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Paul Weldon Bsc Hons Msc

Japan's 2011 Disaster: A grounded theory study of resilience in vicariously exposed Japanese citizens.

Section A: The effectiveness of resilience interventions: A literature review

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A thesis submitted in partial fulfilment of the requirements of Canterbury Christ Church University for the degree of Doctor of Clinical Psychology

July 2015

SALOMONS

CANTERBURY CHRIST CHURCH UNIVERSITY

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Candidate name   Paul Weldon
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Dedicated to the memory of those who remain unfound.

Summary of the portfolio

Section A presents the findings of a review of the evidence for the effectiveness of resilience intervention studies, and discuss the findings with reference to methodological, operational and theoretical resilience frameworks. A search of electronic databases found eight studies which met the inclusion criteria. Poor quality reporting and methodological issues lower confidence in the reported results. Resilience was operationalised as overcoming stress by most studies, which reported significant increases in resilience pre-post intervention and at follow-up. There was little robust evidence that stress reduction interventions alone enhanced resilience. It was concluded that resilience research would benefit from higher quality randomised controlled trials, and qualitative studies which examine how people respond during stress and adversity.

Section B presents the findings of a grounded theory analysis of disaster response in vicariously exposed Japanese citizens living in the UK at the time of Japan's 2011 disaster. Individual semi-structured interviews were conducted with eighteen participants and a grounded theory model of disaster response emerged. The model was contrasted with the aims of Psychological First Aid (PFA) interventions, which are to promote resilience and reduce the potential of psychopathology. The findings supported the aims idea of PFA, with an additional component which enables victims to act on their need to help in the recovery process, and transform perceived helplessness in to empowerment.

Section C provides a critical review of the research process and is structured according to four pre-determined questions, which include a reflective account of study limitations, clinical implications, future directions, and personal reflections.

Contents

Section A

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Submitted in part-fulfilment of the requirement of Canterbury Christ Church

University for the degree of Doctor of Clinical Psychology.

Salomons

Canterbury Christ Church University

Abstract

Aim: To review the evidence for the effectiveness of resilience intervention studies, and discuss the findings with reference to methodological, operational and theoretical resilience frameworks.

Method: Eight electronic databases were searched for peer reviewed randomised controlled trials of resilience intervention studies in adult populations, which reported the analysis of at least one validated psychometric measure of resilience.

Results: Of the 127 studies screened for inclusion, 51 full-text papers were examined, eight of which met inclusion criteria and were reviewed. Poor quality reporting and methodological issues lowered confidence in the reported results. Resilience was operationalised as overcoming stress by most studies, which reported significant increases in resilience pre-post intervention and at follow-up. There was little robust evidence that stress reduction interventions alone enhanced resilience.

Conclusion: The available evidence suggests that resilience interventions which facilitate overcoming stress are better placed to enhance resilience. Resilience research would benefit from higher quality randomised controlled trials, and qualitative studies which examine how people respond during stress and adversity.

Keywords: Resilience, effectiveness

Introduction

The American Psychological Association (APA) supports that of the World Health Organisation (WHO), in recognising that mental health is more than the absence of disease. The WHO advocates for psychological well-being (Keyes, 2007; WHO, 2005), while the APA promotes preventative psychology across all divisions, including clinical psychology through their Guidelines for Prevention in Psychology (APA, 2014). Additionally, the APA actively promotes their community resilience education program 'The Road to Resilience' (Newman, 2005). In advancing a prevention and resilience agenda the APA has acknowledged the need to complement the deficit-driven models of psychopathology, with strengths-based psychological science (Fergus & Zimmerman, 2005; Richardson, 2002; Wood & Tarrier, 2010).

The concept of resilience as a route to improve health, well-being and quality of life is of significant research interest (Almedom, 2008; Friedli, 2009; Haskett, Nears, Sabourin-Ward, & McPherson, 2006). It is argued that resilience interventions have the potential to buffer the effects of trauma, promote recovery, and prevent the development of post-traumatic stress disorder, suicide and disease prior to adverse events (Cornum, Matthews, & Seligman, 2011; Iacoviello & Charney, 2014; Tedeschi & Calhoun, 2004). Further to this, resilience interventions may mitigate compassion fatigue and vicarious trauma (Kaminker, 2014), and support the development of vicarious resilience, within the helping professions (Hernández, Engstrom, & Gangsei, 2010).

Human resilience is thought to be a modifiable attribute influenced by intrinsic psychological and external social influences (Jackson, Firtko, & Edenborough, 2007; van Kessel, 2013). Following a review and concept analysis, Windle (2010) concluded that resilience is rooted in everyday life and that "psychopathology could be averted provided that the individual is able to draw on a range of resources within themselves and their immediate

environment, and that the wider environment is also supportive" (p.14). Promoting personal resilience may offer novel and effective strategies to advance health, well-being and quality of life (Edward, 2013; Gouzman et al., 2015).

However, it is widely acknowledged that defining the conceptual parameters of resilience, its terminology, methodology and operation remains problematic (Davydov, Stewart, Ritchie, & Chaudieu, 2010; Luthar, Sawyer, & Brown, 2006). To better understand the potential of resilience to improve health, well-being and quality of life, it is important to review the empirical evidence for the effectiveness of resilience interventions, with reference to theoretical, methodological and operational parameters proposed to date.

Aim

To better understand the potential of resilience interventions to protect and promote well-being, by reviewing the concept of resilience with reference to: (1) definitions and theoretical frameworks; (2) empirical findings of the effectiveness of resilience interventions in adult populations, and (3) discussion of empirical studies in relation to resilience theory.

Resilience definitions and theoretical frameworks

Resilience defined

Definitions of resilience derived from a trauma perspective include the necessary conditions of positive adaptation to adversity (Khanlou & Wray, 2014; Luthar, Cicchetti, & Becker, 2000; Luthar, Lyman, & Crossman, 2014; Norris, Stevens, Pfefferbaum, Wyche, & Pfefferbaum, 2008). Following an extensive literature review, Windle (2010) defined resilience as:

"the process of negotiating, managing and adapting to significant sources of stress or trauma. Assets and resources within the individual, their life and environment facilitate this capacity for adaptation and 'bouncing back' in the face of adversity. Across the life course, the experience of resilience will vary" (p.152).

Within the promotion/prevention agenda of the APA and WHO above, Windle's definition of resilience is limited by its deficit-driven bias. Kaplan (1999) makes this point by arguing that definitions of resilience derived from a subjective bias (e.g., positive adaptation and adversity), are unnecessarily restrictive; a point echoed by Fletcher and Sarkar (2013), who comment that adaptation to positive stressors such as career advancement also require resilience. Similarly, Davis and colleagues draw attention to the every-day stressors of life that require adaptive responses (Davis, Luecken, & Lemery-Chalfant, 2009). Fletcher and Sarkar (2012) define psychological resilience as "the role of mental processes and behaviour in promoting personal assets and protecting an individual from the potential negative effects of stressors" (p.675); arguing that such a focus excludes resilience at the molecular, physical and structural level (Sarkar & Fletcher, 2014). In contrast, Davydov et al. (2010) draw attention to the significance of bio-psycho-social components of resilience and view resilience as a "defence mechanism, which enables people to thrive in the face of adversity" (p.2). At its simplest level, resilience may be defined as an adaptation to stress (Friborg, Hjemdal, Martinussen, & Rosenvinge, 2009).

Resilience factors

Phases of resilience research have included a focus on determining the personal qualities of children that thrive in high-risk environments, and the promotive and protective factors that enhance adaptive functioning within families and the wider community (Luthar et

al., 2000). Resilience, in the face of adversity, has come to include the notion of successful coping (Luthar, 1991); adequate functioning and emotional regulation (Garmezy, 1991); good mental health and social competence (Olsson, Bond, Burns, Vella-Brodrick, & Sawyer, 2003), or "normal development under difficult conditions" (Fonagy, Steel, Steel, Higgitt, & Target, 1994, p. 233). Richardson (2002) notes that the resilience literature is replete with lists of psychological factors, and Ballenger-Browning and Johnson (2009) comment, "resilience is often misunderstood as defining the norm. And as a result of this inflated and fallacious definition, any behaviour or environment that promotes health can be misconstrued as a resilience factor" (p.1).

Current resilience research points to a dynamic systems perspective (Masten, 2014; O'Dougherty-Wright, Masten, & Narayan, 2013). For example, Masten (2014) has argued that a dynamic systems view of resilience is required to reflect humans as complex adaptive systems; whilst not a new direction in psychological research (Carver, 1998; Granic & Patterson, 2006; Thelen & Smith, 1998; Van Geert, 2009), it arguably represents a paradigm shift in resilience theory and future characteristics of resilience interventions.

Resilience theory

Recent theoretical propositions have considerably developed our understanding of resilience. These are explored below.

Protection-Vulnerability model

This model draws from childhood literature and is applied to adolescents with cancer. Woodgate (1999), proposed that stressors or threats either directly or indirectly trigger emotional responses, based on the relative influence of protective-vulnerability factors.

Responses are outcomes contributing to resilience referenced along a Maladaptive to

Adaptive continuum (Figure 1). Resilience varies over the lifespan due to developmental and

social/societal changes.
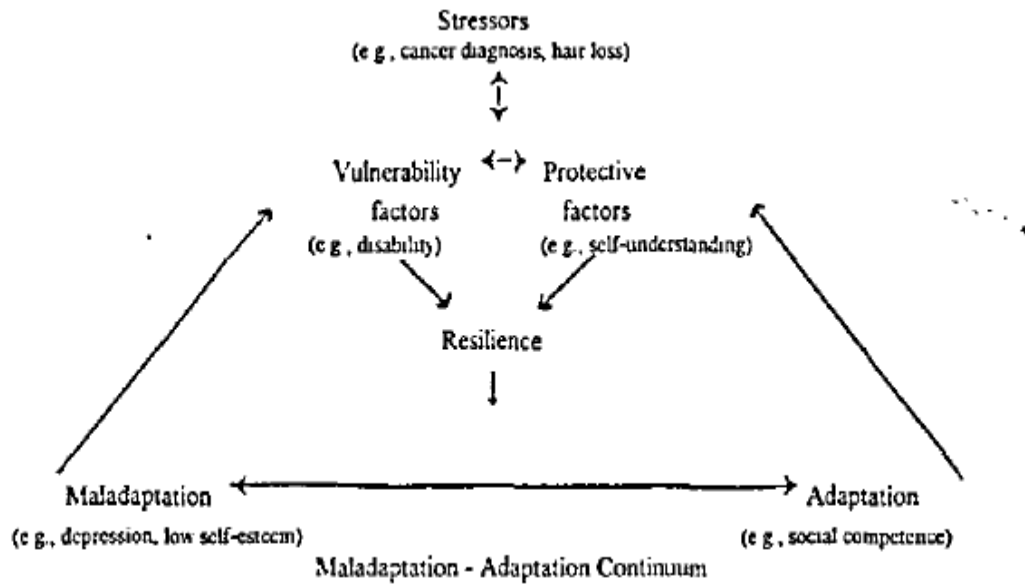
Figure 1. Protection-Vulnerability model of resilience (Woodgate, 1999).

Biopsychospiritual model

Richardson (2002), proposed a state of biopsychospiritual adaptive homeostasis,

maintained by protective responses to internal and external stressors. The model

conceptualises resilience as a "spiritual source of strength" (p.313); largely dependent on an

introspective capacity. Stressors activate primary emotions which initiate conscious

introspection and subconscious processes, forming the question "what am I going to do?"

(p.312). The resilience trajectory (Figure 2), is represented by four outcomes: resilient

reintegration (growth in self-understanding and increased resilience); homeostatic

reintegration (return to baseline); reintegration with loss (a loss of motivation/hope/drive and

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resilience capacity); and dysfunctional reintegration (destructive behaviours such as substance abuse). However, the model does not explain how emotions and meta-cognitions affect the reintegration process (Fletcher & Sarkar, 2013).
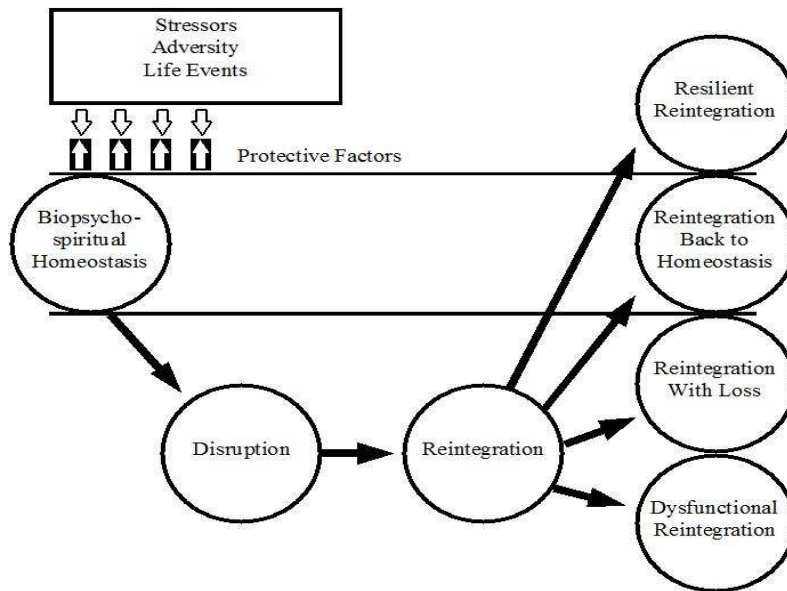
Figure 2. The process model of resilience (Richardson, 2002).

Psychological resilience

Fletcher and Sarkar (2012), approached resilience from a stressor perspective as opposed to the adversity perspective (e.g., Kaplan, 1999). Their grounded theory model of resilience in Olympic champions (Fletcher & Sarkar, 2012) complements Richardson's (2002) model above, with the main focus on psychological resilience, rather than the psychosocial complexities of resilience. The grounded theory (Figure 3) identified resilience responses to stressors as mediated by cognitive appraisal and meta-cognitions, which interact with personality factors, confidence, motivation, focus and perceived social support. Olympic champions are able to take personal responsibility for their thoughts, feelings and actions, and appraise challenges as positive stressors to develop and facilitate optimal performance outcomes.
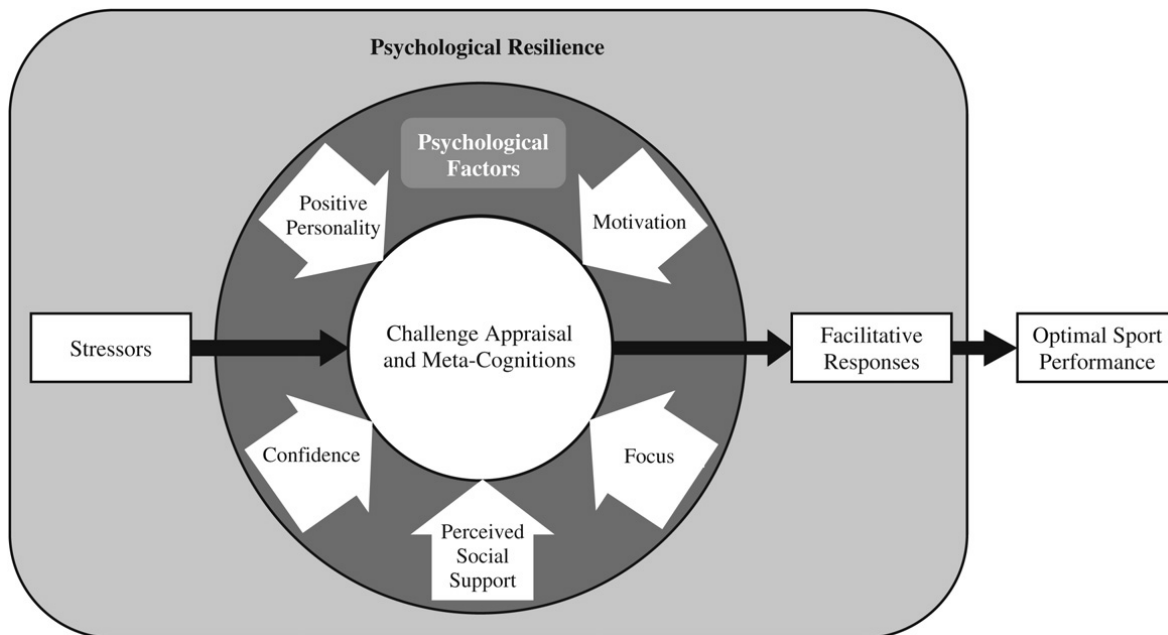
Figure 3. Grounded theory of psychological resilience (Fletcher & Sarkar, 2012).

Dynamic systems theory

Drawing on dynamic systems theory as applied to psychotherapy, Carver (1998) used the idea of attractor landscapes, and basins of attraction, as holding a system in place. With reference to Figure 4, the attractor landscape is represented by the complete figure, and the basins of attraction by the numbered positions within the landscape. An attractor landscape represents the general behavioural characteristics of a person, which may change over time, if/when a person comes to operate from a dominant basin of attraction. There is an inherent resilience of an attractor landscape and basins of attraction, which maintain the system in a relatively stable state. All the factors of life (e.g. thoughts, feelings, behaviours, relationships, social-economic, genetic, personality, health etc…), exert an influence on the attractor landscape, and the interaction of these factors may form constellations of experience, which are represented by the basins of attraction. As an example (Figure 4), a person with

symptoms of depression (represented by the basin of attraction: pre-therapy, position 3), may

seek help from a psychologist. The psychologist will work with the client to loosen and

overcome the resilience of the basin of attraction, which maintains the symptoms of

depression. The aim of the resilience intervention is to overcome the resilience of the

depressive state and influence the formation of a basin of attraction, which is characteristic of

positive/healthy thoughts, feelings and behaviours, with its own inherently strong resilience,

as indicated by the depth of the basin of attraction (e.g., Figure 4, position 2) (Carver, 1998;

Stanek, 2014).
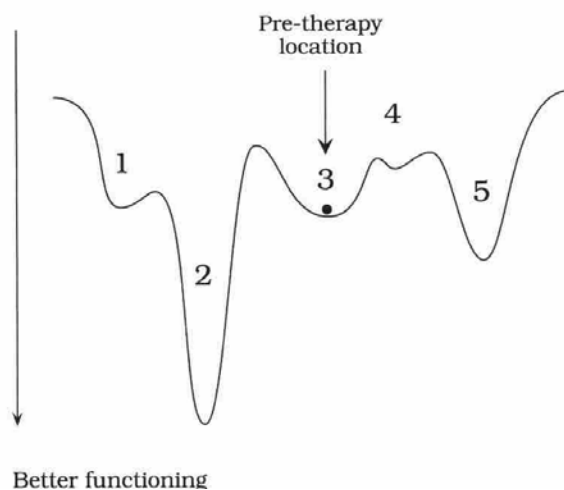
Figure 4. A dynamic systems view of behavioural characteristics as represented by an

attractor landscape and basins of attraction (Carver, 1998, p. 255)

Methodological difficulties

The challenge of developing effective resilience interventions is amplified by the lack

of conceptual harmony (Davydov et al., 2010; Luthar et al., 2006). Whilst there have been

two recent systematic reviews of the efficacy of resilience interventions (Leppin et al., 2014;

Macedo et al., 2014), these reviews did not address the concerns of Davydov et al. (2010), by

seeking to understand how the resilience concept is operationalised. Arguably, the systematic

reviews of Leppin et al. (2014) and Macedo et al. (2014) have contributed to confusion surrounding the resilience concept. For example, 11 of the 25 studies reviewed by Leppin et al. (2014) used no specific psychometric measure of resilience, therefore there is no measure of the construct. Fourteen studies were classified as using a resilience/hardiness measure, which according to Earvolino-Ramirez (2007) is a conflation of concepts; hardiness reflects a capacity to endure hardship, whereas resilience relates to an enhanced adaptive capacity. Only six papers reviewed by Leppin et al. (2014), and two randomised controlled trials reviewed by Macedo et al. (2014) used a reliable and validated measure of resilience.

Summary

Resilience as a concept is purported to offer exciting avenues to protect, promote and facilitate recovery, within clinical and non-clinical populations (Jackson et al., 2007; Lester, Taylor, Hawkins, & Landry, 2015; Sturgeon & Zautra, 2010). However, to better understand how the concept of resilience is operationalised and to address the limitations of the systematic reviews above, a re-examination of resilience studies is required. The evaluation of the efficacy of resilience studies would need to consider: methodological rigor (Wessely, 2007), operational definitions of resilience (Luthar et al., 2006), and effectiveness (Windle, Bennett, & Noyes, 2011).

Methods

Review criteria

Included studies were all randomised controlled trials, published within peer-reviewed journals. Studies evaluated the effectiveness of resilience interventions in human adults aged 18 years and over, and reported an analysis of at least one validated resilience measurement scale.

Search strategy

Electronic databases were searched for articles indexed as of 21st October 2014: EBSCOhost: (Psych Info, Psychology and Behavioral Sciences Collection, PsycARTICLES, MEDLINE and CINAHL); PILOTS; Cochrane Library; and PubMed. Search terms were applied to titles: [Resilien*] AND [Train* OR Interven* OR Program* OR Build* OR Strength*]. Results were limited by PubMed (Randomised Controlled Trial); EBSCOhost (Peer Reviewed, empirical study, adulthood (18 yrs & older)). Additional articles were identified through manual searches of the reference lists of selected papers. Included papers were assessed for methodological quality with reference to the Cochrane Collaboration Tool for Assessing Risk of Bias (Higgins et al., 2011).

<center>**Results**</center>

The search strategy (Figure 6) identified 127 potential articles of interest, which were screened for inclusion criteria by title and abstract, leaving 51 papers for full-text screening, resulting in eight papers for review, which are introduced in Table 2. The search strategy identified two papers, Pidgeon, Ford, and Klaassen (2014) and Gerson and Fernandez (2013) that were not identified in the reviews by Leppin et al. (2014) and Macedo et al. (2014). Gerson and Fernandez (2013) reported two studies with separate participant pools and interventions, which are distinguished as Gerson & Fernandez (2013a); (2013b).
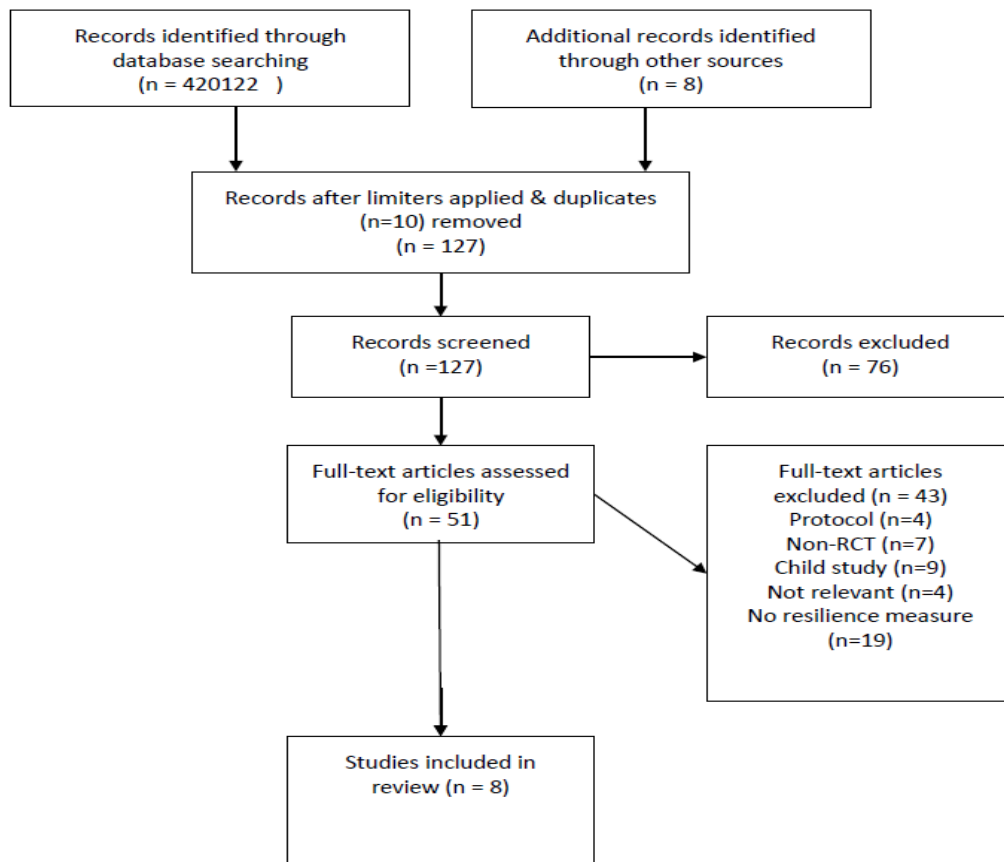
Figure 6. Literature search flow diagram

Introduction to studies

Resilience interventions were targeted to address stress related to employment, academia, pregnancy, self-reported stress, depression and a past diagnosis of breast cancer. Interventions were predominantly group-based, with intervention lengths that ranged from 90 minutes to 2.5 days, over 1 to 8 sessions. Four studies collected follow-up data, from several weeks to 4-months post-intervention.

Resilience interventions were influenced by the theoretical perspectives of positive psychology, mindfulness and compassion (Loprinzi, Prasad, Schroeder, & Sood, 2011; Pidgeon et al., 2014; Sood, Prasad, Schroeder, & Varkey, 2011); cognitive behavioural therapy (Gerson & Fernandez, 2013; Schachman, Lee, & Lederma, 2004; Songprakun & McCann, 2012); and a mixture of the above (Dolbier, Jaggars, & Steinhardt, 2010; Steinhardt & Dolbier, 2008).

Resilience interventions were characterised by an emphasis on stress reduction training such as mindfulness, meditation, acceptance, compassion and relaxation strategies; psychoeducation and cognitive strategies to enhance cognitive flexibility and stress coping strategies, and psychosocial interventions to promote supportive relationships.

The construct of resilience was measured by four separate measurement scales across the eight studies. Four studies used the Connor-Davidson Resilience scale (CD-RISC-25) (Connor & Davidson, 2003); two studies used the 10-item (CD-RISC-10) (Campbell-Sills & Stein, 2007); three studies used the 14-item Resilience Scale (Wagnild, 2009); and one study used the Dispositional Resilience Scale (DRS) (Bartone, 2007). In a methodological review of resilience scales, Windle et al. (2011) assessed the CD-RISC-25 as achieving a quality rating of moderate. Table 1 shows the quality assessment for the above scales. The DRS was the weakest measure, with respect to construct validity. With the exception of the CD-RISC-25, the remaining measures were limited by test-retest analysis.

Table 1

Resilience measures quality assessment (after Windle et al. (2011))

Psychometric measure	Internal consistency*	Test-retest reliability**	Construct validity***	Overall score
CD-RISC-25	?/1	?/1	+/2	7
CD-RISC-10	+/2	0/0	+/2	5
The Resilience Scale	?/1	0/0	+/2	6
DRS	?/1	0/0	0/0	3

*   ?/1 = No factor analysis OR doubtful design or method; +/2 = Factor analysis performed on adequate sample size and Cronbach's alpha(s) calculated per dimension and between .70 and .95

** ?/1 = Doubtful design or method; 0/0 No information found on reliability

*** +/2 = Specific hypotheses were formulated and at least 75% of the results are in accordance with these hypotheses

Participants

A total of 375 participants (intervention, n = 186; control, n = 189) were included in the studies, with individual study participant numbers from 25 to 91. Of 9 study populations, included were students (n = 4), professionals (n = 2), clinically depressed (n = 1), breast cancer survivors (n = 1), and primigravid military wives (n = 1). The majority of participants were female. Four studies reported the ethnic background of participants, with the majority being Caucasian/White, with Hispanic, Asian and African American backgrounds represented.

Five studies used wait-list control groups (Dolbier et al., 2010; Gerson & Fernandez, 2013; Loprinzi et al., 2011; Pidgeon et al., 2014; Sood et al., 2011), whereas, Gerson and Fernandez (2013b) used a placebo psychoeducation group and Songprakun and McCann (2012), a treatment-as-usual control group. Schachman et al. (2004), provided traditional childbirth parenting classes, with relaxation strategies.

Table 2

Study characteristics

Study	Participants (*n*=)	Resilience definition	Theoretical stance	Identified Stressor	Aim	Intervention	Time	Resilience Measure
Pidgeon et al. (2014)	Human service professionals (*n*=44)	Competence to cope/adapt in the face of adversity and bounce back.	Broaden and Build theory	Occupation	Increase resilience, mindfulness and self-compassion.	MMTP: Mindfulness with Metta Training Program Mindfulness training. Metta: loving-kindness meditations.	2.5 day residential group retreat + two booster sessions over 3-months).	Resilience Scale
Gerson and Fernandez (2013a)	Students (*n*=28)	Maintaining /returning to preexisting level of functioning following a stressor.	Ellis's ABC model and explanatory styles. To develop an adaptive explanatory style.	Not identified	Increase personal control, optimistic explanatory styles & thriving	PATH Program for Accelerated Thriving and Health Presentations on: pessimism, optimism and personal control, with small group discussions.	3x 69-90 minute lecture/discussion delivered over 3-week period.	CD-RISC 10

Gerson and Fernandez (2013b)	Students (*n*=63)	As Gerson & Fernandez (2013a)	As Gerson & Fernandez (2013a)	Not identified	As Gerson & Fernandez (2013a)	Revised PATH: increased emphasis on application of explanatory styles to coping with stressful	3x 30-50 minute over 5-6 days.	CD-RISC 10
Songprakun and McCann (2012)	Depressed patients (*n*=56)	Person's psychosocial capacity to maintain positive adaptive functioning and outlook, minimising negative thoughts and promoting recovery of strength/coping ability	Cognitive behavioural therapy	Diagnosed depression	Reduction in depressive symptoms	Bibliotherapy: Taiwanese version of The Good Mood Guide: A self-help manual for depression. + relaxation techniques.	8-week + 8 x 5 minute phone calls	Resilience Scale
Loprinzi et al. (2011)	Breast cancer survivors (*n*=25)	Ability to thrive despite stress and adversity.	Acceptance and compassion	Past breast cancer	Increasing resiliency, stress/anxiety reduction.	SMART Stress Management and Resiliency Training. Attention and Interpretation Therapy (AIT): promotes reflectivity & compassion Breathing meditations.	2x 90 minute group sessions + 1x individual session + 3x follow-up telephone calls of 15 minutes.	CD-RISC-25

Author (Year)	Population	Resilience definition	Model	Outcome	Aim	Intervention	Duration	Measure
Sood et al. (2011)	Academic physicians (*n*=40)	Ability of an individual to withstand adversity	Acceptance and compassion	Physician distress	Increasing resilience stress/anxiety reduction.	SMART	1x 90 minute one-to-one session.	CD-RISC-25
Dolbier et al. (2010)	College students (*n*=64)	Recovering from stressor to pre-stressor level of functioning, and where possible, thriving.	Stress related growth : Internal Family Systems model	Self-report	Enhance adaptive coping, decrease maladaptive coping, promote protective factors.	Transforming Lives Through Resilience Education. Psychoeducation topics: resilience, responsibility, empowering interpretations, creating meaningful connections	4 x 2-hour classroom sessions	CD-RISC-25
Steinhardt and Dolbier (2008)	College students (*n*=64)	Ability to recover quickly from disruptions in functioning resulting from stress appraisals to return to pre-stressor functioning.	As Dolbier et al.	End-of term stress	As Dolbier et al.	As Dolbier et al.	As Dolbier et al.	Dispositional Resilience Scale (DRS) CD-RISC-25
Schachman et al. (2004)	Primigravid military wives (*n*=91)	Adaptation to stressor is influenced by protective-vulnerability factors	Protective-vulnerability	Transition to motherhood,	Facilitate maternal role adaption by enhancing	BBC: Baby Boot Camp Group activities: reflection, sharing coping strategies. Positive	4-hours, weekly over 4 weeks.	Resilience Scale

		within individual and environment.	model Woodgate (1999)	military lifestyle	internal/external resources unique to military wives.	reinforcement. Information resources, role modelling/facilitating supportive relationships.		

The aim of this review is to understand how the concept of resilience is operationalised, to assess methodological rigor and the efficacy of resilience interventions.

Methodological rigor: Risk of bias

Table 3 provides a summary assessment of the risk of bias of studies, which is based on the Cochrane Collaboration risk of bias tool (Higgins et al., 2011). The study by Songprakun and McCann (2012) followed the CONSORT statement and was assessed as superior to the other studies, as the only study with a low risk of bias in random allocation, allocation concealment, and participant/researcher blinding. All studies failed to include an intention to treat analysis. No study provided clear information concerning the blinding of the outcome assessment.

Table 3.

Risk of bias assessment

Study	Random sequence generation	Allocation concealment	Blinding of participants personnel	Blinding of outcome assessment	Intention to treat analysis
Pidgeon et al (2014)	?	?	-	?	-
Gerson & Fernandez (2013a)	-	-	-	?	-
Gerson & Fernandez (2013b)	-	?	?	?	-
Loprinzi et al, (2011)	+	?	-	?	-
Sood et al, (2011)	?	-	-	-	-
Dolbier et al, (2009)	?	?	?	?	?
Steinhardt & Dolbier (2008)	?	-	-	?	-
Songprakun & McCann (2012)	+	+	+	?	-
Schachman et al. (2004)	+	?	-	+	-

Risk of bias (+ low); (- high); (? = unclear)

Leppin et al. (2014) and (Macedo et al., 2014) found poor quality reporting and a moderate to high risk of bias for most studies they assessed. There were quality rating discrepancies between reviews, which may be accounted for as Leppin et al. contacted study authors for additional information. There was agreement between Leppin et al. and the current review that the study by Songprakun and McCann (2012) was of low risk of bias. Based on the published evidence, the current review appraised the remaining resilience studies as having a high risk of bias.

Resilience definitions

The studies by Loprinzi et al. (2011), Sood et al. (2011), and Pidgeon et al. (2014) operationalised resilience as an adaption to adversity; however, none of these studies detailed adversities faced by participants. Pidgeon et al. and Sood et al. referenced the stress of employment. Loprinzi et al. (2011), made reference to the adversity of breast cancer; however, their participants were breast cancer survivors, and active peer support providers. Hsu and colleagues concluded that breast cancer survivors show an improvement in quality of life, which appears similar to matched non-cancer controls (Hsu, Ennis, Hood, Graham, & Goodwin, 2013).

Gerson and Fernandez (2013), operationalised resilience with respect to a return to pre-existing levels of functioning following a stressor. These authors did not provide evidence for a specific stressor. Furthermore, in order to test the operationalised definition,

data must quantify 'everyday' levels of resilience, current resilience in the face of the stressor, and post-intervention resilience. The post intervention score would need to be at the level of pre-existing functioning, which would indicate a non-significant result.

The studies by Dolbier et al. (2010) and Steinhardt and Dolbier (2008), suffer similar difficulty in operationalising resilience in terms of recovering from stressor to pre-stressor levels of functioning. A further difficulty with the Dolbier et al. (2010) study is the nature of the stressors, which were reported as occurring up to 24 years before the study event, with an average of 3 years pre-intervention; are we to assume that these participants have never recovered functioning to pre-existing levels? Longitudinal studies demonstrate that resilience varies over time, for example Werner and Smith report that children with coping difficulties when subject to high-risk factors were resilient individuals by midlife (Werner & Smith, 1982, 2001).

Schachman et al. (2004), defined resilience as an adaptation to a stressor, and identified pregnancy as the stressor, which is consistent with the idea of participants being in a process of change, that then allows for testing of the intervention across time points.

Songprakun and McCann (2012), drew their participants from a clinical pool of depressed patients, and defined resilience with respect to positive adaptive functioning in difficult circumstances. These authors operational definition of resilience is therefore concordant with their psychometric measurement of resilience over time.

Overall, the above studies show that definitions of resilience have been operationalised as an adaptation to stress rather than adversity.

Theoretical orientation

With the exception of Songprakun and McCann (2012) all studies were positioned with respect to resilience theory. Songprakun and McCann (2012) operationalised their resilience intervention with respect to a cognitive-behavioural treatment of depression, based on social competence, problem solving, autonomy and having a purpose/meaning in life (Bernard, 2004). Songprakun and McCann's study assumes that resilience negatively correlates with depression. It follows therefore that any effective depression intervention is also an effective resilience intervention. From the perspective of dynamic systems theory this proposition is valid as mental disorders are reframed:

> "Mental states, disordered or not, are viewed as attractors, as
> dynamical invariants that are constantly in flux, rather than as
> constants or lesions. A psychopathological state is not
> fundamentally different from a healthy state in this respect"
> (Tschacher & Junghan, 2009, p. 327).

Arguably, re-framing mental disorders as states of mind and using resilience interventions to alter states of mind, introduces the potential to present mental health issues in a positive light and re-brand the stigma of mental disorder as something more positive to support service user engagement (Clement et al., 2015).

Dolbier et al. (2010); Steinhardt and Dolbier (2008) and Gerson and Fernandez (2013) operationalised the concept of thriving (Carver, 1998) and post-traumatic growth (Tedeschi &

Calhoun, 2004), which are reflected in Richardson's notion of resilient reintegration (Figure 2); they represent the position of optimising resources to challenge the stressful situation, which is reflected in the grounded theory model of resilience in Olympic champions (Fletcher & Sarkar, 2012). Similarly, the stressor of pregnancy (Schachman et al., 2004) is arguably a positive stressor, which may contribute to resilient reintegration under the stressor of having additional children; although Schachman et al. (2004) referenced the protection vulnerability model (Woodgate, 1999).

Whilst not explicit, Sood et al. (2011) and Loprinzi et al. (2011) appear to draw on the resilience model of Richardson (2002); "the source of resilience is an individual's innate strength that helps the individual adapt to stressors and pursue life's meaning and purpose" (Loprinzi et al., 2011, p. 365). Resilience theory is operationalized as a process of stress-reduction through compassion and enhanced flexibility in explanatory and interpretive styles, which counteract an instinctual focus on threats and imperfections. Thus resilience is positioned as a stress-reduction process achieved through compassionate appraisal of the situation and self. The stress-reduction approach of Loprinzi et al. (2011) and Sood et al. (2011) contrasts with the overcoming-stress approach of Steinhardt and Dolbier (2008), Dolbier et al. (2010) and Schachman et al. (2004).

Pidgeon et al. (2014) drew on Fredrickson' broaden-and-build theory (Fredrickson, 2004), which posits that positive emotions, enhance cognitive flexibility and increase variability in behavioural responses, which promotes good mental health and resilience (Garland et al., 2010). Pidgeon et al. (2014), based their study on Mindfulness and

Compassion meditations for stress reduction and enhanced resilience, similar to Loprinzi et al. (2011) and Sood et al. (2011)' utilisation of a stress reduction approach.

Common to the operationalization of resilience theory in these studies is the idea of flexible cognitive appraisal to support behavioural responses that may foster resilience at stressful times. However, there were clear variations between studies, as to how resilience may be fostered, which for the purposes of this review are classified under the following headings:

Challenge-orientated resilience

Broad definition: Stress represents a challenge to be overcome through the application of cognitive-behavioural and solution focused interventions.

The challenge-orientated studies reported a significant increase in immediate post-test resilience scores: Transforming Lives … (Steinhardt & Dolbier, 2008); The Baby Boot Camp (Schachman et al., 2004) and the PATH study (Gerson & Fernandez, 2013a). Both Dolbier et al. (2010) and Gerson & Fernandez (2013b) found a significant negative correlation with depressive symptoms, which lends support to the assumption of Songprakun and McCann (2012) that depression interventions have the potential to increase resilience. Only Gerson and Fernandez (2013a) reported significant increases in follow-up resilience scores from baseline. The study by Schachman et al. (2004) found no significant difference between groups at 6 weeks post-partum; this may indicate that the intervention was situationally specific as a preparation for birth, with no added value following birth. However, with a CBT theoretic basis the Bibliotherapy study by Songprakun and McCann

(2012a), found significant increases in immediate post-test resilience scores and at follow-up. There appears consistent evidence that challenge-orientated resilience studies increase resilience pre/post intervention, and limited evidence that resilience is sustained by follow-up.

Stress-reduction resilience

Broad definition: Stress represents something to be let-go of through relaxation and meditation practices.

The MMPT study (Pidgeon et al., 2014) reported a significant increase in mean resilience scores at 4-months follow-up. However, it was unclear at what point the 4-month follow-up measures were collected, as there were two booster sessions following the main intervention. Pidgeon et al.'s conclusion that their study shows promise in enhancing resilience is not convincingly evidenced.

Challenge-reduction resilience

Broad definition: Stress is something to be managed through complimentary interventions, with cognitive-behavioural/solution focused and stress reduction techniques.

The SMART studies (Loprinzi et al., 2011; Sood et al., 2011) reported significant increases in immediate post-test resilience scores, with Sood et al., reporting a large effect size. However there were no follow-up measures, and the control group's immediate post-test resilience score was actually higher than the intervention group.

Conclusions

Resilience interventions are limited by poor-quality reporting and lack of methodological rigor. Generalizability is limited by small sample size, low power and homogeneity of population characteristics. The number and range of stressors investigated is limited and there are operational issues with resilience definitions. There is stronger evidence for resilience interventions that focus on overcoming stress compared with stress-reduction interventions.

Clinical potential

Resilience interventions may have the potential to improve mental well-being and quality of life for people with chronic health conditions, and those exposed to high stress due to the nature of their employment; however, current research does not support this position. Fletcher and Sarkar (2013) make the point that resilience theory does not explain the influence of psychological processes such as appraisal and meta-cognitions; a greater emphasis on existing theories of stress and adaptation, for example Stress, Appraisal and Coping by Lazarus and Folkman (1984), may offer a robust platform to examine resilience.

Review limitations

The current review did not contact authors for additional information related to methodological rigor. Additionally, significant findings related to non-resilience measures were not reported, which may give the impression that studies were limited in their utility.

Recommendations for future studies

Resilience research would benefit from an increased number of high-quality RCTs, with clearly operationalised resilience definitions; the use of validated resilience scales and longer follow-up times. Longitudinal studies which included participants from high-risk occupations such as soldiers, fire-fighters and police could usefully measure resilience scores at baseline, throughout employment and post-hazardous exposure and dangerous situations (Macedo et al., 2014).

Resilience theory is likely to be better understood by examining the resilience question posed by Richardson (2002) "what am I going to do?" (p.312), as people face stress/adversity. The current review has suggested that resilience interventions based on overcoming stress and adversity show promise, and therefore it would be useful to look to resilient groups, as did Fletcher and Sarkar (2012), to determine what factors were appraised and how people respond to the situation. Measures of coping would support this research. Resilience interventions may then be tailored to particular groups such as high-risk occupations and lay personnel who are regularly exposed to hazards such as earthquakes, floods and other natural disaster. How do people respond to stress/adversity and what does this say about resilience? The WHO and the APA appear committed to the development of protective and preventative interventions to answer such a question.

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Major Research Project

Japan's 2011 Natural Disaster: A grounded theory study of resilience in vicariously exposed Japanese citizens.

Section B: Empirical paper

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Salomons

Abstract

Disasters are stressors and Psychological First Aid (PFA) interventions are designed to promote resiliency in affected populations; however, there is no supportive evidence that such interventions are effective in reducing or preventing psychopathology. The aim of this study was to explore how Japanese citizens living in the UK responded and coped with the potentially traumatic experience of Japan's Great East Coast disaster of 2011, and discuss how these coping responses might reflect and inform PFA interventions. A qualitative design using a snowball sampling method and semi-structured interview was conducted, and analysed using grounded theory. Participants (n=18; $m = 3, f = 15$), who had lived in the UK for an average of 13.5 years, attended face to face interviews. They reflected on their thoughts, feelings, and behaviours from first hearing of the disaster. A preliminary grounded theory revealed a core conceptual category of cognitive-emotional appraisal and identification. Axial codes indicated four conceptual categories: Primary responses; supportive responses; narrative phase and reflective phase. Resilient responses were characterised by establishing the safety of significant others, contributing to the relief effort, seeking an authentic understanding of the ongoing disaster situation, and over time establishing a personal meaning of the disaster. The resultant theory offered supportive evidence for the aims of PFA. The theory highlighted the significance of enabling disaster victims to contribute to the relief effort, and co-construct an empowering narrative of disaster response, to enhance resiliency and potentially reduce psychopathology.

Key Words: Japan, earthquake, tsunami, vicarious exposure, grounded theory

Introduction

There were 332 natural disasters in 2011 that left over 30,000 people dead, affected 244.7 million, and cost US$ 366.1 billion (Guha-Sapir, Vos, Below, & Ponserre, 2012). By their nature, disasters are severe stressors, which force individuals and communities to respond (Norris, Stevens, Pfefferbaum, Wyche, & Pfefferbaum, 2008).

The psychological impact of natural disasters is an important area of clinical research (Roe & Freeman, 2011), with a primary focus on trauma-related stress reactions (McFarlane, van Hoof, & Goodhew, 2009). A consistent finding of trauma literature is that a minority of directly exposed individuals develop clinically significant psychological problems such as post-traumatic stress disorder (PTSD) (Bonanno, Brewin, Kaniasty, & La Greca, 2010; Kessler, Somnnega, Bromet, & Nelson, 1995), and frequently positive outcomes (Posttraumatic growth) are reported (Sattler et al., 1995; Zoellner & Maercker, 2006). Whilst treatments for PTSD have been shown to be effective (NICE, 2005), there is no evidence that early psychological interventions intended to prevent PTSD are effective (Rose, Bisson, Churchill, & Wessely, 2002), and may even be harmful (Roberts, Kitchiner, & Bisson, 2009). There is however, expert consensus that post-disaster psychological interventions are of value (Watson, Brymer, & Bonanno, 2011).

Post-disaster psychological interventions (PDI's)

A number of PDI models exist, which include Psychological First Aid (PFA) (Ruzek et al., 2007); The Johns Hopkins Perspectives Model of Disaster Mental Health (JHM) (Kaminsky, McCabe, Langlieb, & Everly, 2007); and the 'Five Essential Elements' model of disaster intervention (FEE) (Hobfoll et al., 2007). These models share similar aims: PFA

aims to reduce stress, enhance coping, promote adaptive functioning, and link people with appropriate support services (Allen, Brymer, & Steinberg, 2010). The JHM aims to develop stress management and coping skills; foster group coherence, social support, and positive cognitions; and build self-efficacy and hardiness. The FEE aims to encourage stress resistance and resilience, through the promotion of (1) a sense of safety, (2) calm, (3) a sense of self-and community, (4) connectedness and (5) hope (Hobfoll et al., 2007).

Collectively, these models of post-disaster psychological intervention have come to form a practical guide: *Psychological First Aid: Guide for field workers* (Snider, Van Ommeren, & Schafer, 2011). These PFA models are empirically based, drawing on psychological theory (e.g. self-efficacy: Albert Bandura and cognitive behavioural theory: Aaron Beck), and practice (e.g. generic empathic listening skills and working ethically); and have been developed within a resiliency framework. However, there is no evidence base supporting PFA (Gersons & Olff, 2005). A recent systematic review of PFA concluded that it was seen by experts as effective and thus ""evidence informed" but without proof of effectiveness" (Fox et al., 2012, p. 251). Whilst expert consensus may have to a degree coordinated disaster policy (Watson et al., 2011), the lack of evidence for psychosocial efficacy in disaster situations, and the potential for harm remains a concern (Ganesan, 2006). Indeed Wickramage (2006) describes a "carnival of interventions" (p.167) and calls for regulation of post-disaster psychosocial interventions.

Resilience

PFA is set within a resiliency framework, and there is now a greater emphasis on understanding the resilient majority and disaster preparedness (Bonanno, 2004). Resilience is

variously defined across scientific disciplines (Martin-Breen & Anderies, 2011), with no unifying concept within psychology (Fletcher & Sarkar, 2013). There is however a growing consensus that resilience is an "ordinary normative human resource" (Masten, 2001, p. 235) that operates within and between individuals, families, communities and the structures that support and maintain them (e.g., housing, telecommunications) (Norris, Sherrieb, & Pfefferbaum, 2011). A consistent finding of disaster research is that most people and communities engage in rational, purposeful, and adaptive behaviour (Bolton, 1993). William James provided an informed account of disaster response, based on his observations and experience of the San Francisco earthquake of 1906. James wrote:

> There was no appearance of general dismay, and little of
> chatter or of incoordinated excitement. Every one seemed doggedly
> bent on achieving the job which he had set himself to perform…

James also stated that he "felt no trace whatever of fear; it was pure delight and welcome" and expressed "admiration at the way in which the frail little wooden house could hold iteself together in spite of such a shaking" (William James, 1906)[1]. James's description of the wooden house is an example of how technological resilience, interacts with human resilience (e.g. Norris et al, 2011).

Theoretically and conceptually, integrating resilience research into a coherent concept has proved problematic, and there remains a call for "science to make general predictions" of

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[1] Available at http://www.loa.org/images/pdf/James_California.pdf

how nations will respond to disasters and terrorist attacks and draw on psychological processes and field research (Silver & Fischhoff, 2011, p. 567). Others comment that modern citizens are likely to respond to disasters as our ancestors did (Helsloot & Ruitenberg, 2004), and Gersons and Olff (2005) state "Adequate survival behaviour is a crucial gift of nature" (p. 1038). Together, these authors and Masten (2001) infer that resilience is an evolutionary product, and that our adaptive psychological response, has been refined since our hominid ancestors (Confer et al., 2010).

Perry and Lindell (2003) draw attention to normative helping behaviours of non-victims during times of disaster, but warn that it should not be assumed that these "naturally occurring social processes provide complete support for victims or that they entirely mitigate the negative psychological consequences of disaster impact" (p.53). The difficulty with this position is the implied assertion, that other helping behaviours, such as PFA offer an added active ingredient. There is no justification for assuming that PFA provides any additional value beyond normative helping behaviours. Wickramage (2006), in quoting a tsunami victim illustrates the point:

I just want things to be like what they were before', said the reticent girl in Jaffna who was subject to the barrage of counselling questions. 'I want school to start, to go to temple and play with my friends…This is what I want,' Let us learn from her wisdom… (p.170).

William James and the little girl above, responded to the prevailing environmental conditions of the time. James was protected by his house and then continued with what he knew best, being a psychologist and he applied those skills to the given situation. The little girl too made reference to her skills, of schooling, playing and praying. From the perspective of dynamic systems theory, both James and the girl were attempting to self-organise and stabalise following disturbance (Holling & Gunderson, 2002).

Richardson (2002) conceptualised resilience as a "spiritual source of strength" (p.313), and a reflective capacity that maintained individuals in a state of *biopsychospiritual* adaptive homeostasis, when subject to stress. Stressors such as natural disasters activate primary emotions, subconscious and reflective processes, which lead to the question "what am I going to do?" (p.312). Richardson proposed four resiliency outcomes, which include a growth in self-understanding and increased resilience (resilient-reintegration); or a return to baseline functioning (homeostatic reintegration); or a loss of motivation, hope and drive (reintegration with loss); or destructive behaviours such as substance abuse (dysfunctional reintegration). The resilient majority (Bonanno, 2004), during natural disasters, and their normative behaviours (Perry & Lindell, 2003), may represent the self-organising capacity, developed over evolutionary history, with the facilitative responses potentially protecting against traumatic experiences.

Technology

Disasters cause people to respond and Norris et al. (2011) suggest that technology and organisational structures are potentially the primary resource for human adaptive responses.

An example of technological and organisational structures relates to the role of the media in disasters. Vasterman and colleagues comment, that the health consequences after disasters cannot be understood without considering the influence of the mass media (Vasterman, Yzermans, & Dirkzwager, 2005). Their concerns are echoed by the American Psychological Association who advise people to ""Take a news break" from disaster footage as persistent watching can exacerbate stress, especially if you have loved ones in earthquake-affected areas"[2]. Whereas, Alexander and Klein (2003) state, "the media must be embraced by the authorities as allies because, particularly in the early stages after a terrorist incident, they can play a helpful role by broadcasting to an anxious population accurate information" (p.493). Thus, the potential of technological and organisational systems to enhance human adaptation and resilience is not unidirectional.

Health

Norris et al. (2002), reviewed the empirical literature and found that 77% of disaster studies examined specific psychological problems of which 68% assessed for PTSD. The remaining 23% of studies examined: non-specific distress; health problems; problems in living; resource loss, or problems of youth. Barton (1969), noted that early disaster research was often descriptive in nature and recorded individual and group behaviours. More recently Lindell (2011) has called for more qualitative research and the systematic analysis of interview data.

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[2] Available at (http://www.apa.org/helpcenter/distress-earthquake.aspx).

Since the terrorist attacks of September 11, there has been a greater emphasis on the indirect consequences of disaster. For example, Abrams, Albright, and Panofsky (2004), went beyond describing behavioural responses to disasters, by examining the active processes of post disaster communities. Wayment (2004), examined vicarious victims of disaster and found that a perceived similarity and identification with disaster victims predicted disaster-focussed stress, with survivor guilt and grief associated with collective helping behaviours, and a reduction in stress.

Study rationale

The aim of PFA is to support victims of disaster and prevent the development of psychopathology, through the promotion of resilient responses. If as discussed, the resilient majority respond to the potential trauma of disasters with recourse to evolutionary processes, it becomes useful to appraise this normative coping response, with reference to PFA as a resilience intervention. Vicarious victims of disaster are also responders (Wayment, 2004), and offer an opportunity to understand the naturally occurring resilience response to potentially traumatic events. Such understanding, may be used to inform disaster interventions and potentially promote a strengths-based application of psychology within clinical and non-clinical populations (Cornum, Matthews, & Seligman, 2011; Tedeschi & Kilmer, 2005). The positioning of this study, is concordant with the emphasis of the American Psychological Association's promotion of preventative psychology (APA, 2014; Newman, 2005), and the aims of the World Health Organisation in promoting psychological wellbeing (Keyes, 2007; WHO, 2005).

Present study

Japan's 2011 disaster offered an opportunity to understand how vicarious victims responded to potentially traumatic events. UK based Japanese citizens were a potential sample population, exposed to the unique experience of their family, friends, local communities and country, being exposed to the largest magnitude earthquake in recent history, a tsunami wave, and the threat of nuclear radiation. This study sought to analyse personal accounts of participants to understand the coping response to such a unique disaster, and answer the following question:

1. How had UK-based Japanese citizens responded and coped with the potentially traumatic experience of Japan's Great East Coast disaster over time?

Method

Context

As someone married to a Japanese citizen and who travels frequently to Japan, I was immediately struck by media images and reports depicting Japan's disaster of 2011. This study was developed form a self-observation of an automatic reaching towards my TV in a futile attempt to rescue the people travelling in a car, soon to be consumed by the tsunami wave. I wondered how the people of Japan would cope with such adversity and how Japanese citizens in the UK responded. As the researcher, I position myself as an objective insider, due to my personal connections with Japan. The objective insider position is associated with grounded theory research (Baker, Wuest, & Stern, 1992; Evered & Louis, 1981).

Bracketing

Corbin and Strauss (1998), argued that researchers use their experience, as opposed to imposing their experience on the research process, and that the charge of bias is unfounded, provided there is an awareness of our experience. Tufford and Newman (2012), argue that bracketing has enabled major scientific advances for example Galileo's bracketing of the belief that the earth was static. The scientific resilience/disaster literature was not inspected save for the requirements of gaining research approval and therefore a scientific bracketing as advised by Glaser and Strauss (1967) was demonstrated. The current study was conceived through reflective-practice, which continued throughout the study, and therefore Corbin and Strauss's position of bracketing was upheld.

Participants

Participants comprised 18 native Japanese citizens living in the UK, of which 15 were female. Their time living in the UK ranged from 4 years to 34 years ($m = 13.5$ years). No participant was directly exposed to Japan's 2011 disaster, but all had family and friends living in Japan at the time of the disaster. Their age (yrs) ranged from 18-29 ($n = 4$), 30-39 ($n = 3$), 40-49 ($n = 7$), 50-59 ($n = 3$), 60+ ($n= 1$). Participants were employed ($n = 11$), or in education ($n = 2$), with family responsibilities ($n = 3$), or retired ($n = 2$). Thirteen participants were married and five were single. Participants came to the UK to study ($n = 6$); due to work commitments ($n = 4$), or they accompanied their partners returning to the UK. Table 1 provides participant characteristics and personal descriptions of the initial impact of the disaster, with further details and a pen portrait of each participant in appendix P.

Table 1. Participant characteristics

Participant	Gender	Age (Yrs)	Initial disaster impact
01	Female	32	Devastated, recollected past disasters, worried about family.
02	Female	43	Worried for friend's family in Fukushima, recalled past disasters, scared for own family.
03	Female	28	Worried for relatives living in Fukushima
04	Female	54	Worried for parents living in Fukushima
05	Female	60	Worried for relatives living in near Fukushima area.
06	Female	24	Speechless and unable to think.
07	Female	45	Worried about colleague and her family who are from Fukushima.
08	Female	41	Concern for family and friends living in Tokyo.

09	Female	54	Wanted to find her family, although they were far from the disaster area.
10	Female	42	Horrendous feeling when confronted with images.
11	Female	34	Worried for family living in Osaka. Relief that her family were safe.
12	Female	44	Concern for husband who lives off the coastline of Chiba and the loss of her country.
13	Female	28	Shocked by the *hedoro* (slime), the black tsunami wave swallowing cars and country.
14	Female	29	Had not heard from family "no news is good news".
15	Female	34	Felt "very heavy" as it was a massive disaster.
16	Male	43	Worried for the security of a relative living in the disaster area.
17	Male	45	A sense of surprise and feeling overwhelmed by disaster images and the power of nature.
18	Male	34	Main concern was for the safety of family and friends.

Ethical Approval

Ethical approval was granted by the *Research Ethics Committee* of Canterbury Christ Church University: Salomons campus (Appendix A). The study observed professional codes of practice (BPS, 2010). All participants provided written informed consent and process consent (Polit & Beck, 2006) was maintained throughout the interviews.

 Design

A non-experimental, qualitative design was adopted using a semi-structured interview schedule. The interview schedule consisted of open-ended questions that facilitated unique follow-on questions to respondent's answers and is consistent with a grounded theory analysis (Corbin & Strauss, 1998).

Measures

The semi-structured interview schedule (Appendix B) was created to elicit understandings of how participants experienced and responded to Japan's 2011 disaster.

The questions were devised with reference to *community resilience: concepts, assessment, and implications for intervention* (Norris et al., 2011). This chapter takes the perspective that community resilience is an adaptive process based on resources: "economic development, social capital, information and communication and community competence" (p. 163). An initial general question was used to facilitate rapport before participants were asked to reflect on their thoughts, feelings, and behaviours at various time points from first hearing of the disaster to the present day. They were asked to consider how communities and governments responded to the disaster, and identify any positive aspects to the disaster. Participants were asked if on reflection, they would have done anything differently if a similar event were to occur again. There was an opportunity for participants to talk freely

about any aspect of the disaster, and there were two debrief questions on their interview experience. A pilot interview was conducted with one participant, which was well-received. Question 8 was re-phrased as felt too blunt when asking participants, who in turn asked for clarification.

Procedure

Participants were identified via personal referral; a technique known as snowball sampling (Vogt, 1999). Snowball sampling is advantageous where the participant pool is small or difficult to identify and useful in qualitative, descriptive and explorative research (Atkinson & Flint, 2001). Interviewees made contact with potential participants and introduced them to the idea of the study and provided the study information sheet and consent form (Appendices C and D respectively) as an email attachment. For those potential participants that contacted the researcher a meeting was jointly arranged; typically these were public venues such as a local cafe[3]. Participants were asked if they had read the study information and consent sheet, which was written in both Japanese and English. Once invited questions had been addressed, written informed consent was obtained and the interview process conducted.

Data collection

A total of 18 interviews were digitally recorded using an Olympus LS-11 (15.77 audio hours). Digital recording were transcribed and imported into MAXQDA 11, a qualitative analysis software (Appendix E).

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[3] Discussed in limitations section.

Data analysis

This study involved a psychological and behavioural consideration of the experience of participants vicariously exposed to Japan's 2011 disaster. Given the novelty and complexity of the situation, a qualitative methodology was considered (Smith, 2008). Grounded Theory (GT) (Corbin & Strauss, 1998; Glaser & Strauss, 1967) is an established methodology within sociological and psychological research (Willig, 2004). GT enables the study of individual, interpersonal, and reciprocal relationships and effects between individuals and social processes (Charmaz, 2009).

Interview data were analysed using the constant comparative method of GT (Corbin & Strauss, 1998). Analysis proceeded with reading and re-reading of transcripts and the open coding of data segments (50-100 words). An iterative process of comparing open codes was complimented with the writing of memos (Appendix J) to record thoughts, reflections and theoretical ideas as they emerged. Open codes were clustered to form categories, which were inspected for linking relationships of context consequences and causes (axial coding). Selective coding proceeded in the production of core categories and the development of a theoretical explanatory framework (Corbin & Strauss, 1998).

Quality assurance

Participant quotes are used throughout to ground the theory within the data (Williams & Morrow, 2009). The credibility of the study was strengthened through participant validation; a summary of the findings were sent to participants to review and offer feedback (Appendix G). An independent colleague coded two transcripts and transcripts were compared with the main researcher; there was 66% agreement on the first transcript, with 29% not coded; following discussion and clarification, a second transcript was coded, which was rated as 80% agreed (Appendix H). Triangulation of data was attempted with the coding

of an internet discussion blog. A reflective journal (e.g. Appendix I) was written by the

researcher to maintain awareness of personal thoughts and feelings periodically during the

study process. A fully coded transcript and audit of category coding and category abstraction

leading to emergent theory is available in appendix K.

Results

The results are derived from the analysis of 18 participant interviews, of their

recollection of their response to Japan's 2011 disaster. Interviews were conducted over a 12

month period starting in January 2012, following Japan's disaster of March 11th 2011.

Introduction to the model

Participants were geographically distant from members of their extended

family, friends, and country. Information, received from diverse media sources such as the

internet, television, newspapers and contact with colleagues, friends and relatives acted to

stimulate the central conceptual category of *cognitive-emotional appraisal and identification*

of the grounded theory model (Figure 1). Typically, participants crossed a threshold of

understanding that situated the current disaster as something different to recollections of past

disasters, and therefore something unknown. An identification with past disasters, and the

potential threat to significant relationships, prompted responses, that are reflected in axial

codes linking four conceptual categories:

*Primary response*s, established the relative safety of close attachment figures, through

seeking specific disaster related information (location and magnitude), and making direct

contact with significant attachment figures.

Supportive responses, were important as they acted to mitigate a personal sense of guilt and helplessness (personal coping), and enable participation in the relief effort. Helping responses were characterised by a relatively non-personal act of donating money, to utilising personal skills to generate income to be sent to the disaster zone.

The *narrative phase,* emphasised the need to understand the developing situation based on authentic and relevant information, within the context of a community focused concern and the actions of authorities such as government.

The *reflective phase*, represented an appraisal of what is meaningful in participant's lives and the hopes and concerns for the future of Japan and the wider world community. There was an increased identification and attachment to the Japanese national identity.
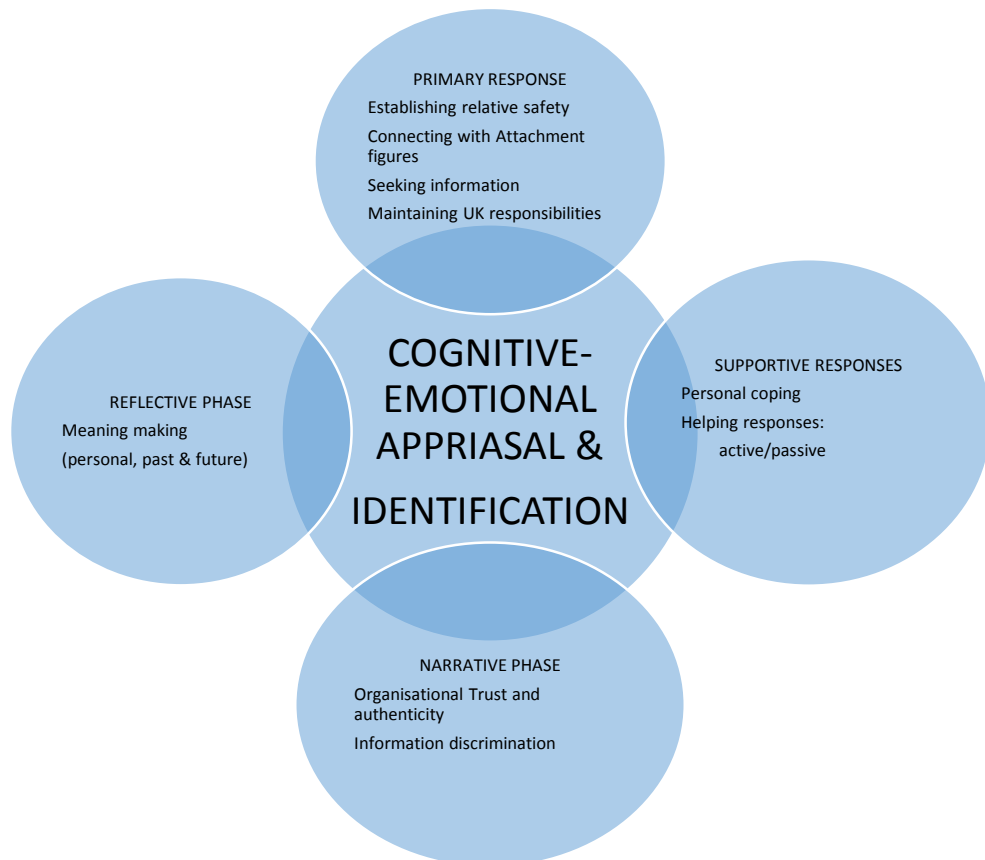
Figure 1. Model of coping response to vicarious response to disaster

Cognitive-emotional appraisal and Identification

Earthquakes are a familiar and common experience for Japanese people, and it is unsurprising to discover that some participants were unconcerned when first hearing of the 2011 disaster; "I thought that earthquake was a normal one, you know" (Participant 11 [P11]; "I didn't think it was so serious, even though I saw the image" [P09]. However, with increased access to media reports, and the concerned questioning of others, feelings emerged: "I don't know overwhelming and I just I was just amazed kind of surprised…that the nature could do this" [P17]. The images of the disaster were "beyond our imagination" [P15]. "I really couldn't believe it, it was surreal…" [P09].

The theory indicates that participants were disturbed by media images of the disaster, which took them beyond their experience. A crossing of a cognitive-emotional threshold from the familiarity of natural disasters and their known consequences, into a place of uncertainty. Recollections of disasters past, situated the participants *in* the current disaster through an identification with media images, and raised a threat to significant relationships, with a particular emphasis on family and friends.

> Without knowing anything I was, devastated. Because when big earthquake happened in Kobe, I was living in Japan, I was student. And I saw all the, catastrophe devastating, news and, pictures and everything. So that went through my mind. So without seeing anything I was devastated [P01].

After that quake in my hometown, my mum and my sister all

the time saying it was so scary. I just can only imagine how they

feel [P02].

In one magazine I saw the really disaster scene; everything

was collapsed, building, houses and then one kind of in the middle

of the picture one kind of the girl was standing helpless, in the

middle of the kind of the field on her own and crying, then I just

imagine her feeling when I saw that picture it was so heavy…. I

imagined if the girl was my niece or my mother or my father [P18].

The above quotes indicate the distress of participants mediated by the identification

with the disaster context and the risks posed to loved ones. Participant [01] above expressed

the idea of feeling devastated without having the information to assess the risk to her family,

but this was a common experience for the participants. Table 1 above, and appendix P,

provides additional summaries of the main impact of the disaster and the concerns for family,

friends and communities, and the sense of relief when relative safety was established.

The identification with the disaster situation appeared as the 'glue' which maintained

engagement with the disaster process and the unfolding events over time. As will be

illustrated there was a cognitive-emotional appraisal of information, which supported the

phases of disaster response.

Primary response

Establishing the relative safety of significant others was a primary initial aim, which

typically manifest in taking actions to connect with friends and family, and seeking specific

information. Factual information relating to the magnitude and location of the disaster were

sought, as this enabled participants to gage the relative risk to family and friends. These two

pieces of information are culturally relevant, as in Japan the exact location and magnitude of

earthquakes are instantly flashed over television programmes and messages sent to mobile

phones.

> I wanted to know the size, but I already felt from the face of
>
> the newscaster of NHK, I've never seen that sort of so tense and so
>
> unusual feeling from the NHK studio, so it must be massive
>
> magnitude number, it must be, which I felt. And I felt very, very
>
> heavy, and also at the same time my family, none of them are
>
> living in that area, that means I had a bit of relief personally [P15].

With such information participants are able to re-appraise the relative-risk to

attachment figures, "I contacted my parents just checking what it was going on there in Japan

because I didn't have much information" [P.16]. "I didn't know the detail that time… so I

had to check the detail that was straight to the internet [P.07].

> I looked at Facebook page as well because … my friend
>
> living in Japan uploaded their information saying oh, I am safe, I
>
> am safe… [P13].

The vicarious disaster response is situated within the context of the responsibilities of

daily living, for example employment. As all participants appeared to maintain their daily

responsibilities (e.g., employment, studying and maintaining the household), it is suggestive of a capacity to absorb, rather than be overwhelmed by the disturbance of the disaster.

> I phoned my mum. Because my parents lived in Fukushima
> and Fukushima was also hit by the tsunami. But I couldn't get the
> connection. I had to go to work. [P04].

> I have people depending on me on the work side, so I think I
> did try and concentrate on getting as much out of the way, so that I
> could just check what the situation was later on as well [P18].

In Summary the initial phase of vicarious response to disaster was marked by a cognitive-emotional appraisal and identification with the threat situation, people and landscape. The initial appraisal initiated an apparent automatic primary response of connecting with significant attachment figures, and seeking additional information to determine the magnitude and location of the disaster, whilst maintaining responsibilities of daily living.

Supportive responses

The conceptual category of supportive responses reflects clustered open codes relating to a sense of wanting to contribute to the relief effort. There was a personal coping, which helped participants manage their sense of guilt and helplessness, through taking supportive action.

The supportive phase of disaster response was marked by a relatively non-personal act of donating money, and for many the application of internal resources (applying skills)

towards recovery. This investment *in* action appeared as an important factor in mitigating feelings of guilt and providing a sense of being an active participant in the disaster recovery, as if participants were in Japan.

An identification with the disaster context helped mitigate initial feelings of helplessness and promote an outward capacity to help and support.

> I thought that was still being connected as a Japanese person to the incident. And then I think that it made me calm down by making me feel that I'm part of it. And being part of it made me feel less powerless. And then I think from that point I started thinking about the donations etc. and what can I do and my brain started working to think how I could help the country [P06].

Personal coping

Supportive responses included donating money to disaster appeals and/or utilising personal skills to raise funds. A characteristic of supportive responses was that it was often infused with a sense of self-care; an opportunity to discharge a sense of duty and/or reduce feelings of guilt, whilst supporting the Japanese people directly exposed to the disaster.

> I can't help them directly all I can do is money way. But at the same time, money can do lots of things, so half of the feeling I feel good by donating money, but half of the feeling is I'm being Japanese, I should be able to do something more useful or I should initiate those kind of events [P14].

…that distress came from the fact that you felt very helpless,

but I think work and people around me sort of help channel that

distress by setting up…charitable funds [P18].

I felt guilty, I felt very guilty for Japanese people in Japan

that I have a normal daily life here. I wanted to help something for

them but what I could do for them was only donation but I thought

that even donation helped the people a little. Thinking of that, I felt

a little bit relieved [P11].

Helping responses

Helping responses were distinguished, by their characteristics. Donating money was seen as an efficient immediate form of help, "I donated to the Red Cross and I thought Japanese Red Cross is quicker" [P02]. It represented a tangible act "I felt that making a donation was the best physical way of trying to assist" [P18].

The nature of supportive responses for many of the participants was to provide a skills-based service (e.g. arranging a concert, setting up tax efficient charitable funds and baking cakes). This required a physical action; an investment in *doing* something, which is characteristic of lay-responders who bring their skills to disaster situations (Solnit, 2009). "we did a bake-off, so everybody baking and bring it to the company and gives a donation" [P14].

I joined a fundraising once, I stood in the street with other

people with a bucket. It was a good experience to see so many

people giving to it [P09].

Narrative phase

From the initial phase of gathering information and accepting available images and

news stories, there was greater concern and discrimination of what information was to be

acknowledged as balanced, truthful and helpful. Participants wanted an authentic narrative of

the disaster trajectory.

I guess just need what is happening as it's being

broadcast rather than making the people feel fear about what it was

like reading the news a few months' later some people being

affected by in Japan watching so many times over tsunami pictures.

To me that's not helping at all, so, I think we need what is

happening and what is required in terms of help or how it's

becoming and how it's been recovering as well. So that people can

be encouraged or feel we are doing okay rather than looking back

oh that was awful, that was awful. To me it was more like

something moving forward. Yes, encouraging for positive giving

us positive feelings. That's what I want to see in TV or news

[P14].

There was greater questioning of the support received with many participants concerned about the transparency of information and trust.

> … maybe I am not picking up all the information but as I heard they are not really helping to the people. We donate lots of things but the stuff not going to, affected area, or it takes time. Even the money they are still not receiving or something that what I heard so that the first few days, I heard so many people are starved or something so they could do more things about [P02].

In relation to the nuclear event, there was some concern that authorities did not respond with efficiency, were withholding of information and hesitant in seeking expert advice from outside of Japan. Authorities were seen as being less than transparent. People wanted clear information particularly in relation to the nuclear disaster.

> Everywhere Fukushima, Fukushima, Fukushima. So, I saw the Japanese government said, it's not under control but it's okay. If I see the news in the UK its disaster, meltdown. It sounds as if it's over, Japan is over. So, I didn't know which news I should believe, so I was quite confused who I should believe. In the end I didn't read those [P.04].

> I think it's to me it's quite difficult to sometimes distinguish all story and the media especially in Japan. Sometimes like

government restricts media what to broadcast and what not to

broadcast but people say Japanese government was hiding the fact

that nuclear power plant is exploded or something [P14].

Although the Japanese people have a history of living together with earthquakes and tsunami, the 2011 disaster was beyond people's imaginations, the underlying sentiment was that of nature as unpredictable, uncontrollable but a known threat. The nuclear disaster was perceived differently:

…the first two [earthquake & tsunami] are natural disasters

so you cannot avoid it even if you could predict it which we

couldn't, but the third one is completely, kind of artificial, human

caused…causing disaster so I think it's very different [P16].

The nuclear disaster was not confined to a specific area, by virtue of the invisible radioactive pollution carried by wind, which threatened the whole of Japan.

Fukushima, has more impact for me, because it will affect

whole Japan…there is some possibility I will lose my country

because of the disaster [P12].

…especially government didn't really, recognised the risk, of

power plant, nuclear power plant failure actually at the very

beginning they, the government didn't, didn't announce that it was

there, happened melt down. They, actually didn't recognise or

maybe they didn't want to tell I don't know [P05].

Arlikatti et al suggest that threat-warning sources such as authorities, news media, and social media are perceived differently according to trustworthiness, expertise and disaster role (Arlikatti, Lindell, & Prater, 2007). A characteristic of most participants was increased discrimination of information received, based on perceptions of truthfulness, reliability and meanings of the messages. Repeated mass media images were screened out by some participants as sensational, irrelevant, and repetitive. The issue of trustful information, and sources was highlighted in relation to the reported evacuation of foreign nationals from Tokyo due to the threat of nuclear fall-out. Information provided by the Japanese authorities was not consistent with the action of fleeing foreign nationals; this undermined trust in Japanese authorities and their information.

But they organised a plane to get the British people back

from Japan and Tokyo that was disturbing. Not they've got people

there but it's normal, they're saying all governments do the same

but to see that foreigners were being moved from the area maybe

just to Hong Kong or somewhere closer, close, but not in Japan but

a little bit…people were moved and that was because of the nuclear

risks…[P09].

Disillusion with government is not just felt in the north-east.

It spreads throughout Japan… But since March 11th the disillusion

has grown a lot stronger. The nuclear accident clobbered faith in

government officials and power companies. Trust in the media also

dived. Even municipal authorities are now openly distrustful of the

central government. "The government lies all the time," said one

(Economist, 2012).

Reflective phase

The reflective phase represents the thoughts and forward looking issues that have

emerged since Japan's 2011 disaster. The hopes and concerns for the people of Japan, their

country and the wider world community. The Japanese disaster led many participants to re-

appraise and reflect on their lives, family, community, and country. The on-going phase of

reflection is marked by an increased identification and attachment to the Japanese national

identity and their country "I am Japanese" [16;13;11;03].

…being Japanese is not so important for me, …but after that

last year I changed, and I found sort of identity, I am definitely

Japanese, …I realised I'm definitely Japanese… it's very good for

me, and also Japanese people I think and we, we are Japanese to

help each other … [P08].

There was a sense of greater contentment with their lives and a closer community: "I

can realise I have everything I need" [P12]; "To live every day more humble" [P15].

I think, maybe in terms of national unity, many people try to

help people there and maybe in terms of national unity, quite, yeah,

it helps to get them together [P13].

Whilst national unity and closer communities were positives that came from the

disaster, there remained a concern for those close communities that had been most affected

by the disaster.

But in a way it's lucky if you find the family's body, but if

you can't find it that trauma may be forever. So some people say, 'I

can't start my life again, not yet, because I couldn't find my boy...

my husband... or my mother,' whatever, whoever. That was maybe

one of the really tough ones; they can't start [P15].

From a future perspective, Japan has predicted an earthquake named the-big-one

which is expected to hit Tokyo. Participants made many references to worry and concern for

the next big one.

I know that the big earthquake is coming ….I am really

worried about the future of Japan because they say the epicentre

would be quite close to Tokyo …. Tokyo is the centre of Japan and

if Tokyo doesn't kind of function it's going to be ...fatal damage to

Japan [P17].

There was a greater sense of individual and governmental responsibility, for example regarding the use of energy, as participants reflected on Fukushima.

> So, toward Fukushima, I feel guilty because I used electricity without not seeing how it has been generated, enjoy electricity life… So Tokyo people just enjoy it and Fukushima people just, affect, affect by yeah, because of us. That's why I feel very guilty and I, yes, I haven't thought about it at all before [P12].

> … earthquakes are unpreventable, you can't prevent those happening, and you have to live with it really. So just prepare, not only the infrastructures, or making sure that the buildings are, how do you call it, structurally, so that it doesn't fall off, those are really important things, but it's also that we have to be mentally prepared so that we can deal with those situations without being emotionally overwhelmed. Yeah, I think to live with nature is the most unfortunate part, and just listen to what your inner-voice or whatever is telling you what to do, and each one of us should listen to what we are supposed to do and do it the way that nature is supposed us to act like [P10].

Negative case?

Studies suggest that pre-existing symptoms of stress are strongly associated with post-stress symptoms following TV viewing of disaster reports (Weems, Scott, Banks,

87

& Graham, 2012), and peri-event emotional reactions (Ahern, Galea, Resnick, & Vlahov, 2004). There were two participants that challenged the spirit of the grounded theory model, and reported difficulties in coping.

> The second day...I had a emotional problem. Every time someone talk about it at work, then I feel really upset; and I felt almost like anger, towards them. My mind was looking for something I could take out on anyone...it's, difficult to explain but I was struggling to cope with that fact; what happened in Japan and the fact I was not there, to help or do anything. I felt like I was, left alone outside…it's the worst feeling I <u>always</u> have, since I've been here, is like...what if something happen to my family? [P01].

Whilst the emotional expression of the internal 'disaster' continued for ten days, and may be seen as a deficit of resources (vulnerability) (Lazarus & Folkman, 1984); a year on and in the reflective process of the interview, this participant expressed the following:

> I've been talking in recalling my memory, and talking about it and come to think of it now, a lot of my negative feelings are coming from my personal position. For example, at that time I felt that I stuck in the UK in London although I never wanted to be, um, I here out alone. So, it was um, the anger was pretty much mixture towards what happened in Japan, and my personal situation

so, if you like you could say, I used earthquake to release my anger

from everyday life here [P01].

The disaster-focused stress (Wayment, 2004), experienced by this participant helped her decide the direction of her life, she subsequently returned to live in Japan. This participant engaged in all aspects of the model, but it was through the reflective phase, of which the interview process was apart, that she came to 'resolve' the question, what am I going to do?

The aims of this study were to understand how UK-based Japanese citizens had responded and coped with the potentially traumatic experience of Japan's Great East Coast disaster. As the participants of this study were both victims and responders (Wayment, 2004), there may be value in considering the disaster response with reference to the aims of psychological first aid in promoting resilience.

Cognitive-emotional appraisal and identification

The theory suggests that participants identified with the disaster situation and the threat posed, based on experiential knowledge and recollections of past disasters. Meek (2010) argues that images alone of violence and destruction are not traumatic for viewers, in the absence of an "identification with events situated within a specific narrative scenario and discursive construction in order to be understood as traumatic" (p.176). The potential threat to significant relationships was assessed via the appraisal of specific information, related to the magnitude and location of the disaster. Lazarus and Folkman (1984), describe the appraisal of threats to significant others as a primary cognitive appraisal, which is shaped by conscious and unconscious processes to initiate a stress response.

Primary response

Vicarious exposure to the disaster through media images and the concern of others facilitated what appeared to be an almost automatic primary response of connecting with family members. Attachment theory describes the activation of the fear, attachment and exploration systems in times of danger, which facilitate developmental adaptation (Fonagy & Target, 2003). From an evolutionary perspective, Paul Gilbert describes an emotion-based threat-protection system that has evolved to alert us to danger, via feelings of anxiety, anger

or disgust, which prompt action to protect oneself, our family, friends and group (Gilbert, 2013).

The primary response was distinguished by the establishment of the relative risk and safety of attachment, which was facilitated by relevant information and modern day technology such as the internet. The Psychological First Aid field guide (Snider et al., 2011), is for first responders to support distressed people, with recent exposure to crisis events. Creating a sense of safety and connecting with relatives is a core component of the immediate aftermath of disasters and the provision of balanced and accurate information may contribute to a reduced perceived threat (Hobfoll et al., 2007).

The current study supports the aim of PFA in establishing the relative risk of the threat with balanced accurate information and facilitating a connection with significant attachment figures.

Supportive responses

Donating money was in many cases an instant bank transfer, which may have provided an immediate sense of relief. In Gilbert's *affect regulation system*, the *incentive and resource-seeking* system "give[s] us positive feelings that guide, motivate and encourage us to seek out resources that we (and those we love and care about) will need to survive and prosper" (Gilbert, 2013, p. 26). Wayment (2004) found that disaster-focused distress and survivor guilt (in vicariously exposed 'victims'), were positively associated with helping behaviours and a reduction in guilt, and similiarly, Lifton (1980) noted a reduction in guilt through collective helping. It may have been that for some participants the initial act of donating money provided an immediate reduction in feelings of guilt and helplessness, and provided sufficient positive feedback, to seek out, and utilise other resources. For example, the skills-based contributions such as arranging a concert, setting up tax efficient charitable

funds and baking cakes. This required a physical action; an investment in *doing* something, which is characteristic of lay-responders who bring their skills to disaster situations (Solnit, 2009). The skills-based helping of study participants invariably meant that new temporary communities gathered in support of disaster victims, as products and services were exchanged for money; this behaviour was described by Zurcher (1968) during debris clearance following a tornado, where ten people, with few social ties "who wanted to do something" came together for three days, completed their self-assigned tasks and then disbanded (Dynes, 1994, p. 7).

From the perspect of PFA, Hobfoll et al. (2007) argued that people must feel that they have the ability to solve problems and overcome threats, as they did prior to the disaster; "the rule should be to encourage as much self-and collective efficacy as possible and for interventions to be cognizant of the dangers of over-protectiveness" (p.295). The participants of the current study as victims and responders wanted to contribute, and did so through donations, and applying their skills to overcome an internal sense of powerlessness, and thus developed a personalised narrative of their self/collective efficacy.

As above, William James noted that "Everyone seemed doggedly bent on achieving the job which he had set himself to perform…" during the San Fransisco earthquake. The PFA field guide provides an earthquake seniro example (appendix M), which illustrates the victims desire to help colleagues, and the first responder's agenda of providing immediate physical/emotional support & connecting with family; however, it raises the question of what effect the neglect of facilitating a desire to help has on the person's self-efficacy and the victims lasting personal narrative of their response to disaster. Meichenbaum (2006), argues that PTSD is a reflection of autobiographical memories, and the work of psychotherapy is the co-construction of a resilience-orientated narrative. Meichenbaum is speaking after the

traumatising event, but PFA interventions are co-constructing disaster narratives. It may be hypothesised that if PFA restricts or inhibits an evolutionary need to help and support in times of disaster (Hobfoll's over-protectiveness above), there is the potential to co-construct a trauma narrative of a victim in need of rescue, due to an imposed limit on personal efficacy. The participants of this study and evidence cited above would suggest that a resilience narrative is constructed in the *doing* of helpful acts.

Narrative phase

A characteristic of most participants was increased discrimination of information received, based on perceptions of truthfulness, reliability and meanings of the messages. In relation to disasters Norris et al. (2008) state that people need accurate communication and information. Information provided by the Japanese authorities was not perceived as consistent with the actions of fleeing foreign nationals, which undermined trust in Japanese authorities and their information. Quarantelli (1990) states that inconsistent messages errode believeability. In Erikson's developmental theory trust develops through the provision of basic needs by parents (Erikson, 1993). From the social-ecological perspective of Bronfenbrenner (1977), the Japanese people are looking to authority figures such as government and the media to provide basic needs, which exceed the resources of an individual, and to mitigate the risk of harm and continued threat. As collective cultures seek harmony with others, individuals may gain a vicarious sense of control through an identification with a more powerful other (Weisz, Rothbaum, & Blackburn, 1984). If Japanese citizens identify with the authority of the PFA field worker, then an opportunity may be lost to co-construct a resilience narrative, as argued in the previous section.

Characteristically, natural disasters tend to be short lived and reach a low point, whereas technological disasters are a human construction, and the threat posed may linger,

and it has been suggested that technological disasters cause greater anger (Baum, Flemming, & Davidson, 1983). Fukuyama (1995) argued that trust as social capital manifests as altruistic and cooperative behaviour to enhance collective wellbeing (Porta, Lopez-De-Silane, Shleifer, & Vishny, 1996). Antonovsky (1979), describes a "sense of coherence" (p.123) as having confidence in the predictability of internal/external environments and that outside sources are acting with benevolent intentions. Information which lacks authenticity will likely undermine a sense of coherence and therefore "leadership must provide an accurate, organised voice to help circumscribe threat, and thereby increase the perception of safety where there is no serious extant threat" cited by (Hobfoll et al., 2007, p. 288). The PFA guide is explicit "**do not** make up information or give false reassurance" (p.28).

The current study results supports the idea that people need accurate and reliable information, so they may construct an authentic narrative of the developing situation and the progress being made towards recovery.

Reflection

The earthquake and tsunami were viewed by participants as "unpreventable, you can't prevent those happening, and you have to live with it really" [P11]. Viktor Frankl (2004) came to believe that meaning sustains hope and life, during the most adverse circumstances. There was a clear concern for those living around Fukushima and the future of Japan in relation to the next big earthquake. Meek (2010, p. 189) comments, "the traumatic event always opens a wound, not only in the past, but before the future, becoming a precursory sign of possible worse things to come".

From the perspective of a first responder the PFA field guide recognises the importance of rest and reflection. PFA recommends that first responders talk about their experience with colleagues or a supervisor and acknowledge the help offered "even in small

ways" (p.40). Thus the PFA field guide encourages first responders to construct their own narrative of the value of their contribution to the relief effort.

Resilience

It has been argued above that the resilience response to disaster has been formulated over evolutionary history. Argueably, before the professionalisation of the responder role, the majoriety of individuals in the disaster experience were as both victim and responder (as suggested by James' account above), therefore, the resilience response to disaster has evolved with respect to the dule role of victim and responder. The PFA field guide has been adopted by the major relief organisations, and symbolises the professionalisation of the responder role, and most likely symbolises parental figures providing for basic needs.

Resilience theory is founded on the idea that individuals have resourses to bring to stressful situations. Richardson' model has four outcomes, which indicate the capacity of the individual to utilise resources and answer the question "what am I going to do?" (Richardson, 2002, p. 312). Fletcher and Sarkar (2012), operationalise resilience from the perspective that stress is a challenge to be overcome. The results of the current study indicate that a key component in a resilience response is the ability to answer the question, what am I going to do? Participants as victim-responders were able to respond through supportive responses, which acted to mitigate feelings of guilt and helplessness, and construct a narrative of empowerment. It is therefore important that PFA interventions, allow for victims to be responders, and to facilitate this significant contribution to enhance a resilient response. If PFA interventions exclude this aspect (which appears the case based on the example provided in the field guide), the victim-responder resiliency, formulated over evolution is denied

expression, and victims of disaster are denied the opportunity to utilise internal resources and generate an empowered narrative of their response to disaster; just as PFA responders are encouraged to do as part of their self-care (see above). The study results provide evidence for the argument above.

Clinical applications

Resilience findings do not translate into a clear programme of prevention and treatment, but they do provide numerous leads on clinical approaches (Rutter, 2013, p. 484).

PFA is derived from psychological theories, and generic supportive listening skills, set within a resilience framework. The grounded theory of this study supports the premise of PFA, but has illustrated a need to incorporate the opportunity for 'victims' of disaster to respond in the dual role of victim-responder, and facilitate the opportunity to co-create a resilience narrative of their response to disaster, which may reduce the potential of developing psychopathology such as PTSD. If as Meichenbaum (2006) argues, that the work of psychotherapy is to co-construct a resilience narrative after trauma, it follows that psychologists can use their skills as a preventative intervention.

The prevention/mitigation of psychopathology before, during and following a heart or lung transplant, is the major focus of my work as a psychologist. I work with patients in developing a resilience narrative through the assessment of coping strengths/weaknesses, and the application of the results to the novel experience of potentially life-saving surgery. Mitigating the potential for delirium within the intensive care wards, or the anxiety related to aftercare and physiotherapy, is possible with a preventative intervention that enhances

resilience. Prevention through resilience, is a new opportunity for Clinical Psychology, as recognised by the American Psychological Association.

Limitations

This study may be limited by the use of English as a second language, which may have inhibited participant's freedom of expression and therefore theoretical construction. Transferability may have been limited by cultural homogeneity and small participant numbers. However, the integration of theory from diverse sciences, strengthens the credibility and utility of the theory. The theory is based on adult populations and therefore cannot be generalised to other groups. Many of the interviews were conducted in convenient locations (e.g café's), which may have inhibited freedom of expression. The place of bracketing raises questions. Whilst the grounded theory is supported in the research literature, it is of note that the participants responded as I did. As a reflection on bracketing, I note that in completing this study I have contributed my skills in supporting the Japanese people's understanding of disaster response.

Conclusions

This study sought to understand the observation of William James that people demonstrated an ordinary resilience during the San Francisco earthquake. By examining the ordinary evolutionary response to disaster, it emerges that a sense of powerlessness and hopelessness as an initial response to disaster, may be transformed in to meaningful helping response. This response may afford a protective resiliency in disaster situations, as James observed, and it might just reduce the risk for developing clinically significant symptoms of PTSD.

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Major Research Project

Japan's 2011 Natural Disaster: A grounded theory study of resilience in

vicariously exposed Japanese citizens.

Section C: Critical Appraisal

Word count: 1926 (+67)

Submitted in part-fulfilment of the requirements of Canterbury Christ Church

University for the degree of Doctor of Clinical Psychology

Salomons

Canterbury Christ Church University

What research skills have you learned and what research abilities have you developed from undertaking this project and what do you think you need to learn further?

The process of research has been personally challenging, stressful, and often demotivating. Whilst existing and new skills have been reinforced, the process has also highlighted personal failings and resilience. My first study, although selected from the Salomons research fair, was considered too ambitious by my then supervisor; I was left feeling both confused and angry that a study put forward in the research fair would not be appropriate. Given the time expended on this first study and the associated feelings, I determined to direct my own research path, which on reflection inhibited my potential to engage with, and learn from the experience of my supervisors. The process of developing a research protocol presented a number of dilemmas: (1) how to review the literature, whilst satisfying the ideal of grounded theory to review the literature post-analysis (Glaser, 2010; Glaser & Strauss, 1967); (2) how to satisfy the academic requirement of clinical relevance.

Following the research review board's feedback, I reflected on how I communicated my ideas and the value of the research. I feel that my ability to clarify my research questions was in part limited by the literature review guidance of grounded theory, and consequently, clarity throughout the process. However, the research proposal was scrutinised and accepted by the research committee as fulfilling the academic requirements and a worthy subject of enquiry.

The learning experience was to find a pragmatic balance of compromise, whilst managing the anxiety of writing the literature review post analysis. The process forced me to consider my relationship with the epistemological position of Glaser and Strauss (1967) and that of Strauss and Corbin (1998), with respect to reviewing the literature; consequently I was forced to think beyond research methods and techniques, and try to internalise the spirit of qualitative research.

The research review board taught me to consider how I was constructing and communicating my ideas, and along with the research board's recommendations, I was able to develop greater clarity, in communicating my research question and process. Further, I learnt to suspend the emotional investment in my study, and assume a more objective critical reviewer position.

The research process helped further develop my organisational skills, particularly in relation to data management. The volume of data was overwhelming at times, but this was mitigated by my experience of thematic analysis, which helped facilitate a trust in the process. I found that whilst computer analysis software offers many organisational advantages, I only really felt immersed and connected with the data when I was drawing spider diagrams.

The research process also illuminated the importance of negotiation and sensitivity, from the perspective of arranging and conducting research interviews. There is a skill in maintaining an open-ended questioning style, and at times the boundary between being an objective researcher and being in conversation with my participants was blurred. All of the

skills above require further development, but the most important skill for me to develop going forward, is a more critical stance and eye to methodological planning and detail. I believe this will support the 'art' of science.

Re-submission: In considering the offer of my viva panel to either re-submit my study or to start anew, I was influenced by my own investment in the work, my belief in the value of the work, but more importantly the scrutiny of the research committee who signed-off the study as fit for purpose. In discussing this with my supervisor, I concluded that my only option was to persist with the process.

Re-analysis: What is it that I am missing? In answering this question I had colleagues open code transcripts and compared the results with my own codes. My supervisor also coded a transcript during a training session she attended and offered verbal feedback. Based on this independent coding, I verified that my analysis was in-line with the views of others. I surmised that the issue was with the communication of the conceptual categories. I felt assured that my analysis was sound, but needed to reflect further on how to communicate my analysis. The re-analysis represents the previous body of work abstracted to conceptual categories, which reflect the data.

Supervision: The many barriers to my engagement with research supervision were largely of my own construction, and reflected a distrust of 'working with' the Salomons culture. I need to be specific in stating that this position is not a personal reflection of my experience of my research supervisor. The inappropriateness of the first study I invested in, and the unreasoned condition of 20 participants (later adjusted to 18), in contrast to the 15

participants in the original proposal, and an average of 12 participants across Salomons qualitative studies, left me feeling angry, manipulated, and less than confident in the research culture. My barrier, was a personal limitation to work through and overcome my issue of trust; had I felt able to discuss this with my current supervisor, and wider experiences, I believe the course of my engagement with research supervision would have been different.

If you were able to do this project again, what would you do differently and why?

Pragmatically, I would consider a thematic analysis methodology, principally because I have greater expertise in this area, and the patterns to emerge from the data have practical applications. My preference, however, would have been to conduct this GT study within the context of a PhD by research; this is driven by the complexity of the resilience concept and the importance of disaster mitigation and nurturing resilient communities.

I would now be more confident in adopting theoretical sampling at an earlier stage in the data gathering process. This would have perhaps provided greater depth to the study, particularly with the inclusion of say Japanese embassy staff within the UK. Whilst triangulation was achieved through the coding of internet blogs, there is an opportunity to further explore sources of data such as video footage, media interviews, and social media, which could provide greater validation of the grounded theory and/or highlight negative cases. Additionally, there would have been a greater usage of the analysis software with image based data.

A relative omission from the study was a more specific question within the interview schedule asking about the personal meaning of the disaster for my participants, and what they had learnt about themselves. This would have enabled a personal resilience view to emerge; whereas the question about 'positives' was perhaps too distant.

I would make greater use of the knowledge and skills of my research supervisors who I made contact with infrequently. I believe this was a flight response to the constant

supervision and assignment feedback within my doctorial training. I wanted and perhaps needed to feel in possession of my research idea; the cost to my study and personal development was the loss of initial clarity around the aim and the subtleties of person-methodology interactions, and likely countless other learning opportunities.

I would provide through greater attention to scheduling, more time to consider and develop my analysis through the process of constructing a substantive theory through to a more substantial 'formal grounded theory'. It would have been useful to have conducted a mini-grounded theory or pilot study to familiarise myself with the methodology and computer analysis software, before embarking on this study. I felt at times the themes within the study clouded the development of conceptual categories and that at times I was seeking to make the conceptual categories more complex than perhaps needed.

As a consequence of doing this study, would you do anything differently in regard to making clinical recommendations or changing clinical practice, and why?

No, not yet.

Implicit within the psychological resilience literature is the idea of a paradigm shift from a deficit to a strength-based focus within clinical psychology. However, *strengths-based cognitive-behavioural Therapy: A four-step model to build resilience* (Padesky & Mooney, 2012*)*, is an example of how the resilience concept is positioned within a deficit driven model as a therapy. As a political view, which may sit uncomfortably with many clinical psychologists, it would be unproductive to challenge clinical psychology so directly.

"No, not yet", means working within the prevention field of clinical psychology, at a community, organisational and specialist group level. Here clinical psychology can construct a balanced formulation of its task and work with all people, not just the client.

Specialist disaster response teams can use resilience training and organisations can develop resilient and adaptive cultures that may weather the storm of dramatic change (e.g. the NHS); at the community level clinical psychology can influence government policy, to promote resilient communities. This however, is premised on the idea that clinical psychology can demonstrate adaptive leadership. So, the recommendation would be to drive and apply empirical resilience research in clinical and non-clinical populations, with the aim of reducing clinical populations in the future. Recommendations for clinical

practice will naturally develop from such evidence and exert a pressure to change based on the core competencies of clinical psychology.

What if we asked, what is the self-organising nature of this person's system; what are the adaptive capacities in this new system (following trauma), and what are the potential pressures of adaptation, which may further influence adaptation, with the aim of greater stability within the system. The idea of a "quick return to normal functioning" is naïve, within the context of ecological systems, and a person with a disturbed stability following a stressful event will change through the experience. From a strength-based resilience perspective, the new opportunities for change become the focus, not a back to normal focus.

The two main threads of this view are not particularly new. Martin Seligman advocates for positive psychology working with non-clinical populations (Seligman & Fowler, 2011), as do Wood and Tarrier (2010), and Peter Kinderman recently posted the below quote on the applied psychology blog page of Canterbury Christ Church University. The recommendation is already out there; Clinical psychology needs to work in mental health, which means all people, communities and organisations.

"Similarly we have a unique perspective on why people might behave in more pro-social ways; offer leadership, act with optimism, possess resilience, etc.– in essence, the stuff of positive psychology" (Kinderman, 2013).

If you were to undertake further research in this area what would that research project seek to answer and how would you go about doing it?

I would like to observe rescue workers in disaster situations and their interaction with victims. The terms victim, hero, and survivor, are both *roles* and *responsibilities* within disaster situations, which descriptively may be expressed as:

As a specialist rescue worker, my role and responsibility is to rescue you. I assign you the role of victim and you are powerless and helpless. As a victim, you feel powerless and helpless, because you are reliant on being rescued, by a hero risking his/her life. As a survivor, you are paraded as a symbol of someone who overcame the disaster, which restores your power in-part.

This media script sells newspapers, but recent floods in India broadcast on British TV stimulated the following questions. Why did the rescue worker carry the 'victim' when he was very able to walk? Why did the rescue worker place his arm around the 'victim' as they walked towards a group of people?

The biological component to psychological first aid is based on stress reduction, so one wonders if the first victim above had been allowed to discharge his stress through walking or running, as may naturally occur in a disaster situation, would he emerge from the disaster with a greater sense of his self-efficacy. If as is hypothesised that both parties in this scene were acting out their assigned roles, then the opportunity to discharge stress

through a physical act was denied, which would according to the Johns Hopkins model of psychological first aid (Kaminsky, McCabe, Langlieb, & Everly, 2007), reduce resilience.

Methods

A systematic observation of rescue footage (video), would provide an opportunity to identify and code rescuer and victim behaviours, (Cooper, Heron, & Heward, 2007). The second method, would be to interview both victim and rescuer to obtain a descriptive account of their experience and the meanings attached (Smith, 2008). It would be most interesting to triangulate observational data with interview data to build an understanding of the rescuer-victim interaction and associated meanings; Psychological first aid may then develop from a field-study perspective and integrate resilience theory as and where appropriate.

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Major Research Project

Japan's 2011 Natural Disaster: A grounded theory study of resilience in vicariously exposed

Japanese citizens.

Section D: Appendices

Submitted in part-fulfilment of the requirements of Canterbury Christ Church

University for the degree of Doctor of Clinical Psychology

Salomons

Canterbury Christ Church University

Appendix A. **Ethical Approval**

Ethical Approval

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Appendix B. Semi structured interview schedule

Japan's 2011 Natural disaster: A grounded theory study of resilience in vicariously exposed Japanese citizens

General introduction questions

- Can you tell me a little about how you came to live in the uk.

1. How did you first hear about Japan's 2011 disaster?

2. What were your immediate: (thoughts, feelings) and what did you do?

3. What was your biggest worry at that time

4. How did you cope with…..

5. Can you tell more about: talking with your…., which tv station, the person you telephoned

6. How did the UK and Japanese authorities respond to the disaster?

7. As time passed what did you find yourself thinking, feeling and doing in response to the disaster.

8. As you reflect on the past year, what if any, are the positive aspects of the disaster?

…personal, family, community, structural.

9. What if anything, would you do differently in the way you coped and supported…….

10. Is there anything you would like to say that has not been said?

Debrief questions

Do you have any questions that you would like to ask me? How did you find this interview experience?

This subject is of value to the Japanese people. Who out of your Japanese friends and colleagues do you think may be interested in expressing their views and how best may I contact them to invite their participation.

Name: Address:

Email: Phone:

Appendix C. **Study information sheet (Japanese/English)**

2011年の東日本大震災について 英国在住日本人を対象としたグラウンデッド・セオリー研究

参加者の方へのインフォメーション・シート この研究はカンタベリー・クライスト・チャーチ大学院応用心理学部に所属す

るポール・ウェルドン、同大学院指導教官のマージ・カラナン教授、NHSサウスロン ドン・モーズリ病院のケイト・ロブジャント、そして東京大学の能智正博准教授によ り行われます。

研究背景

この研究は、2011年3月に東日本大震災が起こった際に、英国に滞在していた、あるいは日本以外の国に滞在していた日本人を対象にした研究です。この研究に参加することを決めていただくために、まずはどうしてこの研究が行われ、どのように関わっていただくかを知っていただきたいと思います。まずは下のインフォメーションをお読みください。

この研究の目的は何ですか?

自然災害は大きなできごとであり、直接あるいは間接的に世界中多数の人達に何らかの影響を与えます。これまでの研究は、自然災害に対して、人々が受ける精神的外傷に焦点が置かれており、必ずしも全ての人が精神的外傷を受けるとは限らないという結果が出ています。人は逆境から立ち直り、新たにコミュニティーを構築してく力を持っています。しかし、人が自然災害を経験し、そこからどのように立ち上がっていくかは心理学的にまだ十分に把握されていません。したがって、この研究では、2011年の東日本大震災の際に海外にいた日本人がどのように思い、感じ、受け止めているかをより理解することを目的としています。

　　どうしてこの研究の参加者に選ばれたのですか?

　　この研究にご興味を示しご協力していただけうる方として選ばれました。日本人の方で、東日本大震災の際、海外（日本以外の国）にいて、大震災を直接日本で経験されていない方が対象となります。

　　参加しないといけないですか?

　　この研究には希望者の方のみ参加していただいています。もし参加していただける場合は、この同意書にサインをし、控えとしてコピーを保存してください。途中いつでも、辞退することができます。あえて途中辞退の理由を述べる必要はありません。

　　参加するとどのようなことに関わりますか?

　　まず最初のミーティングに参加していただき、研究についての説明を受けます。そして、もし研究に参加していただける場合は、東日本災害についての質問が

あります。参加者の方がどの程度ご自身の感情や思いを語ってくださるかによりインタビューの回数は変わってきます。インタビューの前に録音してもよいか確認いたしますが、録音した場合、その内容は書き起こされます。インタビュー中の質問は英語と日本語両方で書かれています。英語、日本語どちらで答えていただいて構いません。

参加して何か貢献できることはありますか?

この研究は自然災害に対して、日本人の方々がどのように感じ影響を受けるかということを心理学的に理解するための研究です。この研究が日本で出版され、日本で自然災害を心理学的に研究している機関の一翼となることを願っています。また、日本で被害にあわれた方々、あるいは災害に直接は関わっていない海外在住の日本人の方々の精神的サポートをしていく上での貴重な結果を提供できることができるでしょう。

参加することによるリスクはありますか? 2011年の東日本大震災について思い出しながら話をしていただきますので、

当時感じていた悲しみや喪失の気持をぶり返すことがあるかもしれません。

私が参加して話すことは外に漏れませんか?

あなたの名前が一切漏れることはありません。すべて匿名となります。録音されたものは全て安全に保存され、限られた人のみアクセスできるようになっています。たとえ日本語で話した場合でも、翻訳する日本人は匿名でデータを受け取ります。全てのデータおよび個人情報は1998年データ保護法に基づき、当大学院内で厳密に保護されます。ポール・ウェルドンとマージ・カラナン教授のみがデータにアクセスすることができるようになっています。この研究がまとまり次第、全ての個人情報は削除されます。

結果報告 研究に参加してくださった方々にまとまった結果をご報告します。その結果

は日本および西欧の心理学雑誌に発表される予定です。

参加を希望する場合はどうしたらいいですか? 最初のミーティングに参加できるか、ポール・ウェルドンから直接連絡がい

きます（ミーティングは英語）。もし参加したい場合は、参加希望の旨を伝えてください。ご質問についてもお答えいたします。同意書にサインをしていただきますが、いつでも途中で辞退理由なく、辞めることができます。

誰の許可をとり研究は行われていますか?

この研究は、カンタベリー・クライスト・チャーチ大学の研究倫理委員会に認 証され行われています。

　　連絡先　ご質問等ございましたら、ポール・ウェルドンにメールかお電話でご連絡く

ださい。（メールxxxxxxxx@canterbury.ac.uK　　　、Tel: 123456）。万一、連絡がとれ

ない場合は、大学院の方にご連絡をお願いいたします。住所： Canterbury
Christchurch University (Salomons Campus), Broomhill Road, Southborough, Tunbridge
Wells, Kent. TN3 0TG

　　ご協力ありがとうございます。

　　2011年9月28日

Study information sheet (English)

Japan's 2011 Natural disaster:

A grounded theory study of resilience in vicariously exposed Japanese citizens

PARTICIPANT INFORMATION SHEET

A research study is being sponsored by the Department of Applied Psychology at Canterbury Christ Church University (CCCU) by xxxxxx and supervised by Professor Xxxx Xxxx (CCCU), Xxxx Xxxx (XXXX) and Associate professor Xxxx Xxxx of the University of Tokyo

Background

You are being invited to participate in a study examining the experience of Japanese citizens living in the UK during the course of the natural disaster that hit the East coast of Japan in March 2011. To aid your decision of whether to contribute or not it is important for you to understand why this study is being conducted and what it will involve. Please take time to read and consider the information below.

What is the purpose of this Study?

Natural disasters are significant events that affect billions of people worldwide who are directly and indirectly exposed to the disaster. Research has tended to focused on the

trauma reactions of populations, to natural disasters and it has been found that not all people are traumatised by their experience. People show resilience in the face of adversity, and rebuild their communities. The psychological understanding of how people experience and cope with natural disasters is not clearly understood. The purpose of this study is to gain a better understanding the thoughts, feelings and reactions of people who were not directly exposed to the Japanese disaster of 2011.

Why have I been invited to participate?

You have been recommended as a person who might be interested in helping with this research, as you are a Japanese citizen who was living in the UK at the time of the Japanese disaster, and therefore not directly exposed.

Do I have to participate?

Taking part in this study is voluntary. If you decide to contribute, you will be given this information sheet to keep and asked to sign a consent form. You are free to change your mind and withdraw consent at any time without giving a reason.

What does participation involve?

You will be asked to meet for an initial discussion where the study will be explained.

If you decide to participate, you will be asked to talk about your experience of the natural disaster. This may be over the course of one or more interviews depending on your willingness to explore your thoughts feelings and reactions. I will ask your permission to

audio record the interview, which will be transcribed. The interview questions will be written in both Japanese and English and you may respond in Japanese or English.

What are the possible benefits of taking part?

This study will contribute to the psychological understanding of response to natural disasters within Japanese populations. It is hoped that this study will be published in Japan and contribute to the body of knowledge that supports disaster research within Japan. This study may result in new knowledge that supports disaster victims in their recovery and others who are not directly involved such as Japanese citizens living abroad.

What are the possible risks of taking part?

You will be asked to recall and talk about your experience of the 2011 earthquake disaster in Japan. You will likely feel a range of emotions as you talk through your experience which may include feelings of sadness and loss.

Will my contribution be kept confidential?

Your identity will kept anonymous, and all audio recordings will be securely store on encrypted media. Only the main research who will conduct all the interviews will know your identity. If you chose to speak in Japanese, a native Japanese speaker who will not be privy to your identity will translate your audio recording. All data and personal information will be stored securely within CCCU premises in accordance with the Data Protection Act 1998 and the University's own data protection requirements. Data can only be accessed by Xxxx Xxxx and Xxxx Xxxx. After completion of the study, all data will be made anonymous (i.e. all personal information associated with the data will be removed).

Dissemination of results

Study participants will be invited to a presentation of the results and provided with a short report. The results of this study will be offered for publication in Japanese & Western Psychological Journals.

What should I do if I want to contribute?

You will be directly contacted by xxxxxx and asked if you would like to meet for an initial discussion about the study (English language). You will have the opportunity to ask questions and if you decide to participate, you will be asked to sign the consent form. Should you decide to participate, you will be free to withdraw at any time without having to give a reason.

Who has authorised this research?

This research has been approved by the research and ethics committee of Canterbury Christ Church University.

Contact & further information

In the first instance, please contact Xxxx Xxxx at xxxxxx@canterbury.ac.uK; Tel: 123456 or write to Canterbury Christchurch University (Salomons Campus), Broomhill Road, Southborough, Tunbridge Wells, Kent. TN3 0TG

Thank you for taking the time to read this information sheet.

28th September 2011

Appendix D. **Study consent form (Japanese/English)**

Canterbury
Christ Church
University

同意書

本研究のタイトル: 2011年の東日本大震災について：英国在住日本人を対象と したグラウンデッド・セオリー研究

研究者: ポール・ウェルドン　連絡先:

住

所:

c/o Canterbury Christ Church University (Salomons Campus)
Broomhill Road
Southborough, Tunbridge Wells, Kent. TN3 0TG

電

123456

話番号:

メ
ール:

右端の各欄にイニシャルをご記入ください。

この研究についてのインフォメーション・シートを読み、不明な点や疑問点は質問し、理解しました。

　この研究に参加することは任意であり、また、研究者に理由を述べることなく、途中で参加を辞退することができると理解しています。

　研究者が個人情報を厳密に守ると理解しています。

　この研究に参加することに同意します。

　インタビューの内容が録音され、また記録されることに同

＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿＿　　　　＿＿＿＿＿＿＿＿＿＿＿＿

＿＿＿＿＿＿＿＿＿＿＿＿＿＿

参加者の名前　　　日付　署名

ポール・ウェルドン　　　　＿＿＿＿＿＿＿＿＿＿

　　　　　　　　　　　　　　　　　　　　　　　＿＿＿＿＿＿＿＿＿＿＿＿＿

研究者　　　　日付　署名

Study consent form (English)

CONSENT FORM

Title of Project: Japan's 2011 Natural disaster: A grounded theory study of resilience in vicariously exposed Japanese citizens.

Name of Researcher: Xxxx Xxxx
Contact details:

Address:

c/o Canterbury Christ Church University (Salomons Campus)
Broomhill Road
Southborough, Tunbridge Wells, Kent. TN3 0TG

Tel:

123456

Email: xxxxxx@canterbury.ac.uk

Please initial box

I confirm that I have read and understand the information sheet for the above study and have had the opportunity to ask questions.

I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason.

I understand that any personal information that I provide to the researchers will be kept strictly confidential.

I agree to take part in the above study.

I agree to the interview being audio recorded and transcribed

Name of Participant   Date   Signature

Xxxx Xxxx   _____   _____

Researcher   Date   Signature

Copies: 1 for participant 1
              for researcher

Appendix E. **MAXQDA 11**

Appendix G. **Participant validation; summary findings (Japanese/English)**

震災に対する反応

　　　この度は、2011年の東日本大震災において、他国に住む皆様がどのように反応されたかを把握する調査研究に参加して頂きました。主な結果要約を下記にご報告します。 これらの結果に対し、あなたのご意見、また、あなたがおっしゃったことがきちんと含まれているかお聞かせいただけますと幸いです。なお、それらコメントをuksaul@hotmail.com までご返信お願いいたします。

　　　中心的要因は震災の状況を認知的および感情的に評価すること、そして震災の映像や国民や国家の苦悩を理解し同じ日本人としてのアイデンティティをもつことです。まず安全確保することが最優先され、次は援助支援への対応と移行していきます。メディアや政府などの機関によって提供される情報の有効性、正確性、信憑性への信頼は時間の経緯に伴い関連してきます。また、個人レベル、家族レベル、地域レベル、さらに国レベルで災害の意味を考慮していきます。

安全確保

考慮

認知的、感情的評価および同一性

援助支援への対応

信頼
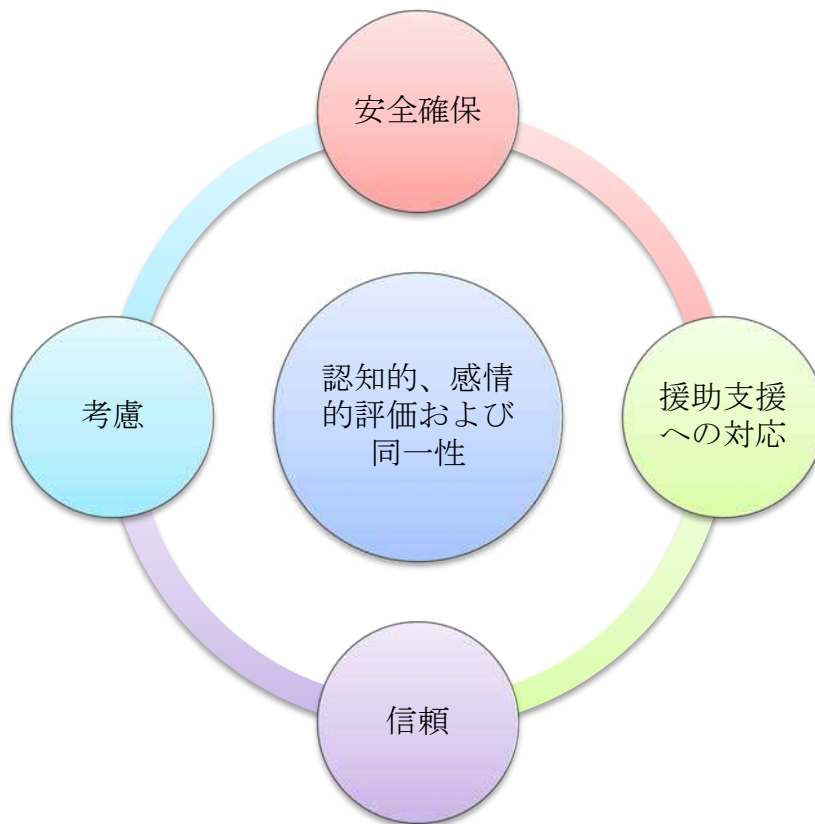
認知的、感情的評価

　　震災に対しどのように理解し感じたかということはどのように震災へ対応したかという過程につながります。日本では地震はごく普通に起きるので、まず最初に思うことは、またどこかで地震が起きたという普通の感覚ですが、映像が繰り返され、他の人から安否を気遣う声があがるにつれ、２０１１年の東日本大震災は大惨事だということが明確になりました。その脅威は不安を助長し、まずは家族や友人の安否が気になり、さらに時間が経つにつれ、その不安は被災地や国全体へと広がっていきます。恐怖を認知し感じ評価することにより人々は反応していきました。第一の反応は、震災の規模そして被災地はどこかという情報を得ることでした。

同一性

　　家族、友人、被災地そして国全体に対し同一性を示し、同情することにより震災が重要視されます。人々は震災において自分自身が震災および被災地と連携していると感じることができたと実感していました。そして、まず、家族や友人に即連絡をとり、震災の規模も確認しました。

安全確保

　　まず第一の反応は家族や友人が安全であるかを確かめることでした。メール、電話あるいはソーシャルメディアを通して連絡を取り合うことは一貫していました。ほとんどの人が、震災の規模や被災地に関連した特定の情報を求めることを重要視していました。また、ほとんどの人が家族や友人が無事だったことを知り、安堵していました。

援助支援への対応

　　援助支援に対する対応は主に３種類挙げられました。（１）銀行口座から災害援助機関へ義援金を送信することが災害援助に対する義援金を送る効率的な方法として一般的に行われていました。しかし、多くの人にとって、送金は最も簡単にできる援助とも考えられていました。（２）多くの人は義援金支援のイベントに参加し、義援金を募り援助し続ける決断行動を起こしていました。（３）自分自身の技術を提供することにより義援金を募る計画をすることが重要と考える人たちもいました。この方法で人々は自分自身の力量が援助支援に貢献していると感じていました。援助支援は、震災から遠く離れていて直接援助できない罪悪感を人々から軽減しており有益でした。

信頼

　　時間が経つにつれ、受け取る情報の正確性、信憑性および有効性に対する疑問が増していきました。概して人々が望んだことは、震災の最新情報であり、繰り返される映像や惨事の傷跡のビデオは有効ではありませんでした。それは復興を前進させるものではないと思われていました。メディアからの情報は衝撃的な画像よ

りも事実や人間模様の方が評価されていました。また、政府からの情報は信憑性、特に原発事故に関連した真の情報が求められていました。

考慮

　　　人々は徐々に震災の意味を考慮するようになりました。ほとんどの人は自分の文化や国に対して同一性を再確認する機会になりました。‘自分が日本人である’ことはインタビューでよく使われた表現でした。原発を使用し続けることへの賛否とその脅威の可能性が検討され、また、個人的にどのようにエネルギーを使っていくかも見直されていました。現在も被災者が生活を立て直そうと努力していることへの思いも語られていました。多くの人が、東京あるい日本のどこかに今後‘大震災’が起こる、‘なんとかしなければならない’という思いと恐怖を抱いていました。

主な結果

　　　災害下における心理学的な応急処置の目的は（１）安全という感覚（２）冷静でいること（３）自己および社会への感覚（４）連携（５）希望を促進することによりストレスに対して強くなることです。.

我々の研究は心理学的な応急処置の目的を支持しています。しかし、回復する過程において自身の技術提供という考え方は心理学的な応急処置では考慮されていません。震災の被害者たちは、メディアで示されているように最初の援助者により被害者としてとり扱われます。被害者自身が支援活動に貢献していくという考え方はまだよく把握されておらず、あるいは提唱されていません。災害下において、被害者自身の技量を用い自分たちが他の被害者たちを援助することで、自分は無力だという気持ちから力強く役立っているという感情へ気持ちが移行し、災害を乗り越えようと貢献していく効果をもたらすことができるかもしれません。そして、震災下の人々はいかに震災を乗り越え、復興へ向け貢献したかというそれぞれの話をもつことができるでしょう。人々は‘自分が日本人である’と自覚することで、抵抗力を示し災害を乗り越えていきます。

ご協力ありがとうございました。

Response to Disaster

You kindly took part in a research study with the aim of understanding the response to disaster in vicarious exposure to Japan's 2011 disaster. A summary of the main findings are reported below. It would be very helpful to receive your thoughts on these findings and whether they generally represent your experience.

Please email your comments to uksaul@hotmail.com

The central factors is the *Cognitive-Emotional Appraisal* of the disaster situation and an *Identification* with the disaster scene and plight of the people and country. *Establishing Safety* is the first priority, which is followed by a *Supportive Response*. *Trust* in the usefulness, accuracy and transparency of information provided by organisations (e.g. Media & Government), becomes relevant over time as does *Reflecting* on the meaning of the disaster at an individual, family, community and country level.
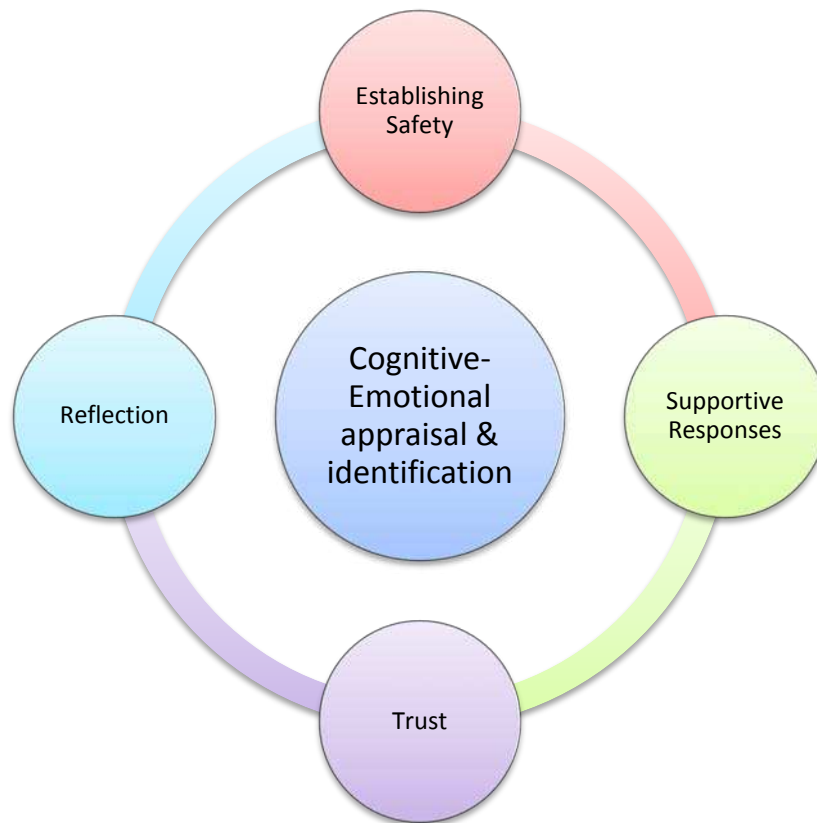
Cognitive-Emotional Appraisal

Thoughts & emotions guide the process of disaster response. Intital thoughts were often that the earthquake was a "normal one", but with repeated images and the questioning concern from others, it became apparent that Japan's 2011 disaster was a significant threat. Threats raise anxiety, and there is a great initial concern for family and friends, which over time extends to the communities directly involved and the country as a whole. The cognitive-emotional appraisal of the threat caused people to respond. The initial response was to seek out information related to the size and location of the disaster.

Identification

The significance of the disaster is driven by an identification and empathy towards family, friends, local communities and the country as a whole. People were able to connect with the disaster and place themselves *in* the disaster, and it was this connection which prompted the initial response to contact family and friends and determine the extent of the disaster zone.

Establishing Safety

The initial response was to establish that family and friends were safe. Invariably this meant contacting people through email, phone, or social media. For most participants seeking out specific information related to the size and location of the disaster was important. With enough information to hand most people down-graded the threat to family and friends and there was a sense of relief.

Supportive responses

Supportive responses were of three main types. (1) Donating money through a bank transfer to a disaster relief organisation was generally seen as an efficient way of delivering funds to the disaster relief effort; however, for many people this was seen as the least they could do. (2) For many, they made a decision to continue to support fund raising by attending fund raising events. (3) For some people it was important to invest their skills in creating something which ultimatly raised funds. In this way they felt they were contributing something of themselves to the relif effort. Supportive responses had the benefit of helping people feel less guilty about being so far away from the disaster and not being able to directly help.

Trust

Over-time there was a greater questioning of the accuracy, transparancy and usefulness of information received. In general what people wanted was the ongoing story of the disaster; repeated images and video footage of devestation was not seen as helpful as it said noting about the forward momentum of the recovery. Media reports were appraised for facts and the human story rather than sensational images. Information provided by Governments was also appraised for trustworthiness, particularly with reference to the nuclear disaster.

Reflection

People began to reflect on the meaning of the disaster, and for many it re-affirmed their identification with their culture and country; "I am Japanese" was a common phrase. There were reflections on the use of nuclear power and the potential threat to Japan, and our own use of energy. There were thoughts for those people still in the process of repairing and rebuilding their lives. "The Big One" was also on people's minds and the threat to Tokyo and Japan—"We must prepare".

Key findings

The aim of *psychological first aid* in a disaster situation is to encourage stress resistance and resilience, through the promotion of (1) a sense of safety, (2) calm, (3) a sense of self-and community, (4) connectedness and (5) hope.

Our study supports the aims of psychological first aid, but the idea of investing skills in the recovery process is not reflected in psychological first aid. Victims of disaster are treated by first responders as victims (this is what is portrayed in the media), and the idea that victims may contribute to the relief effort is not clearly understood or made provision for. By supporting 'victims' to use their skills *in* the disaster situation, may have the benefit of allowing people to convert feelings of helplessness into feeling powerful and useful and contributing to overcoming the effects of the disaster. People in the disaster then have a personal story of how they overcame the disaster and contributed to the ongoing story of recovery. "I am Japanese" embodies the resilience of the nation to overcome.

Thank you for your participation.

Appendix H. **Independent coder agreement**

transcript a	Code	Code	Code	
My friend who meet in the morning, actually she's my colleague, "Have you watched the telly?" No, I didn't. "There's been a big earthquake in the Tokyo area. Are you parents okay?" I didn't know, so I turned on the telly and I saw the tsunami ((0:01:34?)).	Seeking information			

This cannot be true. Tsunamis are that big. There are a lot of earthquakes in Japan; so tsunamis are big. I've known them. My friend, I had a visitor at the time from Japan and I told her and we watched telly together. And she said, "Is that CG?" You know, created image. ((Laughing)) I don't think so, it's real. It was really amazing. I just couldn't believe it.	Seeking information	Appraisal		
Oh my god, just speechless and just shocking.	Appraisal			
Very different. I'd never seen such a tsunami before in my life.	Appraisal			
I phoned my mum. Because my parents lived in Fukushima and Fukushima was also hit by the tsunami. But I couldn't get the connection. I had to go to work. I continued calling my parents but no connection. I checked the website and the news. I got very worried by the images and disastrous news. I thought that maybe my parents' house could even be hit by the tsunami because my parents live by the seaside in Fukushima. But somehow, it's kind of my parents are going to be all right, somehow I got kind of that confidence that they cannot be… they must have survived that.	Connecting with attachment figures	Maintaining responsibilities	Seeking information	Appraisal
My parents and my hometown and Japan. Soon after I heard the news of the explosion of the nuclear station, so I didn't know what was going on or why it happened something like that. My parents live about 35kms from Fukushima.	Connecting with attachment figures	Appraisal	identification	
That night we had just at midnight I finally got a connection and I was able to talk to my parents. I asked them, "Are you all right?" "Yeah, we	Connecting with attachment figures			

are okay. Just the house is damaged. But still you can live inside of the house and be okay".				
Quite relieved. Somehow I believed as well that my parents were still alive, so I was quite relieved. I just said to my mum, "You could have warned me". She said, "Sorry, I just couldn't think of it because everything, the mess and shock, no water, the water stopped immediately". They just didn't have the time to think about me. ((Laughs))	Connecting with attachment figures	Appraisal		
Maybe I have I think my parents. They cannot be dead. Just very well they've always been all right so why not now. I don't know. I was quite sure they were alive.	Connecting with attachment figures	Appraisal	identification	
I had to work as well, also calling my mum. I tried to get information as much as possible otherwise you never know what's really happening there. What else can I do? Just keep believing.	Maintaining responsibilities	Seeking information	Appraisal	connecting with attachments
Google, BBC and all kinds of news sites and all kinds of websites I can read in Japanese.	Seeking information			
I wanted information of my hometown: so how seriously damaged or wiped out by the tsunami; I didn't know anything about that. I saw a couple of emails, tsunami emails of my parents' town where my parents lived. My parents' house is quite close to the sea as well, so.	Seeking information	Connecting with attachment figures	identification	
Yes, about radiation, the nuclear. I saw the news; every day I had news about the nuclear station. I couldn't believe that my hometown was contaminated or whatever. So, it was quite shocking; I never,	Appraisal	Connecting with attachment figures	identification	

ever thought something like that could happen.				
It's like a Chernobyl; but Chernobyl is some incident far away from me. Just unbelievable.	Appraisal			
I'm quite depressed. Just confused and depressed. Just didn't know what I can do. Just I feel awful.	Appraisal			
It was the images really awful, horrible. And so many people since have died obviously. Even Fukushima, where I was born, badly damaged. As a child I used to go to swim in the sea and there was a beach – and everything was wiped out and many people died. Just feeling awful. Just feel awful and depressed.	Appraisal	identification		
Yeah, my memories, everything.	Identification			
Yes, my good memories of when I was in Japan and my childhood. Everything, my good memories are ruined or just wiped out by the tsunami.	Identification			
I don't know. At that time my friend started raising money immediately, and making Japanese food and selling it, and also gathering ((lines?)) to raise the money. I was invited to come; I didn't feel like it at all. I don't feel like doing anything; I don't feel like taking action for me. I just couldn't do anything. But I was asked so I went. A friend of mine said, "Please, share your feeling with others". But I didn't want to do it; I wanted to keep it myself somehow. I don't know. But I	Personal	Contributing	Appraisal	

didn't feel like talking about it to just strangers.				
No, just at the time there were so many people who I had never met before, and suddenly I was there surrounded by other people. And just share your feeling with others, it's more private. Now it's okay; but at that time I was really depressed and I didn't feel like sharing my feeling with others. But now it's fine.	Personal	reflective		
So, your friend invited you and she was making cakes and things to make money.				
Yes, and sushi, things like that.	contributing			
And you helped her with that?				
I just went there.	Contributing			
((Laughs)) Well, she's from Kobe; her parents also experienced the earthquake. At Kobe there was a big earthquake over ten years ago, and her parents also suffered from the earthquake and the house was damaged. So, she should have understood how I would feel. And she even said, "At that time I couldn't do anything; all I could do was cry or roll about but I couldn't take any actions to raise money or to help people. So, that's why I do it now". So, she should have understood my feelings. I was just experiencing the same situation. So, I was quite angry.	Appraisal	Personal	identification	
Maybe she could have talked to me more personally; not with other parties. Since then I haven't met her. ((Laughs)) Anyway we're not so close.	Reflection	Personal		

No, not really. But I didn't want people to feel sorry for me. Also I didn't want to see when she introduced me to others; I couldn't see their faces – oh, this kind of we are very sorry, that kind of face. I just couldn't stand it. I don't know why.	Appraisal	Personal		
They could have taken action more quickly to save the people or to stop the nuclear accident. But this kind of disaster never happened before so I totally understand that there was a delay or they couldn't take appropriate action immediately; I understand that totally.	narative	organisational		
I didn't think about that very much, just they broadcast the news of course about the earthquake; but more about the nuclear explosion; it was more than an earthquake I thought. Everywhere Fukushima, Fukushima, Fukushima. So, I saw the Japanese government said, it's not under control but it's okay. If I see the news in the UK it's disaster, meltdown. It sounds as if it's over, Japan is over. So, I didn't know which news I should believe, so I was quite confused who I should believe. In the end I didn't read those.	Trust	Organisational		
Yeah, at the end I understand what is broadcast, what is released is not always true. So, I realised I shouldn't believe everything; I should always have a suspicion.	Trust	Organisational		

It's not still ended with me; I still very sad about it. Since the earthquake something changed in my life and I cannot be so jolly from my heart. Something changed; always some kind of a shadow in me. It's been more than one year since then. Last year I didn't feel like doing anything; I didn't feel like going on holiday. My colleagues are very keen on booking or taking some; I didn't feel like anything. I wasn't interested in it. So, those types of events take time to get over. I just didn't feel like it; I didn't feel like enjoying myself. I feel guilty and also I'm a bit depressed.	Appraisal	Meaning making		
So many people suffered or are still suffering; I feel guilty to enjoy myself.	Meaning making			
I was not hit by the earthquake because I was in the UK. And my parents had a really hard time at that time because no water for five or six weeks, and they couldn't get petrol. Also they were asked to just stay at home because of the radiation danger. But my parents are quite positive. I was asked by my friends, "Are you parents okay to live in Fukushima? Why don't you ask them to come to the UK?" Or even I asked my parents to go somewhere else, to relatives house in ((0:27:42?)) or Tokyo. They said, "This is the most comfortable place, even with no gas and no water, we can't have a bath; but this is the most comfortable place for us. We're going to continue to live here. It's happened. You cannot do anything; you cannot go back. You have to still keep going. We're okay. We are afraid of the nuclear things but we are	identification	meaning making		

old enough. We will be okay, but small kids are not; but we are all right." So, my parents are quite positive.				
((Laughing)) I never, ever saw that they are so tough. So, I'm quite surprised how tough they are.	meaning making			
((Laughing)) I don't know. Maybe they experienced… they were born during the war. My father is quite sensitive normally, a very sensitive person; but he was quite optimistic: it's terrible but they're okay; we've got still enough food at home. Still I can't get petrol, you have to be in the queue for three or four hours but it's okay, we can survive and we don't go anywhere else. At the time most of the neighbours left ((Yusikura?)) where my parents live because of the nuclear station. But they decided to stay there. My brother was checking every day, is that the house someone left. Because ((0:30:15?)) I feel isolated, but	Connecting with attachment figures	Meaning making		

he explains just as a fact. I'm quite happy to have them.				
Yes, so many people are helping each other. I heard there was no riot after the disaster. People were more patient and more resilient. So, I think this kind of solidarity. I think they're okay. I don't know what's going to happen with the nuclear station. It should go well, otherwise ((laughs)), so.	Meaning making			
Maybe I can understand the feeling of emotion more through ((0:32:41?)) by the disaster or some horrible accident, something horrible. I have never experienced before and how you might feel the incident affects you. Before it was something not really attached to me and it's someone else's incident. I'm very sorry for people who suffer from any kind of accident, disaster; but it was always someone else's problem. But now I can understand. Even though you're not there, you're not in Japan and haven't experienced it, but it can affect very badly on you. Very strange this kind of guilty feeling; I should be very fortunate, I should be very grateful, but I feel guilty that I continue living same as before. ((Laughs)) And I also realise how grateful that you can live normally. You can go to work, you can get food, go shopping and you can meet your friends; it's normal. Every day I feel so grateful that I can continue to live like that. Before	Meaning making	present		

I won't do this, I don't know how to do this ((laughing)); but now I'm quite content and happy.				
My parents knew people who lost their house and were living in the sports hall in the school, and they were sleeping on the floor directly. So, that's why they feel so lucky to be able to be at home.	reflective			
Yes, I think so. I said before that I was sometimes not really happy with my situation. I'm happy generally, but I want to have a better job, a nicer house or, you know ((laughs)); but I don't want it anymore. I'm not interested in getting more. I'm happy.	Meaning making	personal		
Yes, I think it's less now. But if I hear the news there are still people who are living in sheltered house or lost their job because of the disaster and still they're struggling in finding jobs for them – maybe it's not guilty; maybe the guilt gradually decreased. I feel more sorry for them.	Meaning making	personal		
No, I couldn't do anything. ((Laughs)) At the time I was like this. I think just you have to go through it.	Appraisal			
I told you that I was quite annoyed with myself. Also I was quite angry with, not the friend but acquaintance, who emailed me almost every day about how terrible the situation was. I was quite annoyed. ((Laughing)) It was the end of the world! I found this kind of YouTube images about nuclear stations,	Appraisal	Meaning making		

about saying that nuclear stations were dangerous things and we shouldn't have that. Look at Italy, Italy hasn't got any nuclear stations. This was every day showing these YouTube images. I was quite annoyed. In the end I just deleted them. I think they did it kindly, just tried to let me know the information, so I understand; but it was too much for me. I was quite annoyed; I was quite angry. ((Laughs))				
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transcript b	code	code	code		
R: That was when I was in the office. At the Reception they have a monitor showing the news channel all the time. Then I don't remember, I think it was about lunchtime or, I don't pass Reception earlier so often once when I passed I saw the images of the, I think tsunami or the swolling in the bay. And it looked then-, they don't have the sound on but when I was watching I realised that it was in Japan. That was the first time I heard about it. I knew about it.	Identification	Maintaining responsibilities			
R: It was weird because there was no sound, just the image on the monitor. I really couldn't believe it, it was surreal, that was the first immediate reaction yes.	Appraisal				
R: The image and when it happened we don't, there are only news, bits of news so I didn't think it was so serious. Even though I saw the image. Yes.	Appraisal				

R: The feeling was, no I didn't feel much I think. I can-, I think I thought I'd go and check what's really happening. On the Internet or, maybe I can call my family, but I wasn't really feeling shocked or, I wasn't really feeling anything. I just wanted to see what's really happening.	Appraisal	connecting	seeking		
R: I went back to my desk and I checked on the Internet to see the news in Japanese and I called Japan to my family.	Seeking information	Connecting with attachment figures			
R: To check the news. I just really wanted to know what is happening. What happened and to call to Japan to find my family, they're living very far from the affected area so I knew there was nothing-, they were okay. But I wanted to just check if they are okay and what's happening in Japan as well and in that area, the Kansai area. How they felt. If they knew about it the tremor and if they felt that or how their life is there? Not in the Tohoku area, but in Kansai.	Seeking information	Connecting with attachment figures			
R: I remember they're-, I think they said they just know what we can see on the TV, so and they said they didn't really feel any tremor or if it had spread very far and they are living as normal and they are just watching the news. I think that is what they said. They were basically okay. Life is not very affected in Kansai area.	Connecting with attachment figures				
R: I started to see I didn't-, I felt a bit relieved of course. My family it seems okay but then still to me it's so everything-, it's so, so far away in Japan and I really I feel, I think I feel	Appraisal	Identification			

nothing. I can't believe but I feel very detached from everything happening in Japan.					
R: I, I think I wanted to know how serious the disaster is. So on the first day, there was not much news, maybe what I could see was how big the after-quake was and there was a big tsunami and maybe the number of casualties, but starting maybe 60 people or 100 people and so it was still unbelievable. Images I could see on the TV or on the pictures but it was smaller pictures and just repeating the same image was just repeated again and again. And on that particular evening I was supposed to go and meet about ten Japanese ladies living in the area and this area about 5.15pm we were just getting together and all of us were there and we talked about did you see that news? But we just carried on and I don't know what the other people, but me we chatted about something else and I think we didn't really worry. we were waiting to see the scale of the disaster, but on that-, just after on that day maybe I wasn't upset, it didn't upset me emotionally. I'm sorry I don't know if I answer your question.	Seeking information	Maintain responsibilities	Appraisal		

R: It was-, I didn't like it. I mean I think if I were still remember them the image they show it really a shocking image, big, big swell and the boat was turning with it, so it was really, yeah I said I wasn't affected but probably it was better it was repeated. Maybe I was a little bit scared. Of course it's something happened there, not here, but somewhere I know, I was brought up in Sendai for five years when I was little so that's a little bit related to that area as well. Yes.	Appraisal	Identification			
R: Yes, I don't know because it will be happening very, very far and I don't know if I feel the same if it happened or when it happened, something happened the disaster happening in Indonisia a few years ago. Maybe because it's especially Japan so ((13:23?)) safe and quiet and Malaysia's a very nice easy place to live, so maybe I think I scared because of ordinary life was destroyed like that. And I especially know Japan, I'm from Japan. I know how normal daily life is supposing ((14:00?)) not in the big cities but Tohoku area where my parents are from. Very quiet and local area so maybe I didn't really think about it to be honest and I didn't really try to find out what I felt. But in this occasion I think I was shocked to see the life there is destroyed. Such a terrible way.	Appraisal	Identification			

R: No I didn't do anything special. People react in different ways, I remember but I saw them do something for people in Japan and I didn't do anything by myself but I didn't organise for example and-, but I donated wherever they were raising money for. People and people in Japan.	Contributing	Personal			
P: Okay, where did you get most of your information from?					
R: From Internet. Yes and British TV. I heard that people tried to get in touch with Japanese media directly on the Internet they I think, I don't know, I forgot the word but they just kept ((18:17?)) we can't accept people just captured the TV emails and just broadcast it over the Internet and it was allowed, it was not taken down for the special event so people went on line and watching the news all the time wherever possible. I didn't do that too much.	Seeking information	negative case: seeking information			
R: I don't have that access to the Internet at home and I think it's what's happening there is, maybe I didn't want to see constant, instant impact, because when I saw the TV, British TV, the news is always the same images repeating. I thought that Japanese media do the same, so images from the site-, the area and interviews on the streets, people-, the ministers or those specialist experts on TV they were just talking. Apart from that I didn't care what they were talking about but things were happening what they're discussing but they are arguing	Appraisal	Seeking information, Trust	coping response	personal	

it wasn't really relevant to what's happening actually. So I didn't want to know. I wanted to know the information in that chunk maybe, to know something, but I didn't really want to see everything because they wouldn't show everything really important, they were just showing because of the event everything they can catch, so I didn't want to-, I don't need it and probably I don't want to see that bit.					
R: The facts. Yes. And of course I'm not an expert but the media they are mistrusted generally but I don't trust Japanese media either. So and everybody-, people they are saying that Japanese media not being showing things they are showing what they are allowed to show. That's true too. Maybe I'm always like that inside apart from now. Characteristics for the moment say but I wanted to collect the information just ((22:07?)) the facts and it's convenient but they're contracted in my head maybe. It's okay nice, it's not very nice	Trust, seeking information	Appraisal			

R: As I said I have very conveniently picked up information to me and I didn't really know deeply what they did, but the authorities did. I think the response to the events of earthquake and tsunami, I think they can't really do anything much, too much because it happened so instantly, so their reaction afterwards I think was reasonable maybe. But probably after about the nuclear plant, Fukushima I don't know what could have been done better, I don't know. (long pause) The authorities, the people at the top are not really-, don't know about the all this scientific and technology that they are reading about, separating so they need link universities and the people and other organisations who are experts to arears Japanese authorities. Then again Japanese don't really trust authorities and their reactions could have been staged, to have organised people to ask for the help from better more knowledgeable, with more resources but I think they didn't do that because they are limited time for them to do that. I don't know if it delayed things but they could have reacted a little bit more, maybe more, much more quicker, to ask for the help and assistance from other people.	Organisational	Trust	Appraisal		

R: I don't really know much what they done, but living here what we could see as Japanese was strangely the news from Japan, from here we could see they sent out the people, some kind of rescue stuff, but what more, I think what we realised living abroad and not authorities, medical as well. But they organised a plane to get the British people back from Japan and Tokyo that was disturbing. Not they've got people there but it's normal, they're saying all governments do the same but to see that foreigners were being moved from the area maybe just to Hong Kong or somewhere closer, close, but not in Japan but a little bit…	Organisational	trust			
R: It's a natural reaction I think, because I know my friends in Tokyo, living and working and they work with-, for multi-national companies maybe and they were, they opened the company, they organised the foreigners to be taken away and they, the local staff in this sense Japanese are here working every day but foreigners, the companies arranged foreigners to go and work. They kept working but maybe in Hong Kong that's what I heard and many employees were moved to Hong Kong ((28:05?)) their own Hong Kong offices and they work there. So business is not affected maybe, but people were moved and that was because of the nuclear, risks of nuclear. The people want it, the Japanese people living in Tokyo tried to leave and to live with relatives or someone else	Organisational	Identification	Appraisal		

a bit far from Tokyo that's understandable but that's done by organisation and a bigger scale rescue operation. But of course it's normal in some multi-national companies and governments would do, it was expected but as a Japanese it was a little bit sad to see. Just sad of course, but it has to be done I know, but…					
R: I think there are things done by governments I've never really thought about before in my life, happening everywhere in the world in the past. But this time really maybe that was my immediate reaction, my biggest reaction to me, and from me. There are things like what as an individual we can't help, we can't do, ((long pause)) we can't do and yeah ((long pause)) it's really strange but I felt that powerful people could do anything, it's very strange, it's very very childish almost and someone with power and money and opportunities can do anything, but the people who don't have any other way we can't do anything. It's not really, it's difficult to say it, because now I can see it's very very almost childish and they don't really make with a disaster and rescue and this is what I was thinking or not really related	Meaning making (Identitiy) or Appraisal?				

very very personal I'm feeling, very, just personal but that's what I thought. It's sad and angry maybe.					
R: That same thing. The sadness, but a little bit angry because the people there had to be there and they're going now including foreigners especially with the strong policies. I think more than the powerful policies carry on what they are supposed to do, automatic, and they don't think about the people left behind for example. Appraisal	Identification				
R: It's very, ((33:52?)) I feel like a child. *Appraisal*	identification				
R: Yeah I think many people felt the same thing. Yeah I think so, yes, especially like the people who talk, you have a similar thing, similar feeling but it's really, as you said from our childhood, our childish area, the past. Identification					

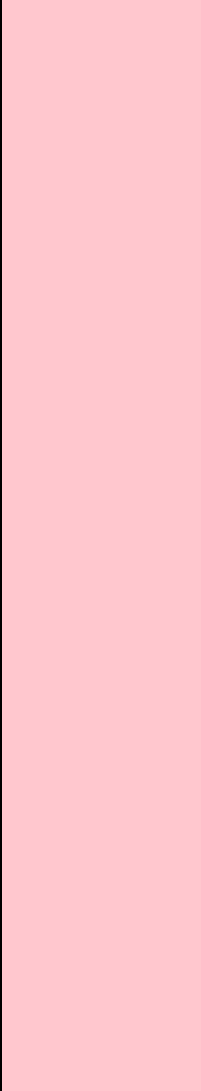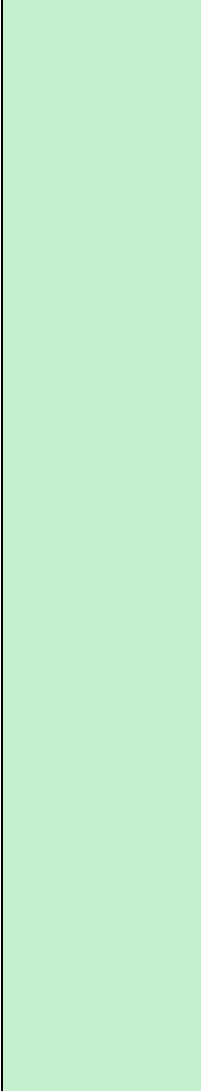|	Identification	Seeking information	Personal	reflective	future
R: Personally I don't do anything, but I haven't done anything before that. I think it's the same with other people in Japan and now people are focussing to redevelop the area and their life. People, the life of the people who are there, still there or who have to leave. And I think it's a really a Japanese and one of the things said the Japanese are very resilient and try to keep calm and carry on and maybe not forget, but carry on because if you can't do anything about what happened and I now I started to hear the stories of the people left, from my family, of my people I know and sometimes on TV. I think BBC broadcasted something maybe as part of the film, I don't-, I've seen how the people are trying to establish again. I think quite quickly, maybe after a few months I ((37:44 -37:55)) re-establish the people of that area so not what happened or maybe I don't try to find what happened. But what is going to happen from now. If I asked, I went just after the disaster, I wanted to know some facts about the disaster then. If now, if I want to know something I want to know about what happened, how many people left that came back for example, how many people really lost their own business and some people. My father went to one of the very badly damaged areas to see if any friends were, but some people were trying, they are proud people working at the core to re-establish the really badly affected area. That is a					

very nice feeling to hear about these people, so again I'm, it's my personal, I don't want really, it's not about people after an interview or about a disaster grounding about disaster but bigger natural disaster in general. I don't want to be affected too much about this, personally. So I rationalise, yes I rationalise in many things in many cases and in many occasions. This is one of the biggest thing I maybe like to rationalise without really thinking. But now one of the best way I can do is, thinking about recovery, that's what's happening. Sorry.					

R: Personally well nothing positive. I went-, maybe I joined a fundraising once, I stood in the street with other people with a bucket. It was a good experience to see so many people giving to it. So that was one thing I experienced, one positive thing. Maybe positive, I saw many people around me reacting, other Japanese people reacting to do something, even though we are very, very far away. I didn't help much, but to see someone reacting quite strongly stood up, was good. My family probably not as a unit but my father went to see the people in the area, talked in his own way, he was really interested and moved by what he saw and what he spoke about it. That's one good thing. ((42:58?)) the man seems to have changed a little bit with a soap star. And structure-wise, community structure, I-, maybe it's been always yeah but the Japanese community is not maybe a structure, but communities show the world how resilient they are. ((43.42?)) positive thing. I saw all the news how resilient the Japanese communities and individuals are, just after such a terrible disaster on the TV reports. That was moving. Yes that was moving for me and for the first time maybe, I felt proud to be Japanese. That was a positive, very positive.	Contributing	Identification			

R: I do differently? I didn't react supported personally to support people in Japan. I could have arranged, organised a little bit of-, because I just donated my money and everything went to Red Cross. If I looked for, I could have found someone personally to send something directly to these people in the disaster area. That was less experience that I have that could have been more effective than sending everything ((45:58?)) was focused on Red Cross here, abroad and in Europe most of the things sent to the Red Cross resources are not really distributed at best. Here they have structure it's to go into the structure it's one way, but I heard, recently I heard someone who really went and helped people there, more personal and support is very, very effective for the communities in those areas. So I could have done, I do maybe a little bit with them. In that way I might find a way to find a way to support on a smaller scale.	Contributing	Personal			
R: From? No, I think I-, why I was just talking I realised how I forgot but now I remembered I was extremely proud to be Japanese maybe last summer time or so, that was thank you for the opportunity I remember something I had forgotten. Yes.	Identification				
R: Yeah, did you see I was nearly crying when I was talking about being proud to be Japanese, to see the Japanese people and their resilience? Still I think when I remember about the news footage I still feel a bit tearful, teary.	Identification				

	78%	4%	18%		

Appendix I. **Reflective journal excerpts.**

May 11

Difficulty finding supervisor/project. Thinking about japan related/disaster?? Ptsd? Trauma?

Sept 11

Supervisors into trauma but trauma not so relevant?—vicarious trauma? Not that relevant, ethier. Resilience? Most people are ok Japanese contacts? Translation? Reaching into the TV to save the people in the car. Why.

October 11

Research feedback—unsure why my project was so difficult to understand. Don't really understand why I now need 20 participants—no rationale offered or asked for. Will work on referral leading up to Christmas. Feeling frustrated with process.

2012

March: Ethics—helpful comments from second supervisor. Please I am not doing NHS IRAS—peers appear to be very stressed over this. Need to start thinking about start asap—lots of work and participants to find.

April

Interviews starting, going alright—language—good English and feels natural—good rapport. Very tired so much to think about—transcription? Ace recorder so clear. Struck by the "normality of earthquakes" a common experience in Japan. Receiving good feedback,

some participants not talked before—is this cultural or a by product of being in the UK?. Snowball sampling working, no problem with gaining participants. Trust appears important. MAXQDA—seems to have a lot of functions—video tutorial online.

May 12

Coding is exhausting and I feel lost in the data. Recall my thematic analysis of first year—same feeling, but it came out ok. This is going to take hours & hours. ndless mass of information too confusing after first. How many hours to transcribe & code + assignments + placement + interviews.

June 12

Each has there own personality—but some how saying the same things. This is interesting, something here but what? Endless transcribing—coding is endless—becoming swamped with all this.

Sept 12

Salomons GT support group? Others should be interested? Get one started—too many versions of gt, what have the others to say—could help with thrashing out codes, categories etc… Not met with supervisors? Feeling in the doldrums—completely lost— others know there stuff— cant get organised and don't want to work in the evenings.

January 2013

Half-way 9 pts remain lost in the data—MAXQDA—codes till you drop—feel like I am repeating the obvious—not so sure about GT. Everything links to everything—you can't neatly separate out everything—I don't believe these nice neat gt theories in research. What

to do with the many avenues—don't want to look at resilience literature too soon. Can I trust in the process—sit with it. Glasser on YOUTUBE—"don't expect to find your theory to have any relevance to existing theories--lit review afterwards—the library ant going anywhere". Need more men as participants—

March 13

Last of the few—18 interviews—lost in data –need to get on with lit review?

Resilience literature does not make common sense. How can I not be resilient unless there is adversity? Am I not resilient without adversity? Masten—lots of self-quotes-science or self promotion? Resilience used in many ways—difficult to know where to start. Ecological resilience far more advanced than psychological resilience. Roehapmton: Hans Seley? "without stress you are dead"—with stress you are resilient—resilience must be everywhere, while you are alive. Anderson (2013)—ecology—complexity—is this why analysis seems so stuck—Forcing the data? neat compartments—its too complex to make it neat—resilience is pervasive as is stress—What about Stress resrearch? How do figure this out—Margie need to see. Resilience research is a small cluster of research with endless ink. Pointless doing a lit review on psych resilience as everyone is patting everyone the back and agreeing.

June 13

Running out of time and steam—tinnitus driving me nuts—can't concentrate—data coming together?? Literature review-still learning about ecological theory, complexity, chaos, non- linear dynamics?? Interested to know this stuff, but complex: New job LD riding on this—have to finish! Dying a death—or being resilient—end

Appendix J. **Memo examples**

itle	Memo text
emo 98	not so alarmed. lots of earthquakes and tsunami in past
emo 93	relationship stress, need a break came to uk.
emo 90	this participant was at a cross-roads in her personal life and the earthquake made her reflect and challenge and ultimately change her current situation.
emo 89	interview experience is positive in reflecting back and determining that the anger was from a personal place.
emo 88	the uncertainty of aftershocks remain after the immediate disaster, so risk and danger is still evident and worries continue.
emo 87	if role in uk was different there would have been a different interaction between the personal situation and the disaster?

emo 86	interview reflection important in personal discovery of insight. interaction between personal situation and disaster situation. this is similar to role? personal role in relation to disaster--the role of wife away from home in interaction with the disaster situation. Reconnecting with her country in a personal, physical way in support which also helps her resolve her personal dilemma??
emo 85	reflection--go back sooner rather than waiting till later--personally driven rather than disaster driven motive?
emo 84	decision made.

this experienced enabled, promoted, found a sense of decision making a resilience in the difficult decision to return home???? positive aspect was reflection and greater self-determination? |
emo 83	being able to reflect on current situation. sudden change in japan causes reflection of current status for participant. now more insightful about making decision for her future?
emo 82	natural time comes to an end the donation--is there enough money now? how do people know? at what point do they stop donating? when is enough enough?
emo	always more than can be done?

81	
emo 80	the donation needs to go beyond the easy transition of money and transcend into the physical realm of doing something. being seen to do? is this important? being able to say i more than the least obligation?
emo 79	contribution needs to be special, personal, direct. making of cakes is personal and direct although the contribution is converted into something useful (money). it is not enough that just money is sent--it needs to be personal? what if just money is sent? and not personal? guilt? shame? selfishness? ....???????????
emo 78	technology to transfer money. she didnt feel anything money to easy to press send. money with no real personal sense of feeling. nothing done to create or send the money links to the least i could do. obligation to send money?
emo 77	money as flexible
emo 76	money more useful than goods (eg clothes). money more flexibly used and targeted?
emo 75	additional effort in making/creating something that clearly requires effort. cakes for others to enjoy money to japan to support. so its not just about the money--support or active resilience in support of others is in the doing and creating. money is impersonal, not connected with the immediate crisis. cakes are made with the crisis in mind and require a

	symbolic hardship on the cake maker and a cost which may exceed the value of cake price, there is something positive in the creation from the perspective of all--the buyer, seller and recipient of the collected funds (survivors/victims)?
emo 74	the least you can do--no effort require? no sacrifice? not obviously supporting? but supporting in the least way.
emo 73	obviously--without thought--giving money
emo 72	we should contribute in some way to reduce the risk for all?
emo 71	"take on that earthquake as a mother"--something about roles--you respond to the earthquake (risk, stressor) with a role--if you hold a different role eg fireman, policeman father.... you respond within that role? do the roles change over time, situation--as a fireman do you stop being in that role and become the father with the resilience response of the father or are different resilient responses activated based on your idea of the role you are in. can you switch off roles and resilience responses or do you need a process of switch off-converting--lowering the volume etc....???????

Appendix K. **Coded transcript & audit.**

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Appendix M. **PFA Field Guide example**

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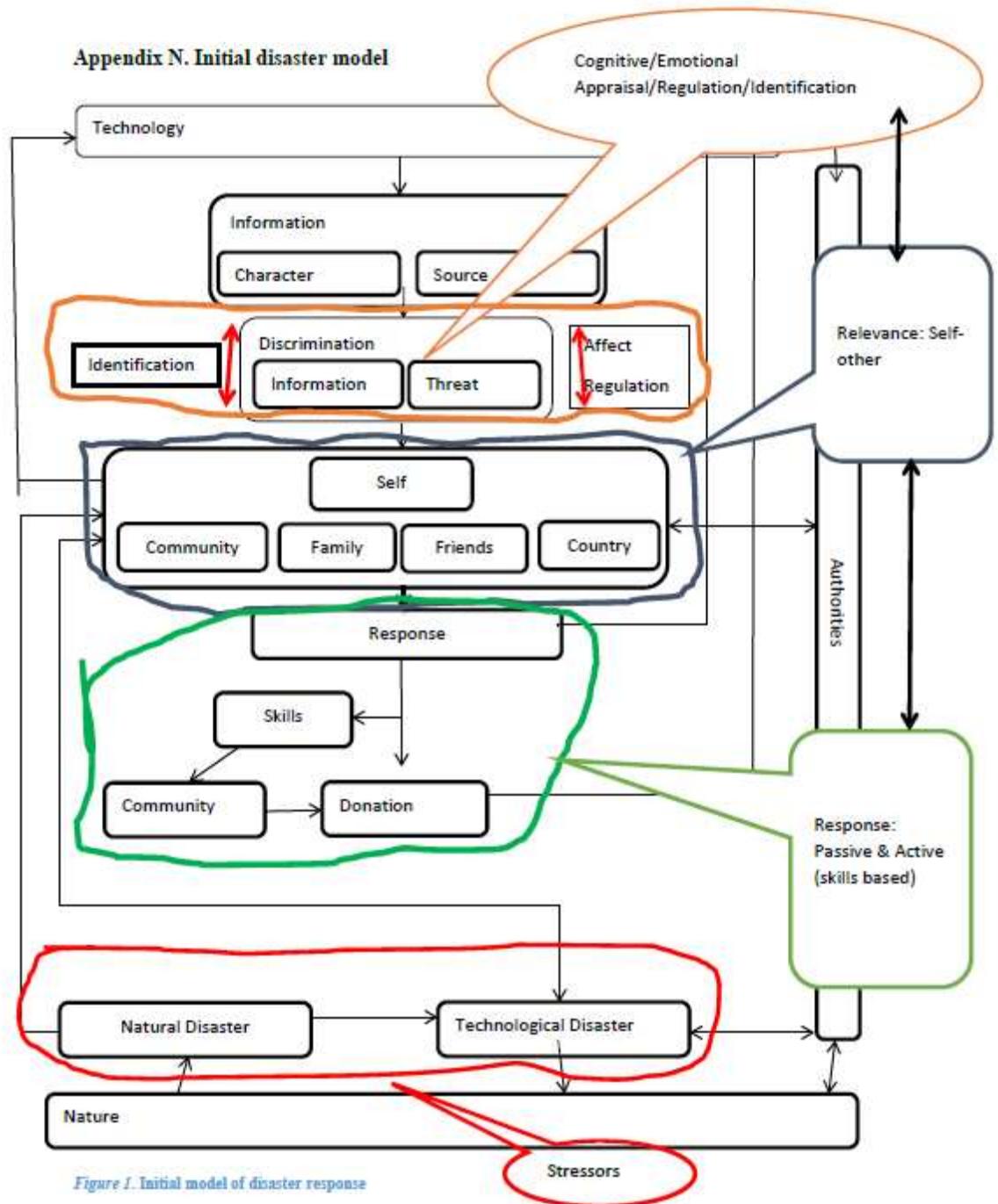
Appendix N. **Initial disaster model**

Figure 1. Initial model of disaster response

Appendix O. **Journals notes for contributors.**

Japanese Psychological Research

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Japanese Psychological Research accepts two kinds of manuscripts: original articles and reviews.
An *original article* must be based on data derived from a research project that is problem-oriented. The results from the analysis of such data must also be substantial, and the theoretical discussion thereon significant so as to be deemed a definitive contribution to the field. *Reviews* should summarize publications setting forth major developments within a particular research area. Reviews that include studies in Japan are especially welcomed.

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Original articles and Reviews will be reviewed by the referees and the final selection for publication will be made by the Editorial Board. Manuscripts may be returned for revision.

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3. The SI (Système International d'Unités) system should be used for units of measurement.

4. References should be cited in the text, each with the last name of the author followed by the publication date enclosed within parentheses. All references should be listed alphabetically by last name, in the bibliography at the end of the article. Journal titles should be spelled out in full. Examples follow:

Underwood, B. J. (1976). Recognition memory for pairs of words as a function of associative context. *Journal of Experimental Psychology: Human Learning and Memory,* **2**, 404-412.

Gibson, E. J. (1969). *Principles of perceptual learning and development.* New York: Appleton-Century-Crofts.

Wundt, W. (1908-1911). *Grundzüge der physiologischen Psychologie.* 6. Aufi. , 3 Bde. , Leipzig: Wilhelm Engelmann.

5. Tables and figures should be on separate sheets and numbered with Arabic numerals in order of appearance in the text.

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Appendix P. **Participant pen portrait**

Participant	Gender	Age (Yrs)	Marital Status	Time in UK (Yrs)	Description	Initial disaster impact
01	Female	32	Married	4	Married in Japan to British husband and lived together for 1.5 years before returning to the UK, as her husband wanted to support his elderly parents. Worked as an administrator for a Japanese company. (4 years in UK)	Felt devastated, recollected past disasters, worried about family in Tokyo.
02	Female	43	Married	12	Moved to from China with her husband who had business interests in the UK. Studied and worked in accountancy in the UK over the last 12 years, until the birth of their first child and now maintains the household.	Worried for close friend's family living in Fukushima area, recalled past disasters and feeling scared for own family at that time.
03	Female	28	Single	8	Influenced by Western dramas on TV as a child and became interested in foreign travel. Moved to the UK to create an independent life and to study hairdressing with an internationally renowned stylist. Currently works as a hairdresser.	Worried for relatives living in Fukushima area, and friends of parents.
04	Female	54	Married	19	Previously lived in Germany, but returned to UK with English Husband.	Worried for parents living in Fukushima, her home town, and Japan. Parent's property damaged and services cut off.
05	Female	60	Married	7	Lived in the UK on two occasions, the first time being 17 years ago, and stayed 2 years. Feels comfortable in the UK and has stayed for the last 7 years.	Worried for relatives living in prefecture near Fukushima area. Concern for son due to chaos in Tokyo and suspended transportation.
06	Female	24	Single	5	Studying tourism in the UK and currently on a work placement in a hotel situated near an international airport.	Felt speechless and unable to think, due to this being the first national disaster experience. Felt devastated, concerned and scared for friends living in the Tohoku area.
07	Female	45	Married	7	Works in IT sales and came to the UK with her husband to take up a job offer.	Worried about colleague and her family who are from Fukushima and live near the sea.
08	Female	41	Married	11	Came to study English as a career break from Japan and working as a musician. Currently works as a musician and travels to Japan regularly in support of her marriage.	Concern for family and friends living in Tokyo, and friend close to the disaster area.

09	Female	54	Single	11	Came to live in the UK and works as a translator in 2001.	Wanted to know what was happening and to find her family, although they were far from the disaster area.
10	Female	42	Married	20	After graduating from University, came to the UK to study Art History and then returned to Japan. Several subsequent stays in the UK, culminated in an offer of a job. Currently works for a Japanese manufacturing company.	Aware of the geology of Japan and that Japan was prepared and therefore feeling calm and hopeful of little damage. But a horrendous feeling when confronted with images.
11	Female	34	Married	10	Married UK citizen and maintains the household.	Worried for family living in Osaka who felt the earthquake, although it is far from Sendai where the tsunami hit, and then relief that her family were safe.
12	Female	44	Married	18	Originally came to the UK due to her husband's employment, and began working in a University. Returned to Japan following the end of her husband's contract, but returned to the UK to take up a permeant full-time position in the same University and currently works as a course director.	Concern for husband who lives off the coastline of Chiba prefecture. Concerned that she would lose her country due to the nuclear risk of Fukushima.
13	Female	28	Married	4	Came to the UK in 2009 to do a master's degree and is currently studying for a PhD.	Shocked by the *hedoro* (slime), the black tsunami wave swallowing cars and country. Worried for husband working in Tokyo, although knew him to be safe. No friends or family in the main disaster regions (Sendai and Fukushima)
14	Female	29	Married	4	Met husband whilst studying in the UK. Returned to Japan as a couple for 18 months, but he preferred living in the UK. Culturally the UK is easy going for the both of us. Currently a homemaker.	Curious as to why people were concerned as the disaster epicenter was not near her family home in Hiroshima. Had not heard from family "no news is good news".
15	Female	34	Married	12	Came to the UK for a three to six months break from Tokyo's busy life style. Met husband two months later, and move to Europe to work for a Japanese finance company. Returned to the UK a year later (1985)	Felt "very heavy" as it was a massive disaster, but relieved that her family/friends were not living in the main disaster region.
16	Male	43	Single	16	Studied Law in Japan and came to the UK to study phonetics over the summer. Completed a Master's degree in the UK and currently teaches Japanese and phonetics. Elderly parents living in Japan.	Worried for the security of a relative living in the disaster area. Confused by the reaction of people in the tsunami disaster who did not appear alarmed and attempting to escape, and therefore he did not initially feel a sense of urgency or emergency.
17	Male	45	Single	18	Came to the UK to study English after graduating from University in Japan. Worked part-time in a delicatessen, serving Japanese food. Applied for visa and has remained in the UK working as a chef and currently as a product development coordinator for a Japanese company.	Thought his family was safe due to the location of the disaster, but not fully aware of the extent of the disaster. Later a sense of surprise and feeling overwhelmed by disaster images and the power of nature and then feeling upset.

| 18 | Male | 34 | Married | 34 | Born in the UK, with dual nationality. Attended Japanese school in the UK forming many friendships with Japanese peers who later returned to Japan. Both parents worked in the UK, but returned to Japan many years ago. Married to a Japanese lady with two young children. Works in finance. (34 years in UK) | Needing to check that family and friends were safe, by establishing the location of the disaster, and a sense of relief that the area was Sendai as there were no family members living there and only a few friends. Main concern was for the safety of family and friends. |