby (1969), posits that individuals have an inherent need to form strong emotional bonds with caregivers, which serve as a foundation for psychological development and social relationships. Secure attachments are formed when caregivers are consistently responsive and available, fostering an environment of safety and reliability. Secure attachments are shown to buffer against the psychological impacts of disasters by promoting emotional regulation, and the ability to seek and utilise support effectively (Sroufe *et al.*, 2005). Insecure attachments, on the other hand, arise from inconsistent or unresponsive caregiving, leading to feelings of uncertainty and worthlessness (Bowlby, 1969). Insecure attachments can exacerbate vulnerability to stress and trauma, highlighting the importance of nurturing secure relationships for disaster recovery (O'Connor and Elklit, 2008).

Research indicates that there may be variations in the perceptions of social support within family units, between children and their parents or caregivers in a post-disaster context (Wisner, 2016). Parents and guardians often prioritise their role as caregivers, while children emphasise the

importance of peer relationships and emotional support from friends (Rothi and Leavey, 2006). These contrasting perceptions are often influenced by shifts in the parent–child relationship in the wake of natural disasters, where parents may experience increased stress, emotional distress and compromised ability to address their children's additional needs for emotional support and reassurance (Cobham and McDermott, 2014). While it has been established that social connectedness has positive effects on the physical (Drukker *et al.*, 2005) and mental wellbeing of adults and children more broadly, there is a need to discern how changes in the parent–child relationship following natural disasters may affect familial coping mechanisms and the development of social connectedness and resilience in children. Research highlights the complex interplay between children's perceptions of threat, family support systems and community cohesion in mitigating the impact of disasters on family functioning. These studies collectively advocate for a child-centred approach and the need to further understand children's subjective experiences in affected families (Peek *et al.*, 2010).

Furthermore, there have been calls for more comprehensive approaches to disaster support that address the needs of children and parents in ways tailored to the specific contexts of disaster-affected communities (Van Beek and Patulny, 2022). For instance, living in a remote or rural location is a significant risk factor for social isolation and loneliness (L'Heurex *et al.*, 2020). Rural communities face unique challenges in accessing support services due to geographic isolation, limited access to transportation and a lack of resources and infrastructure (Kapucu *et al.*, 2013). Understanding the dynamics of social connectedness in rural families post-disaster will support the development of tailored interventions and social services that respond appropriately to the specific social connectedness, resilience and wellbeing needs of children and their families.

Summary and research context

The potential, long-term negative impact of natural disasters on children's mental health is well documented (Masten and Narayan, 2012). However, research on post-disaster resilience and recovery in children is limited, primarily due to the complex interplay between family relationships, peer interaction, school environments, community support and developmental processes. Studies have predominantly employed quantitative methodologies, focusing on the clinical implications associated with natural disasters and PTSD (Le Roux and Cobham, 2021). Few studies have explored the critical dyad of parent–child relationships in these contexts, which may confer a unique source of social connectedness or conflict in managing mental health and resilience outcomes following disaster experiences (Norris *et al.*, 2002).

Qualitative methods are ideally placed to investigate the relational dynamics in parent–child dyads as they can provide a rich, textured understanding of participants' lived experiences, meanings, interpretations and subjective experiences. Australia is a bushfire-prone country, and bushfire risk (and its management) regularly form part of the national crisis response (Australian Broadcasting Corporation, 2020). Cudlee Creek, an area with mixed horticultural properties, hobby farms and rural lifestyle blocks. The town has a population of 425 residents in 2021 (ABS, 2022)—with over 300 residents moving out of the area after the bushfire. The participants of the study were caregiver–child dyads that continued to live in the area following the bushfires.

Research aims

The study aimed to (i) map the similarities and differences in social connectedness and coping between children and parents impacted by the bushfires; and (ii) compare the relative influence of social connectedness on coping and mental health post-disaster for children and parents.

Materials and methods

Study design

The University of Southern Queensland Human Research Ethics Committee (Ethics approval number: H21REA030) granted the study ethical approval. To explore the influence of social connectedness on post-bushfire recovery, potential participants needed to meet the following eligibility criteria: (i) they were between five and seventeen years old at the time of the fires and, (ii) they were affected by the bushfires through property damage or (iii) their family property was within 500 m of the fire impact zone.

Participants were recruited through five local schools' communication platforms in the fire zone, word-of-mouth referrals, and a parent Facebook group. The South Australian Department for Education and five school principals provided permission to source participants for the study. To minimise burdens on the schools, permission for the recruitment and interviewing of participants was obtained for three months (i.e. one school term). Detailed informed consent was obtained from each child and their parent before participation and interview recording. Participants were informed of local mental health services and supports. Eight parent–child dyads participated, with one family providing two sibling participants. All the parents interviewed identified as women and were the biological mothers of the children in the dyads.

Eight child participants (three girls and five boys) were interviewed. The average age of the children was 10.4 years (range = nine to twelve years).

All the dyads had experienced: fire damage to the fencing in their family homes due to the fires; children evacuated during the fires, and at least one family member remained in the fire zone after children were evacuated to put out spot fires and protect the family home. One dyad experienced the loss of their family home due to the bushfire, and four dyads had other extended family members also impacted by the bushfires. The data collection took place approximately twenty to twenty-three months post-event, allowing time for participants to reflect on the longer-term impacts of the bushfire. Despite the relatively small number of dyads, the data collected provided rich, in-depth data on the experiences of the families who remained in the community post-bushfire. The interviews yielded detailed accounts of participants' experiences, allowing for meaningful analysis to address the study aims.

An interview guide consisting of open and close-ended questions directed the interviews (Supplementary Appendix). All the interviews were transcribed manually by the first author (L.S.) into Microsoft Word. A parent or a nominated adult was present for the child interviews to provide support if required. None of the children opted to have their parents assist them in the interviews and opted to not have them in the room during the data collection process. Arts-based interview questions were utilised to engage the children in a developmentally appropriate manner (e.g. can draw a picture for me of yourself before the bushfire?). Interview questions focused on the child's mental health and functioning following the bushfires and social connectedness. Similarly, parent interviews focused on perceptions of their child and family's mental state and coping before and after the bushfires and changes in social connectedness for the family. The average duration of the child interviews was seventeen minutes (range = 13–30 min), and of the parent interviews was thirteen minutes (range = 20–44 min).

Data analysis

The data were analysed using thematic and content analysis, applying the COREQ checklist (Tong *et al.*, 2007) and employing a mix of deductive and inductive analysis (Braun and Clarke, 2021). Pre-defined codes were developed based on key concepts from social capital theory (e.g. bonding, bridging and linking social capital; Aldrich, 2012) and attachment theory (e.g. secure and insecure attachment patterns; Bowlby, 2008). The inductive analysis allowed for identification of unexpected patterns in the data. Findings from the cycles of analysis were combined by comparing the strength of supporting evidence between the two

coders (L.S. and G.K.). Final themes reflect a combination of theoretical concepts and researchers' interpretations of emergent patterns.

Results

Three themes were identified from the data (Table 1). All themes are supported by quotes from child and parent interviews to demonstrate the influence of social connectedness in the recovery of children and parents following a bushfire natural disaster. Identifying information has been redacted from the quotes to minimise the risk of members of the small rural community being identifiable. Parent and child quotes corresponding to each dyad are presented together in each section.

Differences in available and preferred supports

When comparing narratives between the families interviewed, there were differences in the levels of social support and connectedness within their community before the event. For example, some families described limited local community networks and more social isolation as they had moved to the community only months before the bushfire event. In contrast, other families had extensive networks, having been part of the

Table 1. Themes corresponding to intra-dyad and inter-dyad comparisons.

Themes	Theme description
Differences in available and preferred supports	• Influence of pre-disaster connectedness: Quality of social supports before the bushfires impacted post-disaster recovery. • Differences in preferred supports: Children described benefitting from connections with friends and educators by returning to school. Parents described benefitting from community connections via community events. • Opportunities to reconnect: Parents and children valued opportunities for connecting during holidays and time away from bushfire-related stressors.
Thinning of social support networks.	• Reduced availability for pragmatic supports: Family and friends were less available due to competing demands of post-disaster recovery. • Reduced availability for emotional support: Family and friends were less available due to secondary stressors and grieving losses.
Altered patterns of parent–child communication	• Hyper-attunement: Parents and children led to both becoming hypervigilant of distress in each other. • Fears of burdensomeness: Parents and children spoke of withholding disclosures about the psychological impact of the bushfires for fears of being burdensome. • Post-traumatic growth: Positive relational changes were noted, with children exhibiting signs of precocious maturity and parent describing post-traumatic growth.

community for many years. The social support available and accessible to families following the bushfires reflected the social connectedness the families held before the bushfires.

> We're quite social, so have other families come or you know, we'll, you know, socialise with other people. Quite sporty, involved with quite a few different sporting clubs (Child from Dyad 3)

> We had a lot of support, a lot of support from friends. People we have known for a long time … it definitely made a difference (Parent from Dyad 3).

Recovery-related challenges for socially isolated families were also influenced by other pre-disaster factors, such as being a single parent, having prior mental health issues and experiencing socioeconomic disadvantage.

> We didn't know many people, so it was hard to find help when the bushfires happened (Child from Dyad 4)

> My neighbours aren't particularly connected with us … We moved here from the city for a less stressful and complicated life.less expenses and stress. The bushfires changed all that. I was away from my friends and family … and everything after [the bushfires] we needed seemed to be in the city … it's been harder for us since (Parent from Dyad 4)

The quotes highlight the impact of social isolation, intersectional disadvantage and cumulative burdens experienced by members of rural communities' post-disaster. The excerpt also illustrates how marginalised families often resort to engaging with urban centres to access the required infrastructure and supports required post-disaster.

Within each dyad, children and parents agreed upon the salient role of immediate family members (i.e. parents, siblings) as primary social supports.

> We talked to Mum and my brothers (Child from Dyad 8).

> she's pretty good at talking, so she will let you know how she's feeling and if she's upset or whatever (Parent from Dyad 8).

Older children (age ten to twelve years) emphasised the importance of reconnecting with friends and making new connections at school. This aligns with a broader theme amongst children in seeking to rebuild social relationships by engaging in normative activities post-disaster at school, in their neighbourhoods and online.

> I kind of just talked to my friends online. And then seeing them at school … that was good to hang out (Child from Dyad 6).

> It was the fact that he was online on his headset actually talking to his friends. It helped a lot, gave a lot of distraction too (Parent from Dyad 6).

Parents and guardians spoke of the benefits of building connections with local community members through local events and activities. The valued components of the support provided included practical help with recovery (e.g. help with fencing, accessing items of need and information about support services).

> … Fire Support were our immediate source of support in our area, quite literally on the ground, and I'm forever grateful to those amazing people who just turned up and asked what we needed and seemed to just make it happen (Parent from Dyad 3).

Parents and children in four dyads spoke of the opportunities to reconnect as a family by travelling to places outside the bushfire-affected areas. Parents described feeling less preoccupied with recovery-related tasks and being better able to connect with their children. Moreover, the children described enjoying a respite from reminders of the bushfire.

> Going away to … Beach for a short holiday allowed us to leave behind the stress of the disaster, focusing instead on each other. (Parent from Dyad 4)

> It was a nice break from the bushfire. (Child from Dyad 4)

Thinning of social support networks

The cumulative loss reverberated through these networks, leading to a discernible 'thinning' of available support. Within rural communities affected by bushfires, it was observed that the immediate recovery efforts substantially decreased the availability of pragmatic support from family and friends. The focus on securing disaster recovery grants and other government supports and services interfered with time previously allocated to spending time with loved ones. The process of accessing post-disaster support also emerged as a complex concern.

Parents reported unawareness of entitlements offered by local agencies and spoke of the large volume of paperwork and bureaucratic processes, reducing the time they could spend with children and families.

> 'It was very stressful, and it went on for most of the year….I'm the director of my Mum and Dad farm so I, I was getting grants for them. I didn't have time for much else to be honest' (Parent from Dyad 1).

> 'Sometimes at school … when it's fun or whatever. I feel bad … I think I should be helping my parents at home with things' (Child from Dyad 1).

Like the child in above dyad, children in two other dyads spoke of being aware of the competing demands faced by their parents. Feelings of guilt for returning to normative activities seemed to influence how receptive children were to support offered to them in other contexts, such as educators and peers at school, and other family members.

> I was lucky that I could send my child off to my sister's house and so she [daughter] was sort of out of the picture. I know lots of other people who couldn't do that. I just had too much to do and I didn't want to worry about her [daughter]. I know she needed me but I had so much to get on top of (Parent from Dyad 5).

> [At my aunt's home] They always talk about it ….every time we went up to the rental they talked about [loss from the bushfires] and then it just, I had to go out the room sometimes (Child from Dyad 5)

The quote illustrates how children did not always experience certain family members as sources of support—particularly those who seemed preoccupied with the bushfires. Children in three dyads spoke of feeling overwhelmed, burdened and withdrawing from conversations about the bushfires from adult family members. Both children and parents spoke of not seeking support for concerns of their experiences being trivialised and misunderstood.

> they're like, oh, you're fine .because your property didn't burn down like your house didn't burn down, your shed didn't burn down, you didn't lose any livestock (Child from Dyad 2)

> I think the biggest problem was that they just didn't have, like, they hadn't experienced it themselves, they were quite distant from it, and it was just hard for them to understand (Parent from Dyad 2)

Challenges to seeking appropriate social support were also linked to strong beliefs relating to self-reliance and stoicism amongst families in the region.

> …. people don't complain about this sort of thing. You just deal with it, you know. Everyone just gets on with it, and you'll deal with it … you fix it and you'll sort it and you'll move on. People are proud and don't ask for help (Parent from Dyad 6).

> … I always feel like it wasn't so bad for us. Like we know so many families … need more help than us … but they are ok. So you don't want to carry on [complain] too much (Child from Dyad 6)

Parents in three dyads described being mindful of being an 'emotional burden' on family and friends. They limited discussions of their mental state and coping—even in the moment when they required emotional support. This stoicism contributed to some parents being unable to fully grieve and make meaning of the cumulative losses and traumatic memories linked to the bushfires.

> .effects of the bushfire, go on for so long … everyone … is still dealing with it a year later, like whether it be the stress, the financial stress the, we still don't have a home stress we're still rebuilding back. My parents' fences only just got built …. There is no time to stop and think about everything we lost or could have lost.. Honestly thought Dad was gonna die [in the bushfires]. I really did. He still has a really weak heart. A lot

of heart problems. But he didn't die … but there's no time for that. Everyone is busy trying to get their life back, so you carry on (Parent from Dyad 4)

Altered patterns of parent–child communication

Both parents and children described patterns of 'hyper-attunement'— hypervigilance and preoccupation with the emotional state of family members. As seen below, parents described feeling worried and preoccupied about the negative emotional impacts of the bushfires on their children.

> its been like two years … we are a bit tuned in to the weather … checking about for the rain, like we had after the fires … I'm also more tuned in to how they are going, like the mental impact of looking at black [burnt trees and landscape] all the time … I guess its just trying to protect my family from all of it' (Parent from Dyad 3)

> 'We had to go to grandma's [birthday] in [another Australian state], and I could tell everybody was nervous about leaving … mum was starting to get stressed, so I was trying to help. I can tell now when its starting to get like that … ' (Child from Dyad 3)

Parents spoke of difficulties differentiating normative changes in their children's emotional states from those that required additional support. This difficulty with accurately attuning to children's mental state is illustrated in these quotes:

> I was pretty chill with the fires …. I found it more entertaining and fun than it being a big disaster, which it very much was. (Child from Dyad 5)

> all this time that he's been saying I wasn't really affected by it, umm, truthfully, he didn't react in any big way …. But after that, he stopped watching David Attenborough, and he's always been really environmentally concerned …. He still hasn't been back to the park. Won't go there. (Parent from Dyad 5).

Difficulties tuning into children's emotional needs were reported by six of the eight dyads. These parents also described a family culture that endorsed strong beliefs regarding self-reliance and stoicism. In these dyads, parents described a pattern of children not disclosing worries and emotional states to family members for concerns of being burdensome.

> He won't open up to me about these things … It's his way of coping is to keep the atmosphere really calm … I think he needs everyone around him calm. And if he tells me he thinks … maybe I won't be calm and I will get stressed … it's hard. I know the more I ask and push, the more he will shut down' (Parent from Dyad 1)

'Felt sad for … . couple months. Then I had, like, anxiety over sleeping in my own room for months, like ages. Yes. That. I don't know why I was just like that. And I didn't want to talk about it because I didn't know why … it was annoying when they were asking me about it because they were make me feel like a problem … like I'm a wuss and weak … I didn't want to make it a thing for everyone to be worried about' (Child from Dyad 1)

As illustrated in the quotes, dyads described a cycle of approach and withdrawal in their parent–child relationships. Parents spoke of difficulties understanding their children's emotional needs, leading to increased vigilance for signs of distress. Children, primarily boys from four of the dyads, perceived this increased vigilance as intrusive, causing them to withdraw further and mask their emotional needs. This cycle seemed to lead to feelings of helplessness in parents and conflict in parent–child dyads.

Children and parents also described positive changes to their relationships after the bushfire. They described their children's behaviour as showing signs of precocious maturity. Many parents described their children as engaging in more prosocial behaviours in and outside the family.

I think we, we talk better. As in we talked before, but I think … .a relationship that's more even (Child from Dyad 5)

I certainly feel like our relationship between the three of us is a little more, umm, as friends more, less like 'I'm the adult decision maker, and you're just the kids (Parent from Dyad 5)

Parents also spoke of post-traumatic growth, offering new perspectives on the importance of their relationship with their children, family and friends. They discussed gratitude and the re-prioritisation of life goals to nurture social connections.

We just felt so grateful. That probably is a keyword as well. Grateful that we you know that [husband] was safe after fighting the fires on Kangaroo Island. It's the small things, but you realise how fragile life is. your kids, the house, our farm … you know we are so grateful for all that stuff (Parent from Dyad 2)

Lots of things have changed.like Christmas and Easter … but we still got the TV, still got [gifts]. Still have my family. (Child from Dyad 2)

Discussion

Climate change predictions highlight the increased risk of substantial storm, flood and drought events (Cleugh *et al.*, 2011) and increased severity and frequency of catastrophic bushfires (Australian Academy of Science, 2015). This study aimed to investigate changes in social

connectedness in parent–child dyads following a bushfire event. The findings of this study are consistent with the social capital theory (Aldrich, 2012) and with the extant literature on the relationship between social connectedness in adults and positive mental health outcomes (Bryant *et al.*, 2017). The 'recovery advantage' to those with stronger pre-bushfire social connections was evident in the narratives of this study. Overall, our findings align with previous research on family functioning post-disaster. For example, Pujadas *et al.* (2013) found similar patterns of family communication in their study of nineteen families after the 2011 Slave Lake wildfires. They found families focused on emotional support, community involvement and positive reframing to cope with the disaster's aftermath and foster resilience (Pujadas *et al.*, 2013).

Several participants described challenges related to social isolation, socioeconomic difficulties or being new to the community. While not systematically assessed across all participants, these factors appeared to influence post-disaster experiences for several families in the study. The disadvantage experienced by those who were more socially isolated seemed to interact with other domains of inequality and marginalisation, such as socioeconomic difficulties. Further research is needed to more comprehensively examine how various forms of marginalisation may impact social connectedness and disaster recovery in rural communities (e.g. Fraser and Blake, 2020) and innovative methods to promote the social capital of these families is warranted.

The findings provide preliminary support for the notion that parents from both socially isolated and connected dyads may prefer more bridging social capital in the form of relationships across the community. They highlighted the benefits of community events in making links with other community members while also providing them with a respite from post-disaster recovery stressors. Reports of limited bridging capital amongst the families in this study may reflect the paucity of access to local community-based organisations in rural regions of Australia (AIHW, 2022).

The study's findings of children's preferences for contact with friends and peers in the school setting highlight the importance of considering developmental differences in post-disaster support. Schools constitute a significant community structure for children and relate to a broad range of child-specific services and referral agencies. They embody structure, safety and social connections, which are vital for positive post-disaster outcomes and resilience (Ayre and Krishnamoorthy, 2020; McDonald-Harker *et al.*, 2021). Schools are well placed to facilitate engagement with social resources and trauma-informed support (Mutch, 2015; Schimke *et al.*, 2022) and provide access to multi-disciplinary care post-disaster (Curtin *et al.*, 2020; Krishnamoorthy and Ayre, 2021). Children, families and staff in school communities can offer input into screening and assessment processes and assist in providing information to families

(Bellamy *et al.*, 2022; Bowyer *et al.*, 2023). Allowing integrated services within schools improves access to services for overburdened parents.

Changes in the parent–child relationships post-disaster appear to be characterised by a cycle of hyper-attunement and masking/withholding for fears of being burdensome. Research on such patterns of hyper-attunement in parents could be understood as a mechanism by which parents seek to limit their distress and that of their child and to keep their child mentally safe and healthy (Williamson *et al.*, 2017). Studies have also linked this hypervigilance to parental beliefs about their children being 'permanently damaged', leading to a heightened sense of future danger, preoccupation with child's vulnerability and ruminations about traumatic stress reactions in their children (Hiller *et al.*, 2018). While it is important to note that no assessments of parent–child attachment were undertaken in this this study, previous research highlights that parents exhibiting insecure attachment styles may face challenges in their reflective functioning (RF) capabilities (Fonagy *et al.*, 2002; Krishnamoorthy *et al.*, 2020a,b).

RF relates to the ability of adults to think about their personal and their child's mental states, as well as the influence of these states on their parent–child relationship (Fonagy *et al.*, 2002). It is noteworthy to mention that a specific dimension of RF termed 'hyper-mentalisation' is characterised by an over-attribution (or misattribution) of mental states, occasionally incommensurate with the observable cues in the child's behaviour (Sharp *et al.*, 2011). Specifically, misalignment in ascribing accurate emotional states in children may inadvertently perpetuate destabilising interactions—such as the approach-withdrawal patterns identified in the findings. Although scant literature addresses hyper-mentalisation post-bushfires and no assessments of RF or mentalisation were conducted in the study, further research is warranted to explore the relationship between these constructs in a post-disaster context.

The difficulties in accurately mentalising children's needs may be related to the limited communication between some dyads of emotional reactions and needs. This was linked to the endorsement of a stoic coping style, concerns about burdensomeness and pride in self-reliance during post-disaster recovery. Previous research has highlighted the role of stoicism and self-reliance as significant factors influencing help-seeking in men in post-disaster contexts (e.g. Whittaker, 2019). In this study, there appears to be evidence to suggest the presence of such attitudes in the interviews of caregivers. While the research suggests the prevalence of such attitudes in regional and rural communities in Australia (Whitaker, 2019), more targeted research in the Cuddlee Creek community may need to be conducted to confirm such beliefs and copings styles.

While this study did not include assessments of post-traumatic stress within the dyads, a large body of literature confirms the substantial negative influence of parent post-traumatic stress symptoms on children's coping (Afzal *et al.*, 2023; Miko *et al.*, 2023). Such findings have

prompted scholars to recommend a focus on reducing parents' post-traumatic stress symptoms & distress and bolster their coping to enable them to be more emotionally available and appropriately attuned to the needs of their children. A family-focused screening approach for mental health may allow the detection of psychological concerns in both children and their parents—particularly in cases where anxious parents are seeking support for their children's mental health. In the context of the present research, the access to social capital, and sense of social connectedness of the families may have been mitigated by parent mental health concerns (Afzal *et al.*, 2023). Further investigations of these issues in the context of post-disaster rural and regional areas are warranted.

Given the growing prevalence of mental health concerns in children and adolescents (Lu *et al.*, 2022), the findings of this study hold important implications for social work practice in a post-disaster context to mitigate child mental health concerns and promote family coping. Guidance on preventative practice—including positive parenting practices that encourage supportive and developmentally appropriate communication and limits on children's exposure to disaster-related information (Phoenix Australia Centre for Post-traumatic Health, 2013; Dallinger *et al.*, 2022). Social workers are well placed to personalise such guidance by incorporating the influence of multi-systemic factors on families in rural areas—such as the challenges related to the bushfires including financial strain and increased familial conflict (Taylor and Goodman, 2015). Social work responses to supporting parents and children may need to also consider those with clinical levels of post-traumatic stress and other mental health concerns. Research has shown that universal screening of children in schools in post-disaster areas can inform a stepped-care approach to providing varying levels of mental health support for children and their families (McDermott and Cobham, 2014). The implementation of such stepped-care practices will likely require a systematic approach to understanding the specific and idiosyncratic needs of rural centres—including key assets and resources that can be mobilised in post-disaster contexts (McDermott, 2014).

Study strengths and limitations

The qualitative nature of this study both enhances its richness and introduces limitations. By prioritising children's autonomy and personal experiences within the context of natural disasters, the research provides nuanced insights into the parent–child dyadic post-disaster social connectedness after an Australian bushfire. This approach, however, relies on self-reported accounts, potentially missing the objective assessment of actual behaviours and receipt of support. While the study captures the essence of children's experiences, it acknowledges limitations in the depth of their qualitative responses. In addition, given the timing of

the interviews (twenty to twenty-three months after the bushfire), and the traumatic nature of the events, it is possible that recollection abilities of parents and children may have been impacted. This may constrain the comprehensive understanding of their emotional and social dynamics post-disaster. Moreover, the study's focus exclusively on bushfire events restricts the generalisability of findings to other types of natural disasters, each entailing distinct challenges and support mechanisms. Another dimension lies in the diverse interpretations of social connection, evident in the differentiation between parents and children. This variability in perspectives challenges the alignment of findings with established theoretical models. The study thus underscores the complexity of post-disaster social connectedness and highlights potential discrepancies between lived experience and theoretical constructs.

Conclusion

This study investigated the effect of dyadic social connectedness on the recovery of children and parents in the aftermath of bushfires in a rural community in Australia. The results revealed the complex multi-systemic influences on the impact of the bushfires on the social capital of families and the attachment relationship between children and their parents. Among the identified differences, parents often tended to seek community-level support, while children found solace in family and friends. These differences were consistent with prior research and hold important implications for influence on community-wide recovery-oriented events and school-based supports for rural families that are isolated or have less available social support. Patterns of insecure attachment and communication—characterised by the cycle of limited emotional communication, fears of being burdensome and hypervigilance for the mental state of others—is a novel finding. Given the prevalence of stoic and self-reliance attitudes among rural communities, this finding holds important implications for the design of screening and intervention programmes aimed at promoting post-disaster mental health and well-being in families. With evidence of increasing frequencies of natural disasters like bushfires, the present research highlights the importance of adopting sociometric planning, assessment and monitoring approaches to disaster resilience and recovery and the need to continually honour and understand the lived experiences of children and their families impacted by natural disasters.

Supplementary material

Supplementary material is available at *British Journal of Social Work Journal* online.

Author contributions

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