



Disaster Impacts on Students and Staff from a Specialist, Trauma-Informed Australian School

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Abstract

Children from disadvantaged backgrounds often experience high levels of traumatic stress, however, little is known about their experiences and the responses of their teachers following disasters. The aim of this study was to examine, from the perspective of teachers, the impact of a critical community-wide traumatic event on student and staff wellbeing, and student learning and teaching practices at a specialist school for disadvantaged and displaced youth in Australia. Eight school staff were interviewed, including administrative, teaching, and support personnel, with their responses interpreted using Interpretative Phenomenological Analysis. Results focused largely on the impact of the event and the resultant relocation of the school on staff and student health, reduced opportunities for learning, changes to teaching and student engagement, and the strengths and limitations of the trauma-informed approach of the school. Implications for teacher education and school trauma-informed models are discussed.

Keywords Disaster · Trauma · Disadvantage · Children · Teachers · School

Exposure to disasters, which can be defined as events causing significant disruption to a community beyond their capacity to cope (United Nations Office for Disaster Risk Reduction 2017), can have serious and long lasting effects on children. There is increasing evidence of the impact of trauma on academic achievement, classroom behaviour, and social and emotional development of children (Perfect et al. 2016). According to a major US study, approximately one in four children are estimated to have experienced a traumatic event in childhood (Costello et al. 2002), with children from disadvantaged backgrounds at even greater risk (Salazar et al. 2013). Schools play a major role in improving educational outcomes and mental health of children following trauma (Rolfesnes and Idsoe 2011; Stokes and Turnbull 2016). However, few studies have specifically examined the impact

of disasters on the wellbeing and learning capacity of students from underprivileged and displaced backgrounds. This study will examine the perceptions of school staff on the impact of the Hazelwood mine fire event on student and staff wellbeing, student learning and teaching practices.

The Hazelwood Mine Fire Event

On February 9, 2014, burning embers generated from nearby bushfires spotted into the open-cut brown coal mine in Morwell, Victoria, adjacent to the Hazelwood power station. Within hours this had sparked large fires in disused sections of the mine, resulting in thick plumes of smoke and ash covering the town of Morwell and surrounding neighbourhoods (Teague et al. 2014). Over the 45-day duration of the fires, levels of carbon monoxide (CO) and particulate matter less than 2.5 thousandths of a millimetre and small enough to be breathed into the lungs (abbreviated as PM_{2.5}) regularly exceeded EPA advised standards (Emmerson et al. 2016). Some local businesses, schools and other community services closed or relocated, while families and residents of Morwell and surrounding towns also relocated or endured the smoke and ash by wearing masks and remaining indoors (Teague et al. 2014). The duration and uncertain health implications

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of this event, coupled with the higher levels of disability and disadvantage of people within the town of Morwell, had the potential to increase the physical and psychological impacts of this event at the time and ongoing (Teague et al. 2014).

The School Setting and Use of a Trauma-Informed Teaching Model

The specialist independent secondary school that took part in this study is one that relocated as a result of the smoke event. The school caters for students aged 12 to 18 years who have stopped attending or been excluded from mainstream education because of traumatic, behavioural, emotional, learning and/or family and relationship challenges. Students at this school may have experienced multiple placements in foster care or residential care, may be from refugee backgrounds or living independently while gaining their education. The school uses a three-tiered trauma-informed model developed by researchers at the University of Melbourne, Victoria, which focuses on enhancing students' stress regulation skills, repairing students' disrupted attachments, and increasing students' psychological resources to promote post-traumatic growth (Stokes and Turnbull 2016).

To achieve these aims, the model addresses five domains, including: (a) self-regulation of the body, including appropriate identification of emotions and behaviour in response to those emotions; (b) relationships that encourage attachment and whole-school relationships; (c) stamina to foster emotional intelligence and resilience; (d) engagement of students in the learning process; and (e) identification of the personal strengths and values of students (Stokes and Turnbull 2016). A recent pilot of the model at two different schools revealed that staff felt that the program had a positive impact on student wellbeing, achievement, behaviour and engagement, and expressed a willingness to continue using the model and maintain professional development of staff (Stokes and Turnbull 2016). This model has been adopted more widely in Australian schools.

Review of the Relevant Literature

Studies into the impact of traumatic events on schools and school staff have indicated that teachers experience uncertainty and emotional burden when working with children after trauma (Alisic 2012; Alisic et al. 2012; Dyregrov 2009; Kenny 2001, 2004). Teachers have expressed frustration and helplessness when providing support to students following incidents of loss and bereavement (Papadatou et al. 2002), while students themselves have reported dissatisfaction with the response of teachers following an experience of trauma or loss (Dyregrov et al. 1999). A recent report by Hubbard (2014) alluded to developmental delay and anti-social

behaviour among some children following the 2009 Black Saturday fires, and the need for programs to assist teachers to manage these issues in the classroom. Teachers and school staff have also been shown to have elevated levels of emotional distress and posttraumatic stress disorder (PTSD) following disasters (Costa et al. 2015; O'Toole and Friesen 2016). However, the bulk of trauma-related studies have been concerned with individually experienced events (e.g. family violence), rather than community-wide incidents, with even less research on the effects of disasters on students with additional learning, behavioural and emotional difficulties.

People from disadvantaged communities and who are disabled are often the most heavily impacted and vulnerable to both the short- and long-term consequences of disasters. This can be due to a disproportionate number of disadvantaged individuals living in high-risk areas for disasters, their lacking economic resources and access to information (i.e. language barriers, limited communications devices), and their higher prevalence of chronic physical and mental health conditions (Victorian Council of Social Service 2014). Children with disabilities have also been described as being at greater risk of posttraumatic stress and adverse outcomes due to greater loss and separation from caregivers, increased parental strain, intellectual difficulties and educational delay, complex support and health care needs, and greater physical and mobility issues (Peek and Stough 2010). Exposure to trauma in childhood can also further exacerbate disadvantage and social exclusion (Frederick and Goddard 2007), and psychiatric illness (McFarlane and Van Hooff 2009) in adulthood. As a consequence, research with children from disadvantaged backgrounds is necessary to understand the impacts of disasters on those likely to experience the greatest negative outcomes and therefore most likely to benefit from additional support and targeted intervention.

The daily contact between school staff and students means that staff are well placed to identify the negative impacts of disaster events on student learning and resilience, as well as impacts on teaching and staff wellbeing. Understanding the impacts of disasters on vulnerable children and those who support them is the critical first step in development of resources and programs designed to intervene and respond to the unique needs of these students and carers following disasters. To the authors' knowledge, this study will be the first to specifically examine the perceived impact and experiences of school staff in responding to disadvantaged students following exposure to a disaster event. This study will examine teacher and other school staff perspectives regarding the potential impact of the Hazelwood mine fire event on staff wellbeing and teaching, and student wellbeing and learning at a trauma-informed specialist school evacuated as a result of the critical six-week event.

During the past decade, growing awareness of the additional needs of students from disadvantaged and traumatised

backgrounds in Australia has seen the development of trauma-informed approaches in schools (Stokes and Turnbull 2016). Trauma-informed models recognise that dealing with traumatic stress of students promotes greater school attendance and classroom engagement among students (Ko et al. 2008). According to a trauma-informed approach, dealing with traumatic stress of students involves developing a safe and secure school environment for staff and students, replacing traditional disciplinary methods with strategies to reintegrate students back into the school community and limit re-traumatisation, encouraging skills for self- and co-regulation with peers, developing healthy social relationships with peers and teachers, providing development opportunities and training for staff, and improving links between school staff and mental health providers (Oehlberg 2008; Stokes and Turnbull 2016). However, as trauma-informed models continue to be developed, further research is warranted to evaluate and provide recommendations on their effectiveness in different contexts. An understanding of the views of staff from a trauma-informed school will provide insights that should be generalized to mainstream schools regarding the utility of this approach following a community-wide critical event in creating a more supportive school environment for staff and students.

Research Questions

Drawing on the above review of the literature, the research questions for this study included: (a) What was the impact of the Hazelwood mine fire event on student and teacher wellbeing at a specialist school?; (b) What was the impact of the Hazelwood mine fire event on learning and teaching at a specialist school?; and (c) Can a trauma-informed approach assist students and teachers at a specialist school during a disaster?

Method

Ethical Considerations

Ethics approval was provided by the Monash University Human Research Ethics Committee (Approval number 5834) and consent from the manager of the specialist school was obtained. Because of the small staffing complement at the school and the small number of schools in the impacted area, the name and location of the school are not being identified to protect the anonymity of participants.

Participants

Staff from a specialist independent secondary school in a regional town of the Latrobe Valley, Australia, were invited

to participate in the study. School staff were invited to participate via an information sheet and the study was publicised by the school manager. The invitations, and subsequent interviews, took place approximately a year and a half after the smoke event. Approximately half of those employed at the school agreed to participate, including a mixture of leadership ($n = 2$), teaching ($n = 4$) and support ($n = 2$) staff. The sample size of eight participants was considered appropriate to gain an in-depth understanding of the event from the perspective of staff at the school (Guest et al. 2006). Participants ranged in age from 38 to 66 years (*mean age* = 51.36 years; *SD* = 12.3) and had been working at the school between three and ten years, with an average of approximately four years.

Measures

A semi-structured interview schedule was developed by the researchers to assess the impact of the Hazelwood mine fire event on wellbeing and teaching at the specialist school. The interview schedule included open-ended questions to address the research questions of the study, including understanding the effect of the event on student and staff wellbeing, and learning and teaching at a trauma-informed school. The schedule consisted of two distinct sections. The first was intended to prompt recall of the event, and to promote discussion about the students and practices of the school (e.g. “Think back to the time of the event, what do you remember about this time?” and “What are specific challenges for students at your school?”). The second section was designed for participants to talk about the impact of the event on staff and student wellbeing, learning and work practices at the time of the event and currently (e.g. “What, if any, impact did the event have on you?”).

The overarching theme from the analysis centred on relocation of the school during the event, with subthemes ordered according to the different types of impacts reported by the participants, including: (a) the impact on student wellbeing; (b) the impact on student learning; (c) the impact on staff wellbeing; (d) the impact on teaching; (e) use of the trauma-informed model; and (f) recommendations from the event. Example quotes to illustrate themes are included within each section.

Interviews were conducted by trained postgraduate student researchers, at the school, during school time, and lasted between 30 to 60 min. School staff completed a consent form prior to completion of the interview. Interviews were recorded and the recordings transcribed by the student researchers. Transcripts were then returned to participants who were given the opportunity to review them, correct errors and provide additional information. No participant took up this opportunity to provide feedback.

Procedures

This study drew on an Interpretative Phenomenological Analysis (IPA) approach (Smith et al. 2009), with the aim of exploring the experiences and significance of a disaster event among school staff at a specialist school. According to the procedure for IPA, transcripts were read and re-read by two of the authors (EB and DH), and themes and the connections between themes were identified and discussed between the two authors and with the remaining authors until consensus was reached. IPA was selected because it is a person-centred approach that seeks to understand and describe the subjective experiences of individuals through in-depth but flexible semi-structured interview and comprehensive analysis. The data generated from the interviews was highly detailed and specific to the experience of relocation for staff and students at the specialist school.

Results

School Relocation

As described earlier, the event led to the relocation of the school campuses. Initially, participants commented on how students attended their original school site for the first few days of the event before staff decided that the event could continue for some time and have a negative impact on staff and student health, so an alternative school location was needed. However, being a specialist school, participants described the challenge of relocating their cohort of students because they could not be relocated to a mainstream school and also could not be in close proximity to shops and other distractions. The process of finding an alternative venue was reported to take two weeks until staff settled on a sporting and recreation community hall located in a neighbouring town. While closure of the school as an alternative to relocation was discussed among staff, this was described as not being an option due to the vulnerability of students at the school. According to participants, relocation of the school to a site away from the event impacted their wellbeing and work practices, and students' wellbeing and learning in several ways, including reduced quality of teaching, poor student engagement, imposition of extra duties on staff, increased student anxiety and behavioural issues, and shortening of the school day. Each of these will be discussed in more detail in the following sections. The difficulties surrounding the relocation were summed up by one staff member: "So it was either that or shut the school for the whole month and a half or what have you, and then lose kids literally, they don't come back sometimes or it takes another three months to find them all and reengage them...".

Impact on Student Wellbeing

The event was reported to increase the physical and mental health vulnerabilities of students (e.g. coughs, anxiety), and increase frustration, stress and violence in students' homes, while relocation of the school reduced students' sense of safety and security. The challenges faced by students in their home environments, students' exposure to the smoke and potential health impacts, and issues related to finding an appropriate and safe relocation site for students were particularly difficult for staff to manage. Issues also related to merging students from the junior and senior campuses together at the relocation site which led to conflict between the two groups, negative influences of the older students on the younger students, and other behavioural issues among students. These issues further increased the workload and anxiety of staff.

One participant summarised the impacts of the relocation on students: "So we saw a little bit of aggression. We saw a drop in attendance. We saw students having the ability to exclude themselves and hide in places in the hall where we were unable to find them at times. Actually that was only one student. We had issues with the senior students and with the junior students not managing together. So some verbal altercations, a reasonable amount of work refusal, because there was too many people in the environment, in the big hall and it was all too overwhelming". Another staff member added: "From the students' perspective, some of them responded rather adversely, that there was a change in the routine, some find a certain security in the routine of things, and it was obviously disrupted". The impact of the event on the home lives of students was raised, with one participant commenting: "I know that for some kids there was an increase in violence at home, you could see the stress levels in the family go up". The challenging home environments of some of the students were also commented on by another participant: "... there isn't enough blankets on the bed, there isn't quite enough food in the cupboards so it's the dip which made the dip bigger".

Other comments related to the positive implications of school relocation on student wellbeing, including that the relocation site was further from the mine, reducing student exposure to the smoke and the associated negative health implications, especially for those with known asthma and respiratory illnesses. Participants recognised that not all students were anxious or concerned at the time or following the event, and reflected that some students were resilient due to earlier exposure to adverse experiences, while others were more vulnerable based on these experiences. It was reportedly difficult for staff to separate the impact of the event on students from other co-occurring difficulties faced by the students.

One participant stated that, "It impacted some of the student's health. We do have quite a few students with asthma -

that was a bit of an issue”. Another added, “Our kids are really resilient. You know I work with young people who have had 10 changes of addresses this year and it’s only July and they just pick their gear up and go and they’re the older kids. Younger ones, some of them had been in and out of different residential programs and foster care so they’re, not that they’re used to change but they sort of go with change”. A third staff member commented, “... we don’t know what they are and, their life situation, you know, some of them wear the same pair of clothes for two weeks... before they get washed or any of those kinds of things, some of them come in absolutely ravenous and are very grateful for the food here every day so the impact... it’s hard to know”.

Impact on Student Learning

Once a new setting was selected, issues related to creating a new school schedule, managing student behaviour, maintaining student learning, and engaging vulnerable students were identified by participants. Participants spoke about how it took two weeks for staff and students to settle into the new environment, including adjusting to the new, shorter school timetable due to students being bussed to and from the site daily, understanding how best to use the space of the new setting to promote learning, and chasing up students who had stopped attending school. Some participants indicated that the relocation would have impacted student learning regardless of the setting, with one participant noting that, “The kids don’t like change, this is where having to relocate was a huge impact on the kid’s learning ability and their settlement, everything because they do not like change”.

While the relocation was challenging, the new site had some positive aspects, such as use of a sports field oval for students and kitchen facilities for staff to continue providing breakfast and lunch provisions to students. The sports field oval was reported as having a positive impact in terms of increasing student’s self-regulation and fostering relationships between students, with one participant noting, “We did lots of physical activity because we had an oval so we adapted to being outside a little bit more... So there was always continual changes. It doesn’t help sometimes, but it did help with the situation we had”.

Relocation was reported to reduce school attendance by a third, resulting in greater staff to student ratios and increasing opportunities for one-on-one work between teachers and students. Despite increased opportunities for one-on-one instruction between staff and students, the relocation impacted student learning due to the shorter school days, poorly structured classrooms and greater distractions for students, and reduced access to resources, such as computers and the internet. The reduced access to resources resulted in some frustration for

staff, but also changed the curriculum and opportunities for hands-on learning among the students, with one participant noting, “...the disruption to the curriculum was quite significant. I would argue that not a lot of learning occurred during that time”. Some students were reported as having withdrawn from school completely at the time; however, it was unclear whether this was due to the relocation, with one staff member commenting, “... I know that several students who started that term never came back, they sort of disappeared off the radar. I don’t know what happened to them, whether they moved away...”. Although an impact on student education was recalled, some participants indicated that learning was maintained to an extent. “... the students still got an education, maybe not the best education that they would have had at our school but you can’t help these things when you have had, you know, a crisis like that”.

Impact on Staff Wellbeing

Participants mentioned their own frustration and anxiety about the uncertain duration and implications of the event on staff wellbeing. It was difficult for staff to receive information because they were not told about meetings for school staff organised by the Country Fire Authority (CFA), with one participant noting, “... you were inadvertently left out of many groups so I’d go to one meeting and there’d not be a meeting again and I’d have to ring up and figure out that there has been a meeting...”. Communication with the Department of Education and Training was also reportedly difficult because the school is independent (non-government) and therefore not under the control of the Victorian government. The time taken to move the school’s resources to the new location and pack up at the end of each school week so that the relocation site could be used for sporting and other community events over the weekends also increased the frustration of staff. One interviewee commented, “... I was just sick of the back and forth, back and forth, I just wanted to be back at school, consistency and the routine, which I’m sure the students wanted the same...”.

There were also comments about the potentially cumulative impact of trauma exposure on staff wellbeing and the wellbeing of their family due to previous bushfire exposure in the region, with one participant noting, “... it sort of made me scared, the orange shadow that you could see on the ground, the smell of the smoke, took me back to that time, that fire...”. Staff were required to attend the original school site before and after school hours during the relocation to collect and drop off school materials. This was reportedly difficult for staff because of the increasing demands on their time and the potential impact on their family, with one commenting, “We had to sort of still continue with the day to day stuff and school ... one of the

school staff members at the time he had to relocate at the time as well so him, his partner and his two children had to move to his in-laws place so they shifted because they live very close". There were also concerns about the immediate and long-term health complications of smoke exposure for staff and their families, including asthma and headaches, particularly for staff with existing health conditions that required them to stay away from the area during the event. One interviewee commented, "...I don't get asthma so I felt like I was going to be ok, but I did feel for the people who had asthma, for the staff members who you could tell it affected them...". Replacement staff were then needed to be located by the school, increasing the pressure experienced by the remaining staff. However, participants reported on the resilience of staff during the event and commented that staff worked cooperatively and in the best interests of students. While there was a sense of striving to put student safety first, particularly because of their vulnerabilities, it was clear that the uncertain nature of the event and health implications resulted in increased staff anxiety. This was highlighted by one staff member:

... staff worked really well together and held a strong united front. Which we always do but we really had to glue really well together so we could manage the situation. And it was really tiring because of the packing up and moving, and having like a transport roster and register. And there were phone calls going on about who's going on the bus where and it was a really strong coordinated approach that we were very glad was over by the time it was done.

While teamwork and cooperation reduced the burden for some staff, for others, there was a question about the need for increased decision-making and consultation between school leadership and teachers, with one participant noting:

... pretty much, they [school leadership] make a decision and ... then they, as in our leaders, ... they'll come to us as teachers and you know, we will sit down and talk about it, but... as the teachers, I don't think we had too much say, on... what was happening,... I don't think we had too much of a voice in that.

Impact on Teaching

It was "a lot harder", according to staff, to reportedly do their work because of the physical impacts of the event, the additional duties and pressures they experienced during the event, the disruption caused by the relocation, and the impact of student behaviour and wellbeing. The additional duties reported by

participants included additional paperwork related to collecting and returning students each school day, phoning students and carers to notify them about the school's closure and relocation, managing student behaviour during and after school hours, and packing up the relocation site each week. Staff spoke about their anxiety regarding the "cascading little minor hiccups" related to selecting the relocation site and bussing students to and from this location each school day. This was highlighted by one interviewee:

... and all the little anxieties that come with busing people, how long do you wait, oh someone said they're on their way and they're on their phone and they'll be there in five minutes. You sit there... waiting for them to turn up or not..., and you get to the station and the train's delayed, so you phone someone and say 'look we're waiting for...'

Another interviewee made the following observations:

Organising a transport schedule for these students was quite difficult as well because some students are on one-on-one programs so they are not ready to manage in a group and making sure we delivered an education to everyone even though the school was shut down. So the extra challenges included transporting a whole group of students out of the really structured, consistent type of environment that we provide at the school to a big hall and trying to maintain the same type of consistency when everything was different.

The Trauma-Informed Model

Participants spoke about the different processes of the school according to the trauma-informed model for managing student behaviour and enhancing student self-regulation and coping skills, and that they were able to capitalise on the existing model when responding to the mine fire event. One participant commented, "... with the demographics of the school, support at a fairly high level is an everyday, ongoing thing anyway, and I'd suspect it probably, you know, changed the focus of the support a little bit...". Access to the site sports field oval, one-on-one support and teaching for students, consideration of the individualised needs and home circumstances of students, maintained school attendance and engagement, and focus on students' ability to cope were all strategies used by staff that could be linked to the pillars of the model (including emotion and behaviour regulation, maintained student-staff relationships and attachment, engagement with schooling, and stamina and resilience of students). Only the last factor (i.e.,

identification of personal strengths and values) of the model was excluded. However, participants mentioned difficulties in applying aspects of the model due to relocation of the school. Some participants commented that the trauma-informed model did not translate in the new location, while others suggested that the support aspects of the model were useful in helping staff and students at the time. For example, participants reported that they worked hard to monitor student behaviour and maintain routines during the relocation period. The focus of the model on communication and debriefing between staff was also highly valued at the time. One participant noted, “We have lots of different challenging behaviours that we had to manage and the way our school is set up so students are never unattended. There is always a teacher present at every moment of every day and then we were in this whole new environment”.

Recommendations from the Event

Participants spoke about what they learned from the event and would recommend to other schools impacted by similar events. There was an emphasis on having a system in place to contact students and families in an emergency (i.e., school lists and work computers at home), a system to notify students and families earlier of school closures and changes (e.g., Facebook page) and to have a plan in place for a suitable alternative location in case of another disaster event. This was best summarised by one participant, “Look we have learnt quite a lot, its things, like simple things, like having student lists available from home you know, so you don’t have to come in and get a student list to ring everyone and say, there’s no school. Just the things, like making sure you have your laptop at home and things like that, just in case”.

Discussion

Overall, the Hazelwood mine fire event impacted the wellbeing and learning of students and the teaching and wellbeing of school staff. In terms of the impact on students and staff, school staff reported that students had heightened anxiety as a result of the relocation, there was disruption to school routines which impacted on the students’ learning and increased staff workload, and the event reduced the school’s capacity to deliver trauma-informed care to students. It was also suggested that the event increased disruption in the home environment, with students reporting to staff that there was an increase in frustration, stress and violence in the home. This finding is consistent with past trauma research that has shown wide-ranging effects on social, emotional and academic outcomes among children, including increased irritability and conflict within families (Anda et al., 2006; McFarlane 1987).

There were, however, positive reports regarding physical wellbeing, particularly being that the relocation reduced exposure to the pollution and potentially a reduction in the associated symptoms, such as coughs, asthma and anxiety, along with increased outdoor activities on the relocation site sports oval. While it was reported that the physical environment improved, the relocation negatively impacted students’ emotional and social wellbeing, again through disruption of their regular routine. Part of the disruption to school routines was the result of merging the junior and senior students which reportedly led to student conflict and behavioural issues. From a broader perspective, staff highlighted that it was difficult to separate the impacts of the event and relocation from other co-occurring difficulties of students. These findings expand on previous research showing that students from disadvantaged backgrounds are at greater risk of being exposed to the negative complications of traumatic events (Salazar et al. 2013). Interestingly, staff commented on how students’ prior experiences of dealing with multiple challenges put them in good stead during this period.

While the teachers in this study had similar experiences to those reported previously (i.e. uncertainty, frustration and emotional burden; Alisic 2012; Alisic et al. 2012; Dyregrov 2009; Kenny 2001, 2004), it might be argued that the response of staff was improved due to the nature of the school and their familiarity with trauma-informed care. Staff indicated in interviews that their awareness of the background of children gave them insight into how the students would respond to the disruption caused by the event and the course of action they should undertake. This heightened awareness was illustrated by discussion relating to the selection of the relocation site, which could not be in close proximity to other schools and shops, and awareness that relocation would disrupt the carefully developed school routines and impact student learning and sense of stability.

The key issues associated with the relocation included the reported decrease in student attendance and risk of students’ dropping out of school, shorter school days because of the time lost to transport students to the new school site each day, poorly structured classrooms and increased distractions for students, and reduced access to resources for teaching. From a staff perspective, this led to a greater need to manage student learning and behaviour, as well as considerable administrative time chasing up students who had stopped attending school. While these actions were seen as negative by participants and the demands of staff were considerable at this time, it is likely that their knowledge of the additional needs of their students and use of at least four of the five tenets of the trauma-informed model may have prepared them to respond to the event in a more optimal manner. Having said that, however, staff did indicate some limitations of the school’s

response, including lack of early preparation and school policy prior to such an event occurring, and limited decision making consultation with teaching staff.

While the focus of the staff was on the wellbeing of students, it must be recognised that there was also a substantial impact upon staff wellbeing. Staff reported being adversely impacted by the event, and had concerns about the short- and long-term health implications of pollutant exposure for themselves and their family. Staff experienced frustration and anxiety about the uncertain duration of the event, and concerns regarding communication failures with local and state-level authorities. This is despite comments about the overall resilience of staff during the event, and the reported communication and debriefing which occurred among staff which were a highly valued aspect of the trauma-informed approach. Although it is likely that without the trauma-informed practices of the school and high level of knowledge and training of staff that the school response would have been far worse following such an event, some lessons can be learnt from this study by all schools.

Recommendations

Adoption of Trauma-Informed Teaching more Broadly

The major recommendation from this study relates to the adoption of trauma-informed approaches more broadly in educational settings. While the results of this study indicate that implementation of the trauma-informed practices was challenging in light of the relocation and associated disruption to the school routine, the model may have increased staff awareness of the importance of monitoring student behaviour and, where possible, maintaining stable routines, school engagement, and looking for opportunities to increase students' emotional and behavioural self-regulatory skills regardless of the setting (e.g. use of the oval field at the new site, focus on maintained staff-student relationships). However, these models need to include clearer school policy and staff training for responding to community-wide disaster events, in addition to individually experienced trauma, to reduce the burden on teachers. Many of the concerns raised regarding appropriate implementation of the trauma-sensitive strategies could be mitigated through having a plan in place for a suitable alternative school location or locations in case of another disaster event.

Specific Disaster Response Recommendations

Related to this point, staff also made recommendations to other schools impacted by similar events. Having a system

in place that can be accessed away from the school site to contact students and families in the event of an emergency or disaster was strongly recommended by staff. This could include key school personnel having access to school contact lists from their home or through secure online systems. In addition, schools should put in place a collective system to alert all families and students to school closures and provide updates earlier (e.g. through Facebook), as well as having a plan in place for communicating with other impacted schools and departments of education. Staff indicated that greater communication and support from wider school regulatory authorities and emergency response teams is needed for schools and families to maintain wellbeing and promote recovery following such events.

Support for Parents and Families

Results indicated that disruptive parent-child interactions increased during the event and therefore may have hindered the recovery of students and increased the burden of school staff. Therefore, related to the idea of coordinated crisis response teams and development of community-wide protocols, is the recommendation for parents and families to be better supported during critical events. This is particularly important for teachers and other school staff who as community members are potentially dealing with the same disaster response issues as their students (Costa et al. 2015). Furthermore, research has shown that even if not directly impacted, school staff can experience levels of secondary posttraumatic stress when working with traumatised youth (Bride 2007; Smith Hatcher et al. 2011). Arguably, staff working with children and families from disadvantaged and displaced backgrounds require greater support in this area.

Limitations

Findings from this study need to be viewed in light of the fact that the sample was drawn from one specialist school in Australia and the results are not necessarily reflective of the experiences of all school staff following traumatic experiences. In addition, the unique nature of this prolonged community-wide pollution event means that the issue of relocation may not be applicable to all disaster events in which schools are required to respond. Further research exploring the impact and response of trauma-informed schools to other disaster events is warranted. It would also be highly beneficial to explore the experiences of the entire school community, including students and families, and to further explore the contribution of parent distress on child outcomes.

Conclusion

It is clear that the specialist school staff faced considerable challenges in responding to the mine fire event and maintaining the school routines in a sub-optimal relocation site. This included challenges for staff to manage their own reactions and family instability during the event, to challenges associated with maintaining stable relationships and student engagement due to the event and subsequent relocation. While there were wellbeing and educational impacts reported for students and staff, the school's use of a trauma-informed approach to teaching provided considerable insights into how best to support students during this period.

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Compliance with Ethical Standards

Disclosure of Potential Conflicts of Interest On behalf of all authors, the corresponding author states that there is no conflict of interest.

Research involving Human Participants and/or Animals Details of the Monash University Human Research Ethics Committee approval and approval number are provided in the body of the article.

Informed Consent We confirm that the ethical standard of informed consent was followed in all matters.

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