Systematic Review of Psychological First Aid

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Psychological distress is common following extreme stressors (potentially traumatic events), often short-lived but problematic in a significant minority. More marked reactions include the development of psychiatric disorders such as post-traumatic stress disorder (PTSD), depressive disorders, anxiety disorders and substance use disorders. Attempts to develop early interventions that can prevent the development of these disorders have yielded disappointing results and there remains considerable debate regarding how best to respond to the psychosocial needs of those affected by traumatic events.

Systematic reviews have found no convincing evidence for the ability of any psychosocial intervention directed at everyone involved shortly after a traumatic event to reduce mental health symptoms[1]. This is true for single session interventions such as individual psychological debriefing[2] and multiple session interventions including those based on cognitive behavioural therapy[3]. Thankfully, there is room to be more optimistic regarding the efficacy of trauma focused cognitive behavioural therapy when delivered to individuals who have developed either acute stress disorder or acute post-traumatic stress disorder[4]. This has led to the recommendation that trauma focused cognitive behavioural therapy is delivered to individuals who develop these diagnoses[1].

Given the evidence available at present, it can be argued that no formal intervention should be delivered following traumatic events unless individuals develop a diagnosable condition. The option of doing nothing, however, risks promoting a sense of lack of social support in those affected which has been associated with the development of PTSD following traumatic events[5,6]. Many guidelines caution against doing nothing shortly after traumatic events, arguing for the delivery of supportive, practical and pragmatic input in a supportive and empathic manner but avoidance of formal clinical interventions[1,7,8]. Such approaches do not resemble psychological treatments, in contrast to most of the early interventions that have been subjected to randomised controlled trials. They are psychosocial with key social elements that address people's basic needs, such as housing, finances and nutrition.

Such approaches have been advocated as important for many years and the term Psychological First Aid (PFA) is not a new one[9]. More recently and driven by the work of the National Centre for Post-Traumatic Stress Disorder (NC-PTSD) in the United States of America PFA has been developed into a specific intervention[10]. PFA has become very popular and is increasingly used and recommended. The cautions against the use of individual psychological debriefing and the absence of an evidence based early intervention to recommend[1] have fuelled the popularity of PFA. The term PFA, however, like other terms such as counselling and debriefing, is often used as a blanket term to describe a range of different approaches and would benefit from more formal definition. NC-PTSD define PFA as:

'an evidence informed, modular approach for assisting people in the immediate aftermath of disaster and terrorism to reduce initial distress and to foster short and long-term adaptive functioning.'

The NATO guidelines on psychosocial care for people affected by disasters and major incidents[8] usefully describe PFA as:

"*not a single intervention or treatment but an approach that is designed to respond to people's psychosocial needs after major incidents or disasters which comprises of a number of elements"*.

The *Sphere Handbook* describes PFA as:

" basic, non-intrusive pragmatic care with a focus on: listening but not forcing talk; assessing needs and ensuring that basic needs are met; encouraging but not forcing company from significant others; and protecting from further harm."

The Inter-Agency Standing Committee (IASC)[11] describe PFA as:

"…..is often mistakenly seen as a clinical or emergency psychiatric intervention. Rather, it is a description of a humane, supportive response to a fellow human being who is suffering and who may need support. PFA is very different from psychological debriefing in that it does not necessarily involve a discussion of the event that caused the distress."

The key components of PFA described by NATO, IASC and a joint UK-USA group of experts[12] are listed alongside each other in Table 1.

Table 1: Components of Psychological First Aid

UK-USA Group[12]	NATO[8]	IASC[11]
Active listening	Providing comfort and consolation	Protecting from further harm
Reassurance through normalisation	Protecting people from further threat and distress	Providing the opportunity for survivors to talk about the events, but without Pressure and respecting the wish not to talk
Provision of appropriate and supportive advice and information to include self care and self monitoring	Providing immediate physical care	Listening patiently in an accepting and non-judgemental manner
Helping people to identify problems they cannot handle	Encouraging goal orientated and purposeful behaviour	Conveying genuine compassion
Modelling helpful reactions to traumatic stress	Helping people to reunite with loved ones	Identifying basic practical needs

		and ensuring that these are met
Advice and guidance on maintaining a lifestyle favourable to mental health and wellbeing	Enabling voluntary sharing of experiences	Asking for people's concerns and trying to address these
Providing information on how and when to refer themselves	Linking survivors with sources of support	Discouraging negative ways of coping (specifically through use of substances
Specific attention to the needs of children, young people and other specific groups	Facilitating a sense of being in control	Encouraging participation in normal daily routines (if possible) and use of positive means of coping
Helping people understand the needs and reactions of others and how they can support others	Identifying people who need further help (triage)	Encouraging, but not forcing, company from one or more family member or friends
Referral to other more specialist or supportive services where indicated		As appropriate, offering the possibility to return for further support
Considering and addressing ethical matters		As appropriate, referring to locally available support mechanisms or to trained clinicians
Evaluating risk (including suicide risk)		

PFA continues to be described as an evidence-informed approach but has not yet been subjected to a formal systematic review of its effectiveness. In order to address this, the World Health Organisation commissioned us to conduct a systematic review to determine the current evidence base. As we were not aware of any randomised controlled trials of PFA we decided to consider any data containing study regarding its effectiveness. We also conducted a systematic review of predictors of PTSD and depression to determine if there were other sources of research that could inform its potential effectiveness.

Methods and Results

Systematic review of Psychological First Aid (PFA)

Using the search terms 'psychological first aid' and 'PFA' the 16 widely used online bibliographic databases listed in Table 2 were searched.

Table 2: Online bibliographic databases searched

AMED (Allied and Complementary Medicine)
ASSIA (Applied Social Sciences Index and Abstracts)
British Nursing Index and Archive
CINAHL (Cumulative Index to Nursing & Allied Health Literature)
Cochrane Central Register of Controlled Trials (CENTRAL)
Cochrane Database of Systematic Reviews (CDSR)
EMBASE (Excerpta Medica)
HMIC (Health Management Information Consortium)
ISI Science Citation Index
ISI Social Sciences Citation Index
International Bibliography of the Social Sciences (IBSS)
MEDLINE
MEDLINE In-Process & Other Non-Indexed Citations
PILOTS
PsychINFO
Sociological Abstracts

The search yielded 779 citations which were imported into EndNoteX1 reference management software. Removal of duplicates resulted in 516 abstracts for consideration. These were scrutinized one by one to ascertain potential relevance. 298 were removed on the basis that they did not relate to PFA or disaster response. This left 218 abstracts for more in depth consideration. Of these only 74 were directly related to PFA and none contained any data. These articles provided description, commentary, expert opinion or discussion of PFA. This search revealed no RCTs, observational or any other empirical study of PFA.

Systematic review of existing systematic reviews of protective/risk factors for PTSD

The databases listed in Table 2 were searched using the terms 'PTSD', 'Post traumatic stress disorder' and 'traumatic stress' combined with the terms 'predictors', 'risk factors', 'resilience' and 'protective' limited only to 'reviews'.

The search revealed 901 citations. Removal of duplicates left 798. Reviewing the abstracts revealed 70 reviews of the literature related to protective/risk factors for PTSD. 15 were systematic reviews. The reference sections of these papers were checked for additional systematic reviews, none were found. Table 3 summarises the results of the systematic reviews identified.

The quality of the reviews included was variable and the reviews of Brewin et al and Ozer et al remain the most comprehensive ones in the field. Only five of the reviews included a meta-analysis, two of which only considered peri-traumatic dissociation. In these five studies, the factors associated with the presence of PTSD with an effect size over 0.2 were peri-traumatic dissociation, lack of social support post trauma, trauma severity, life stress post-trauma, perceived life-threat and peri-traumatic emotional response. In children the associated factors were pre-trauma psychopathology, threat to life and pre-trauma parental distress. All effect sizes were weighted average correlations (Pearson's r)

Table 3: Systematic reviews of risk/ protective factors for PTSD

Author	Year	Traumatising event(s)	Age Group	Risk / protective factors examined	Number of studies included	Average effect size (r)/ Conclusion
Breh et al[13]	2007	Various traumas	Adults	Peri-traumatic dissociation	35	Peri-traumatic dissociation = 0.36
Brewin et al[5]	2000	Various traumas	Adults	Gender Age Socio-economic status Education Intelligence Race Pre-trauma psychopathology Childhood abuse Prior trauma Other adverse childhood Family psychiatric history Trauma severity Lack of social support Life stress	77	Gender (female) = 0.13 Age (younger) = 0.06 Socio-economic status (lower) = 0.14 Education (lack of) = 0.10 Intelligence (lower) = 0.18 Race (minority status) = 0.05 Pre-trauma psychopathology = 0.11 Childhood abuse = 0.14 Prior trauma = 0.12 Other adverse childhood = 0.19 Family psychiatric history = 0.13 Trauma severity = 0.23 **Lack of social support = 0.40** Life stress = 0.32
Bruce[14]	2006	Childhood cancer survivors and their parents	All ages	Parent sex Age of child Socioeconomic status Time off treatment Prior stressful life events	24	Parent sex – "mothers of childhood cancer survivors exhibited higher rates of cancer-related PTSS than fathers" Age of child – one study supported Socioeconomic status – "some findings

				Family support Social support Coping style		support the relationship between lower socioeconomic status and PTSS, others find the opposite" Time off treatment – "the vast majority of studies of studies reported no correlation between time off treatment and PTSS" Prior stressful life events – "both quantity and quality of prior stressful life events were shown to be associated with increased rates of developing cancer related PTSD" **Family support – "greater family support was associated with fewer PTSS"**
Cox et al[15]	2008	Accidental traumatic injury	Children and adolescents	Gender Age Pre-trauma psychopathology Injury severity Threat to life Prior trauma Involvement of family/friends in trauma Pre-trauma parental distress	14	Gender (female) = 0.18 Age (younger) = -0.04 Pre-trauma psychopathology = 0.22 Injury severity = 0.09 Threat to life = 0.38 Prior trauma = 0.08 Involvement of family/friends in trauma = 0.09 Pre-trauma parental distress = 0.29
Davydow et al[16]	2008	Individuals admitted to ICU	All ages	Gender (female) Age (younger) Agitation in ICU Physical restraint Medication Post ICU memories	15	No meta analysis. The following predictors were identified: Gender (female) – significant in 2 of 7 studies Age (younger) – significant in 4 of 8 studies Agitation in ICU – significant in 1 of 1 study

				Anxiety or depression post ICU		Physical restraint - significant in 1 of 1 study Anxiety or depression post ICU – significant in 1 of 2 studies Various factors to do with medication were found significant in 1 or more study Various factors to do with post ICU memories were found significant in 1 or more study
Gidron et al[17]	2002	Terrorist attacks	All ages	Injury severity Fear Feeling treatment was helpful Depression Dissatisfaction with crisis support	6	No meta analysis Conclusion: "the literature is inconsistent concerning the role of injury severity as a predictor of PTSD" Other factors discussed only in relation to individual studies.
Johnson et al[18]	2008	Civilian survivors of war trauma and torture	Adults	Dose Gender Age Refugee variables	Unclear	No meta analysis. Conclusions were as follows: Dose – "there appears to be consistent evidence of a dose-effect relationship between cumulative trauma and the development and maintenance of PTSD" Gender – "there is also some evidence that females are at higher risk than males for developing PTSD" Age – "there is also some evidence that those of older age are more at risk of developing PTSD"

						Refugee variables – "although there is a dearth of studies investigating the impact of refugee variables on the development of PTSD it is likely that variables such as uncertain refugee status and obstacles to employment and **lack of social support** exacerbate symptoms and contribute to their maintainance"
Lensvelt-Mulders et al[19]	2008	Various traumas	All ages	Peri-traumatic dissociation	59	Peritraumatic dissociation = 0.401
Olofsson et al [20]	2009	RTAs	Children and adolescents	Perceived threat Gender (female) Anxiety and depression symptoms Increased parental vigilance after RTA (reported by child) Involvement in car accidents Child and parent PTSS symptoms at 4-6 weeks	12	No meta analysis: The following were significant risk factors in multiple studies: Perceived threat Gender (female) Anxiety and depression symptoms The remainder were predictive in single studies: Increased parental vigilance after RTA (reported by child) Involvement in car accidents Child and parent PTSS symptoms at 4-6 weeks
Ozer et al[6]	2003	Various traumas	Adults	Prior trauma Prior psychological adjustment Family history of psychopathology	68	Prior trauma – 0.17 Prior psychological adjustment – 0.17 Family history of psychopathology – 0.17 Perceived threat to life – 0.26 **Social support post-trauma - -0.28**

				Perceived threat to life Social support post-trauma Peri-traumatic emotional response Peri-traumatic dissociation		Peri-traumatic emotional response – 0.26 Peri-traumatic dissociation – 0.35
Tedstone et al[21]	2003	Medical illness and treatment	Adults	Existing characteristics (e.g. personality, previous life adversity, previous mental health difficulties) Age Aspects of trauma itself Medication	14	No meta analysis. The following conclusions were drawn: Existing characteristics (e.g. personality, previous life adversity, previous mental health difficulties) – "may dispose individuals to the development of PTSD" Age – "there is mixed evidence concerning the impact of age on the development of PTSD in the physical health literature" Aspects of trauma itself – "may also predispose individuals to the development of PTSD" Medication – "little is known about how these drugs may impede or enhance trauma processing"
Tolin et al[22]	2006	Various traumas	All ages	Gender	290	"Meta analyses of studies yielding sex-specific risk of potentially traumatic events and PTSD indicated that female participants indicated that female participants were more likely than male participants to meet criteria for PTSD(I couldn't see an effect size)
Van der Hart	2008	Various	All ages	Peri-traumatic	53	No meta analysis

et al[23]		traumas	(only one study pertained to children)	dissociation		Conclusion: "the majority of the empirical studies reviewed supported the notion that the experience of dissociative symptoms during a potentially traumatising event increases the risk of developing PTS"
Van der Velden[24]	2008	Various traumas	All ages	Peri-traumatic dissociation (PD)	17	No meta analysis. Conclusion: "this systematic review demonstrates that the majority of prospective studies found no indications that PD is an independent predictor for PTSD symptomatology 3 months or later after type I traumatic events, although several studies reported a significant cross-sectional or bivariate association between PD and PTSD symptomatology"

Systematic review of existing systematic reviews of protective/risk factors for depression after disaster/ traumatic events

Using the search terms 'depression' combined with the terms 'predictors', 'risk factors', 'resilience' and 'protective' together with 'trauma', 'traumatic', 'disaster' limited only to 'reviews' the online databases shown in Table 1 were searched. The search yielded 3473 citations which were imported into EndNoteX1 reference management software. Removal of duplicates resulted in 2598 for consideration. These were scrutinized one by one to ascertain potential relevance. This search however revealed no systematic reviews of risk factors for depression after traumatic events.

Discussion

The absence of quantitative data containing evidence to support PFA makes it impossible to determine whether it is effective or not following traumatic events. It is apparent, however, that certain factors, in particular peri-traumatic dissociation and perceived poor social support, are associated with raised rates of PTSD. This provides support for the argument that effective interventions should address these two factors. A recent Delphi study of over 100 experts, performed to develop the European Network for Traumatic Stress's (TENTS) Guidelines on psychosocial care following disasters[7], found strong consensus that, despite the absence of direct evidence, social care should be provided for those involved in disasters[25]. There was also strong consensus that responses should promote a sense of safety, self and community efficacy/empowerment, connectedness, calm and hope. This is in keeping with and informed by the work of Hobfoll and colleagues who argued that indirect evidence pointed to these factors as being guiding principles for early to mid-level intervention following disaster and mass violence[26]. The TENTS Delphi study also found strong consensus for the provision of general support, access to social support, physical support and psychological support.

The TENTS guidelines - like the IASC Guidelines - recommend that the interventions provided to individuals should only be done with full consideration of individuals' wider social environment, especially their families and communities[7]. They advocate the provision of practical help and pragmatic support in an empathic manner. These recommendations are consistent with the principles of PFA and are supported by the findings of our systematic review of systematic reviews of predictors. They are also consistent with considerable anecdotal evidence that individuals fare badly if they feel they are not supported, particularly by those they feel should be supporting them, for example employers or people in positions of authority.

It is clear that the principles of PFA have much in common with the approaches recommended in guidelines for psychosocial responses following major traumatic events and are supported by evidence that lack of social support is associated with poorer outcome. It therefore seems reasonable to

advocate the use of interventions based on the principles of PFA, as several guidelines do[8,11,12,27] although most fall short of recommending PFA as a manualised step-by-step intervention. We would also caution against this given the absence of direct evidence for PFA or any other formal intervention for everyone involved in a traumatic event. Hobfoll et al[26] argue that there are many ways to operationalise the five principles they identified and the need for careful design of interventions that are tested in pilot programs, refined, retested, and further evaluated before being implemented. They also caution against hopes that such interventions will be an ultimate panacea that prevent long-term difficulties and emphasise the need to consider cultural factors, a point that led the NC-PTSD to note a potential limitation of its PFA guide as its specific development for use in Western settings.

IASC's guidance recommends the provision of PFA by "a variety of community workers" for people in "acute trauma-induced distress"[11]. This is consistent with Sphere's recommendation that PFA is available to acutely distressed individuals after traumatic events. IASC argue that some forms of psychological support ("*very basic psychological first aid*") for people in acute psychological distress do not require advanced knowledge and can easily be taught to workers who have no previous training in mental health. It seems important that the principles of PFA can be taught quickly to both volunteers and professionals[27] and that PFA is not seen as, and does not become, a formal clinical intervention.

The NATO Guidelines favour the principles of PFA as an appropriate basis for psychosocial plans because:

"the abilities of people to accept and use social support and the availability of it are two of the key features of resilience."

In common with others,[1,28] the NATO guidelines advocate a stepped model of care, in which the needs of people determine the level of support they receive. PFA is a key component in this model as shown in Table 4.

Table 4: NATO Stepped Care Model - the six main components

Strategic planning - multi-agency to include preparation, training and rehearsal
Prevention services - planned and delivered in advance to develop communities' psychosocial resilience
Basic humanitarian and welfare services available to everyone
Psychological first aid delivered by trained and supervised lay persons
Screening, assessment and intervention services for people with ongoing distress
Access to primary and secondary mental healthcare services for people who are assessed as requiring them.

In summary, there is an absence of direct evidence for the effectiveness of PFA but indirect evidence supports the delivery of services based on the principles of PFA in the first few weeks after a traumatic event. We agree that when delivered PFA should be consistent with research evidence on risk and

resilience following trauma; applicable and practical in field settings; appropriate for developmental levels across the lifespan; and culturally informed and delivered in a flexible manner[8].

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