Australian e-Journal for the Advancement of Mental Health (AeJAMH), Volume 5, Issue 3, 2006
ISSN: 1446-7984

Intervening with the process of recovery from a traumatic life event: Case study of a child victim of a school fire disaster in India

Sujata Satapathy and Ajinder Walia

National Institute of Disaster Management, Ministry of Home Affairs, New Delhi, India

Abstract

The case analysis is based on a school fire tragedy in India, which resulted in 93 deaths and 21 grievously injured children. The case discussed here was a part of a larger study undertaken mainly to identify harmful psychological reactions and associated behaviour having long-term psychiatric implications, and to assess the suitability and appropriateness of a 10-day home-based psychosocial intervention programme. The intervention was undertaken three and half months after the incident to ensure that the major treatment of injuries was done. Different play therapy methods were applied to facilitate the ventilation of thoughts and emotions in the child. Post traumatic stress symptoms were measured with a subset of 8 items from the Impact of Events Scale (Horowitz, Wilner & Alvarez, 1979; validated by Dyregrov & Yule, 1995). Results showed remarkable reduction in the exhibition of psychosomatic symptoms, especially stress and anxiety symptoms, in the post intervention assessment. The mean score on the IES scale was also less. Parents, neighbours and relatives corroborated the behavioural change observed by the team. Reduced anxiety, apprehension, and shyness also validated the intervention. The findings highlighted the need for and significance of providing mental health care services and developing need-based psychosocial intervention programmes for children encountering such severe disasters.

Keywords

recovery, trauma, impact of events, post traumatic stress disorder, play therapy, interventions, children

Case synopsis

The case discussed in the paper is of a girl aged nine who sustained 38% burns and associated physical and psychological trauma in a school fire disaster. The case study revealed anxiety related symptoms and the child's strong feelings and emotions related to the acceptance of her scarred face. Her concern about her newly acquired physical identity and perhaps her and society's acceptance of it was a source of incessant stress for her. Since disaster mental health care is not included in the primary health care facilities in the Southern Indian state of Tamil Nadu, it was imperative to intervene when the treatment for the burn injuries was about to be completed. The deep impact of the incident on the psyche of the child had to be addressed and taken care of as otherwise it might permanently affect her personality as well as her

Contact: Sujata Satapathy, Ph.D, Assistant Professor, National Institute of Disaster Management (Ministry of Home Affairs, Government of India), IIPA Campus, I P Estate, Outer Ring Road, New Delhi, India 110002
sujata.s@nidm.net

Citation: Satapathy, S. & Walia, A. (2006). Intervening with the process of recovery from a traumatic life event: Case study of a child victim of a school fire disaster in India. *Australian e-Journal for the Advancement of Mental Health,* 5(3), www.auseinet.com/journal/vol5iss3/satapathy.pdf

Published by: *Australian Network for Promotion, Prevention and Early Intervention for Mental Health (Auseinet) –* www.auseinet.com/journal

Received 30 August 2005; Revised 25 October 2006; Accepted 3 November 2006

future, in terms of education, occupation, social and family life. The team applied the play therapy method, which facilitated not only the ventilation of the child but also changed her overall state of happiness and well-being. The impact of this traumatic event had also deeply affected the internal fabric of the family, resulting in increased alcohol consumption by the father and other associated family problems relating to change in his behaviour. All these secondary consequences could make the child's life more traumatic. The case narration and discussion highlighted the importance of necessary mental health interventions for the child, as well as the significance of including mental health services in the primary health care services in the state.

Introduction

Fire accidents in buildings across India have caused extensive loss of life, limb and property in the last four decades. Many of these tragic incidents have occurred in Tamil Nadu. Some of the major incidents include a fire accident in a Higher Elementary School in Madurai in 1964 which killed 35 children; a touring cinema tragedy in Tuticorin in 1979 (73 deaths); a fire breakout in a Temple in Thanjavur in 1997 (40 deaths); a fire in a (so called) 'mental home' in Erwadi in 2001 (28 deaths); and a fire in a marriage hall near Tiruchi in 2004 (63 deaths). The worst affected in all these fire incidents were the children in terms of number of deaths, injuries and suffering.

Subsequent to the series of tragedies, fire safety measures were made compulsory in marriage and community halls in the state in 2004, with periodic inspection by fire service personnel and local administration. However, school safety measures were not included in the purview. Within a couple of months a fire breakout at the Sri Krishna High School in Kumbakonam in Thanjavur district of Tamil Nadu state in July 2004 was another incident added to the list. The fire spread outside the hearth oven and further to the thatched roof of the school kitchen (in India there is nation wide programme of providing a mid-day meal for children below 14 years of age in government and government-aided schools; this is a part of the national movement in promoting 'Education For All'). A strong wind normal in the months of July-August fanned the flames as they leapt to catch the thatched roof on the first floor of the school building. Seeing an outbreak, the teachers hustled all the children into a classroom that was approximately 15 feet wide and 115 feet long with a thatched roof, locked the collapsible door, and then left to extinguish the fire. About half an hour later, the situation got out of control. The children on the ground floor as well as one part of the first floor were asked to escape from the school; due to the panic generated no one seemed to spare a thought for the 125 primary standard children who were locked inside the classroom. The incident resulted in the deaths of 93 children. Twenty-one children sustained 30-60% burn injuries.

There is a plethora of literature elucidating the influence of psychological mechanisms and consequences of natural as well as man-made disasters (Bachrach & Zautra, 1985; Gibbs, 1989; Green, 1993). However, while community characteristics and demographic vulnerability factors have received considerable attention (Paton, 1996), psychological vulnerability mechanisms and consequences have been less extensively researched. This is more so the case in India, though disaster vulnerability in its every aspect is very high among the population due to its geo-climatic, economic and socio-cultural set up. Therefore, disaster managers must acknowledge this heterogeneity and design and develop intervention models that accommodate all these factors, along with special needs of more vulnerable groups like children and women.

The psychosocial intervention programme applied here was an attempt to design an age-appropriate, flexible, home-based programme; keeping socio-cultural factors and family needs in view.

Case overview

Vidya, a resident of Karuppur village, is a nine year old girl studying in fourth standard of a Tamil medium school in Kumbakonam. Her father is a television mechanic in his early thirties and her mother is a housewife in her late twenties. Vidya belongs to a low middle class socio-economic background (Indian standard) with a monthly family income of US$100-120. She is the only child of her parents. She was a

beautiful and cheerful child before the fire incident. As described by her parents, relatives and neighbours, she used to play outside most of the time. Vidya lost her best friend in this incident.

Vidya sustained 38% burns on the face, back, hands, palms and shoulder. While the team intervened she was undergoing treatment, which was about to be completed in a month or two, in a private hospital in Kumbakonam. Her fingers had been badly burnt; she could not keep them straight. The doctors had recommended surgery, which was to take place in a couple of days. One side of her face and scalp had irreversible burn scars.

At the time of the incident, the local community rescued Vidya. She was in a semi-conscious state for 10 days after the incident. Throughout these days, traumatised Vidya kept calling her teachers to come and save her and her friends. She could not even recognise her parents after she regained full consciousness. However, after several counselling sessions she began to recall the incident and finally recognised her parents. She seemed to be very self-conscious about the burns on her face as she was earlier a pretty child. She had become socially withdrawn. She was not going out to play but kept to herself most of the time. Moreover, the death of two close friends from the adjacent household had also affected her. She had started feeling lonely due to their absence. Since she was under treatment she was yet to attend her new school. The pain in her eyes and faint smile indicated the internal turmoil she was going through at the time of team's visit. Apart from the child's trauma, the incident also appeared to have had repercussions on the family environment, which is briefly discussed below.

Nearly four months after the incident, the family's reactions to this new and perhaps permanent stressor were very apparent. Her father was still at home and had not resumed his daily occupation. He suffered from a reduced appetite and had started consuming more alcohol. It was observed that he was drunk most of the time. Consequently, the financial status of the family was declining. During the 10 days of intervention with the child, though, he cooperated with the team. He appeared overprotective of his daughter as he repeatedly patted and caressed her. According to the mother, his possessiveness and over-protectiveness towards Vidya had remarkably increased after the incident. He was worried about her future, particularly regarding marriage. The mother also complained of his comparatively more aggressive behaviour towards her.

The mother was initially on medication as well as counselling provided by different visiting psychiatrists and counsellors. Interactions with her revealed her to be in a stable emotional state. Her husband's alcohol problem, however, had added to her woes. The declining financial status of the family was also a constant source of worry for her.

However, both the parents supported Vidya throughout. The bond between the parents themselves seemed to be stronger during the crisis, even if the mother had to bear with her husband's drinking behaviour. The couple regularly visited the temple since their only daughter was saved. Only six students survived from Vidya's classroom. Since the adjacent household had lost two sons in this tragedy, the couple felt fortunate that their daughter had survived. Vidya's grandmother was staying across the road; her frequent visits and spending time with Vidya was a great support to the family. Vidya, being the only girl in the family and the single child of her parents, received a lot of social support, contributing towards her recovery.

During the course of discussion with the parents, grandmother and Vidya, it was revealed that the child was exhibiting the following symptoms:

- Reduced appetite;
- Disturbed sleep (unable to sleep - rising every one or two hours murmuring that she was in flames);
- Nightmares;
- Weepiness;
- Loss of interest in social interaction;
- Reluctance to make new friends;
- Dislike of going out;
- Feeling of loneliness (two of her friends from the adjacent household died in the same fire incident);
- Quieter, more introverted after the incident;
- Less cheerful;

- Shyness;
- Frequently looking in the mirror;
- Engrossed with touching the burnt parts of her body.

During the rapport building stage she expressed her love for her friends and strong need to play with them. However, she also expressed apprehension about other children laughing at her, which would hurt her more. She frequently stressed that new friends would not understand her and that it would be difficult for her to adjust with them. To understand Vidya's feelings and emotions better, the team decided to conduct some activities based on play therapy principles, with an objective to allow her to ventilate her fear, apprehension, problems, other feelings and thoughts.

Methodology

The intervention

The intervention was undertaken three and half months after the incident took place, to ensure that the major treatment and surgery of the injuries had been done and the child was available at home to carry out the intervention. It was also found that no debriefing or defusing session or any other formal or informal psychosocial intervention was done either with the child or the parents. The selection of the child was made randomly from the list of injured children that was received from the District administration.

Two trained disaster psychosocial care professionals applied different play therapy methods to facilitate the ventilation of thoughts and emotions. Toy kits such as miniature animals, crayons, story cards, clay, and family of dogs, were used during different activities. The mediums and materials used to carry out the play therapy sessions are some of the standard methods to facilitate ventilation in children and these methods were previously tested by the National Institute of Mental Health and Neuro Sciences (the premier institute of mental health in India) during different natural and man-made disasters in India. However, the structure of the 10-day intensive home-based psychosocial intervention was designed in a totally different way to assess its suitability and appropriateness to deal with such kinds of traumatic personal life events encountered by children.

The comparison between the pre and post intervention psychological symptoms and behaviour were analysed. To measure the post traumatic stress symptoms, a subset of 8 items from the Impact of Event Scale (Horowitz, Wilner & Alvarez, 1979; validated by Dyregrov & Yule, 1995; and retested by March, Amaya-Jackson, Terry & Costanza, 1997) was used. Seven more items were included later, which made the total number of items 15 on the IES scale for children. Both versions are psychometrically sound. A higher score implied more post traumatic stress symptoms.

Activities carried out with the child

As the child was very withdrawn, shy and less talkative, it took two full days to establish rapport and friendly relations with her. Efforts were made to develop a rapport with her by giving her the chocolates, toys and crayons she liked the most, and playing simple indoor games like cards and ludo. Since her parents were usually involved in the process, slowly and steadily she started opening up and actively participated in the activities that were carried out by the team.

Then the Impact of Event Scale was administered to find out the pre intervention scores on post traumatic stress symptoms. The mean score on IES scale was 41.

In the first activity she was asked to select her favourite animals/birds from a set of 17 animals. Then she was asked to describe and explain why she chose a particular animal/pair of animals, what was it that she liked about that animal, and so on. In the second activity, she had to tell a story with the help of story telling cards (similar to thematic apperception test: TAT). In the third activity, she had to make something out of the colourful clay and explain about her activity. In the fourth activity, she used a set of soft plastic dogs (known as family of dogs). There she had to identify herself with one of the dogs and the others with other family members. Then she had to express their emotions and thoughts in terms of a story. All other activities were carried out smoothly and the child enjoyed all of them. Relevant and pertinent questions were asked during the activity, which helped her to ventilate her feelings and emotions. All these reactions, thoughts and emotions were immediately recorded to maintain the accuracy and

authenticity of information. During the last two days of intervention, she was encouraged to play with the children staying nearby. The average duration of interaction and intervention was two and a half hours every day.

Outcome

During the process of ventilation, it was discovered that her feelings and emotions were revolving around her burnt face and the self-perceived ugliness of it. She was strongly influenced by the concept of beauty. The selection of the animals and the story told by her was entirely based on the concept of beauty. This consciousness about her own looks was perhaps the main reason restricting her from going out and playing and initiating friendships with other children. She was unable to identify with other children. This resulted in her inhibited behaviour and loneliness. All her apprehension was directed towards the adjustment problems she would be facing when she would go to the new school. Her apprehension was quite overt when she said 'would other children like to have friendship with me and even if they do, will the friendship be as good as the earlier one?' However, gradually she responded very well to all activities.

Observation

Towards the end of the activities, she had opened up and appeared to be happier. She also agreed to go out and mix with other children. The smile on her face while welcoming the team in the next few days was also observed. On the last day it was noticed that her apprehension and inhibition towards socialising and making friends were minimised. Her parents also reported that she had started talking to other children and that some typical behaviours associated with the burn scars, such as frequently looking in the mirror and at body parts, were also reduced to a reasonable extent. It was also observed that her overall state of happiness and activeness had increased.

Clinical symptoms

IES was again administered on the last day to check the accuracy of reduced clinical symptoms. The mean score was 23 as compared with 41, which again supported the observation of the child's overall behaviour and reactions. Her appetite was near normal and quality of sleep was remarkably improved as reported by her parents. Nightmares were stopped in the last five days of intervention. Sadness, weepiness, anxiety towards social isolation and adjustment problems were reduced as reported by the child as well as her close relatives. The child showed keen interest in talking with the team members, which meant reduction in shyness and tendency to become quieter.

The follow up in subsequent months via telephone and through the village level officers who were present during the intervention, revealed that her social network as well as general well being had increased. Appetite and sleep were normal compared to the pre disaster stage. Symptoms of anxiety-depression were also not very overt and the child was mentally ready to start her new schooling.

Discussion

Since the affected population was scattered around different geographical areas and the community composition and dynamics were different in each area, community debriefing perhaps was not an ideal possibility. Rather the NGO started working in the field in a systematic manner and after three months could carry out some community-based outreach programmes in one village only from where seven children died. To deal with heterogeneity of the affected families, specially designed home-based programmes seemed to be more adapting and result-oriented.

In this case also, the intervention was responded to well by the child and the family, perhaps because of the amount of time, privacy and independence provided to them to deal with negative thoughts and reactions. However, this needs to be tested in similar cases to assess the validity of the results and their wider applicability.

Analysis of the findings revealed that there was a remarkable reduction in the exhibition of psychosomatic symptoms, especially stress and anxiety symptoms in the post intervention assessment both clinical and observational. Her appetite increased and reached to the near normal stage (pre incident). Sleep was less disturbed and the number of nightmares was also reduced to a significant level. The mean score on

the IEC scale was also less, which indicated reduction in post traumatic stress symptoms. Parents, neighbours and relatives corroborated the behavioural change observed in the child. The findings emphasise the significance of providing basic mental health services to the victims of such traumatic life events (Bhave, Mathur & Agarwal, 2005). The improvements can directly be attributed to the intervention and family support. The design adopted for the intervention programme was found to be appropriate to deal with children encountering man-made disasters like fire incidents.

However, the following needs were identified to maintain the impact of intervention and to foster faster recovery:

- The child needed to ventilate her fears, apprehensions, feelings and emotions more often; hence professionals should regularly carry out play therapy sessions with her. This will help her to rebuild her confidence, overcome her fear and apprehension, and learn the skills to overcome adjustment problems. This will also facilitate her adjustment in a new school and help her to establish new friendships.
- Regular behavioural counselling sessions should be carried out with her to prevent any long-term psychiatric disorders.
- The father needed to be counselled to go back to work as soon as possible. In addition, if possible, he could be treated with de-addiction therapy to restrict his alcohol consumption.
- Mental health services should look at the family as a whole unit, with a special focus on the child.

The findings essentially highlighted the importance of mental health services and specially designed home-based intervention programmes for children faced with a major fire incident (de Boer & Dubouloz, 2000). Conducting play therapy activities for the child in a socio-culturally sensitive manner, and unstructured counselling series for the family members in the same intervention programme, could restore normalcy in the child to a maximum possible extent. Debriefing and defusing sessions were found to be helpful for adult victims in a community; whether children below 10 years do benefit from debriefing or not is yet to be discovered. Children encountering such personalised traumatic life events need special psychosocial care services on a regular basis. The present design of the intervention programme also needs to be applied in similar cases and similar types of disasters to generalise the findings and enhance their wider applicability. This finding reinforced the importance of treating children's vulnerability in different disasters in a need-based manner while planning response management. This finding has been supported by many studies on disaster mental heath care and services, emphasising child specific mental health services in the eventuality of natural and manmade disasters (Miller, Paton & Johnston, 1999).

In India, it has been repeatedly reported that during the first 7-15 days following any major disaster, generally the visiting mental health personnel visit households and prescribe (or hand out) anti-anxiety drugs, anti-depression drugs and sleeping pills to the victims (especially to the women and adolescents). In this case, similar complaints came from the mothers that the medicines were provided to them without briefing them about why to take those medicines, how to take them, when to stop and where to go for follow up. Since the affected people belonged to low socio-economic and educational backgrounds, the effectiveness of these temporary services resulted in less encouraging outcomes in many cases. Nevertheless, providing mental health services has to be a continuous process, and therefore be locally arranged. Similarly, such kind of ad hoc arrangements without proper professional service providers can deteriorate the condition of child victims in an even more alarming way.

Conclusion

Providing mental health services is still to be incorporated in the main primary health care system in India. Though the National Health Policy 2002 of the Government of India stressed the integration of physical and mental health at the district level (District Mental Health Scheme), the implementation needs to be pursued in a more vigorous manner. Institutionalising the scheme would perhaps check the long term psychiatric complications of such tragic life events.

Firstly, family counselling should be a compulsory part of rural primary health care services. This would also facilitate the follow up process for the mothers who are on psychiatric medication after the incident.

Secondly, introducing counselling in schools where such children are relocated might help them to understand their emotions, channel their emotions in the right direction, learn strategies to overcome the stressors, raise their self-esteem and self-efficacy and finally, reshape their self-confidence and overall personality development.

Finally, including professional mental health care givers (not the psychiatrist only) in each emergency pre-hospital health care programme for the initial months could also be a feasible option. However, careful follow ups with a regular and need-based approach must be ensured, which is only possible through established primary health care facilities available to the communities during the pre-disaster phase. Disaster-specific health management for children during the response and rehabilitation phase must consider socio-cultural and psychological consequences and accommodate differences within communities.

References

Bachrach, K.M. & Zautra, A.J. (1985). Coping with a community stressor: the threat of a hazardous waste facility. *Journal of Health and Social Behaviour,* 26(2), 127-41.

Bhave, S., Mathur, Y.C., & Agarwal, V. (2005). Vulnerable group management. *Indian Academy of Pediatrics Guide Book on Management of Children in Disaster Affected Situations.* Delhi: Cambridge Press, pp 40-45.

De Boer, J.D. & Dubouloz, M. (2000). *Handbook of Disaster Medicine.* Netherlands: Van Der Wees, 115-140.

Dyregrov, A. & Yule, W. (1995). Sudden death of a classmate and friend.Adolescents' perception of support from their school, *School Psychology International*, 20, 191-208.

Gibbs, M.S. (1989). Factors in the victims that mediate between disaster and psychopathology: a review. *Journal of Traumatic Stress,* 2, 489-514.

Green, B. L. (1993). Identifying survivors at risk: trauma and stressors across events. In J.P. Wilson & B. Raphael (Eds), *International Handbook of Traumatic Stress*. New York: Plenum Press.

Horowitz, M., Wilner, N.J. & Alvarez, W. (1979). Impact of Events Scale: A measure of subjective stress. *Psychosomatic Medicine*, 41, 209-218.

March, J.S., Amaya-Jackson, L., Terry, R., & Costanzo P. (1997). Posttraumatic symptomatology in children and adolescents after an industrial fire. *Journal of the American Academy of Child and Adolescent Psychiatry,* 36(8), 1080-8.

Miller, M., Paton, D., & Johnston, D. (1999). Community vulnerability to volcanic hazard consequences. *Disaster Prevention and Management*, 8(4), 255-260.

Paton, D. (1996). Disasters, communities and mental health: Psychosocial influences on long-term impact. *Community Mental Health in New Zealand*, 9, 3-14.