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MENTAL HEALTH CRISIS INTERVENTION: THEORETICAL APPROACHES AND
PRINCIPLES FOR PSYCHOLOGICAL FIRST AID, TRIAGE AND POST
TRAUMATIC STRESS DISORDER

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ΠΡΑΚΤΙΚΟ ΚΡΙΣΕΩΣ

**ΤΗΣ ΣΥΝΕΔΡΙΑΣΗΣ ΤΗΣ ΤΡΙΜΕΛΟΥΣ ΕΞΕΤΑΣΤΙΚΗΣ ΕΠΙΤΡΟΠΗΣ ΓΙΑ
ΤΗΝ ΑΞΙΟΛΟΓΗΣΗ ΤΗΣ ΔΙΠΛΩΜΑΤΙΚΗΣ ΕΡΓΑΣΙΑΣ**

Του Μεταπτυχιακού Φοιτητή Μανάφα Ιωάννη Εξεταστική Επιτροπή

-Επιβλέπων
-Μέλος
-Μέλος
-

Η Τριμελής Εξεταστική Επιτροπή η οποία ορίστηκε απο την ΓΣΕΣ της Ιατρικής Σχολής του Παν. Αθηνών Συνεδρίαση της^{ης} 20..... για την αξιολόγηση και εξέταση του υποψηφίου κ. Μανάφα Ιωάννη, συνεδρίασε σήμερα/...../.....

Η Επιτροπή **διαπίστωσε** ότι η Διπλωματική Εργασία του κ. Μανάφα Ιωάννη με τίτλο

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....., είναι πρωτότυπη, επιστημονικά και τεχνικά άρτια και η βιβλιογραφική πληροφορία ολοκληρωμένη και εμπειριστατωμένη.

Η εξεταστική επιτροπή αφού έλαβε υπ' όψιν το περιεχόμενο της εργασίας και τη συμβολή της στην επιστήμη, με ψήφους προτείνει την απονομή στον παραπάνω Μεταπτυχιακό Φοιτητή την απονομή του Μεταπτυχιακού Διπλώματος Ειδίκευσης (Master's).

Στην ψηφοφορία για την βαθμολογία ο υποψήφιος έλαβε για τον βαθμό «ΑΡΙΣΤΑ» ψήφους, για τον βαθμό «ΛΙΑΝ ΚΑΛΩΣ» ψήφους, και για τον βαθμό «ΚΑΛΩΣ» ψήφους Κατά συνέπεια, απονέμεται ο βαθμός «(Αριστα/Λίαν Καλώς/Καλώς)& (Βαθμός).....».

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-Επιβλέπων (Υπογραφή) _____
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To my father
...who met crisis in his life with resilience and resolve.

1944 – 2007
Canada

I would like to thank Dr. Rosenberg and the entire academic team for the dedication and support they showed through the program.

I would also like to thank my wife and my newborn for putting up with me.

MENTAL HEALTH CRISIS INTERVENTION

Abstract

Disaster Medicine and specifically Mental Health Crisis Intervention, like psychology for the most part, is little more than a collection of facts, figures, mini-theories and related research. Both psychology and mental health intervention require the enlistment of other disciplines to formulate a complete picture. To this end, this paper employs a multi-disciplinary approach to identifying complimentary theories that might work well enough together to inform mental health crisis intervention in cases of individual or population based catastrophes. A presentation and discussion follows on the main components that inform us on subject a) theoretical frameworks: re-conceptualizing “disaster” and crisis in context theory, b) principles of intervention: psychological first aid and triage, c) theory on PTSD symptomatology as an evolutionary defence-adaptation and d) cognitive behavioural therapy as a corresponding therapeutic approach to post trauma. Recommendations for future research and application: computer-based therapy.

Keywords: crisis intervention, catastrophe, CCT, PTSD, PFA, triage, defence-adaptation, CBT

ΠΕΡΙΛΗΨΗ

ΠΑΡΕΜΒΑΣΗ ΣΤΙΣ ΨΥΧΟΛΟΓΙΚΕΣ ΚΡΙΣΕΙΣ ΥΓΕΙΑΣ: ΘΕΩΡΗΤΙΚΕΣ ΠΡΟΣΕΓΓΙΣΗΣ
ΚΑΙ ΑΡΧΕΣ ΓΙΑ ΤΗΝ ΨΥΧΟΛΟΓΙΚΗ «ΠΡΩΤΗ ΒΟΗΘΕΙΑ», ΔΙΑΛΟΓΗ ΚΑΙ
ΜΕΤΑΤΡΑΥΜΑΤΙΚΗ ΑΓΧΩΔΗΣ ΔΙΑΤΑΡΑΧΗΣ

Η Ιατρική Καταστροφών και πιο συγκεκριμένα η Παρέμβαση στις Ψυχολογικές Κρίσεις Υγείας, όπως είναι και ο κλάδος της Ψυχολογίας, κυρίως αποτελείται από μικρο-θεωρίες, πολλές φορές ανταγωνιστικές μεταξύ τους, παρουσίαση πολλών στοιχείων και σχετικών ερευνών. Τόσο η ψυχολογία όσο και η ψυχολογική παρέμβαση στα πλαίσια κρίσεων υγείας προϋποθέτουν τη χρήση και άλλων θεωρητικών υποβάθρων και κατευθύνσεων για να μπορέσει κανείς να σχηματίσει μία εικόνα. Μ' αυτό κατά νου, σ' αυτό το άρθρο γίνεται μία πολυεπίπεδη προσέγγιση για να εντοπιστούν συμπληρωματικές θεωρίες που μπορούν να συμπράξουν στο σχηματισμό σωστής εικόνας και πληροφόρησης σε περιπτώσεις ψυχολογικής παρέμβασης σε ατομικών ή πολυπληθυσμιακών καταστροφών. Μία παρουσίαση και συζήτηση ακολουθεί στις βασικές συνιστώσες που μας πληροφορούν σχετικά με το θέμα: α) Θεωρητικό Υπόβαθρο: αναθεώρηση της έννοιας "disaster" και "Crisis in Context Theory" β) Αρχές της παρέμβασης: ψυχολογική "πρώτη βοήθεια" και διαλογή γ) Θεωρητική προσέγγιση της μετατραυματικής αγχώδης διαταραχής (PTSD) στα πλαίσια της Εξελικτικής Θεωρίας και δ) Η προσέγγιση στη μετατραυματική διαταραχή με Γνωστική Συμπεριφορική μέθοδο θεραπείας. Συστάσεις για μελλοντική έρευνα και εφαρμογή: θεραπεία που βασίζεται σε ηλεκτρονικό υπολογιστή (computer-based).

MENTAL HEALTH CRISIS INTERVENTION

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PART I

Introduction

Science is facts: just as houses are made of stones, so is science made of facts; but a pile of stones is not a house and a collection of facts is not necessarily science.

Henri Poincaré, 1842–1912

Disaster Medicine and specifically Mental Health Crisis Intervention, like psychology for the most part, is little more than a collection of facts, figures, mini-theories and related research. Both psychology and mental health intervention require the enlistment of other disciplines to formulate a complete picture. To this end, this paper employs a multi-disciplinary approach to identifying complimentary theories that might work well enough together to inform mental health crisis intervention in cases of individual or population based catastrophes.

This paper therefore identifies outlines and discusses a number of theoretical premises beginning with reconceptualising terminology, such as “disaster” within a psycholinguistic paradigm. Second, by a discussing on the theoretical framework formulated for understanding the *impact of a crisis*: Crisis in Context Theory (CCT) (Myer and Moore, 2006). Third, outlining and discussing mental health intervention with an introduction of psychological first aid core actions, clarification on post trauma symptomatology and triage. Fourth, PTSD will be considered from a new perspective: as an evolutionary defense-adaptation with, finally, recommendations for comparable therapeutic approaches that fall within Cognitive Behavioural Theory (CBT).

PART II

Framework of Theories

Reconceptualising “Disaster and Crisis”

When one referred to post traumatic stress a few years ago, it was understood to be a mental disorder resulting from a destructive event affecting masses of people. Today, PTSD stands out as one of the most unusual categories of mental disorders. It is not only controversial in its concept-definition (Herbert and Sageman, 2004), but it has the privilege of including aetiology as part of the criteria for diagnosis (McNally, 2003); the only thing more odd than this, is the aetiology it self. It too, is controversial! Appendix D has the full account of the post trauma criteria.

With respect to mass destructive events, the definition of what constitutes an “event” has become equally obscure; in other words, there is problem with the definition concept *disaster*. Al-Madhari and Keller, (1997) conducted a survey outlining the enormity of diverse conceptualizations of the term. Considering the heterogeneity of people and organization listed in that survey this is not be a surprise. It does however, call attention to how important it is to have a unified and coherent framework of definitions, theories, and principles by which all these heterogeneous people and organizations work from.

A clear and illustrative example can be made by a quick search on Google with the term disaster and catastrophe. It will produce discussions and questions on a broad subject area. Including on what the two terms really mean or articles on how planning should be approached depending on proposed definitions of the terms. Among other

things, it shows that current popular culture has infiltrated and influenced and has informed professional opinion on the subject to a considerable degree. So much, so that scientific articles make statement like “just as ‘disasters’ are qualitatively different from everyday community emergencies, so are ‘catastrophes’ a qualitative jump over “disasters” (Quarantelli, 2006). The author in a more in-depth article points out that the scientific community has neglected such an important distinction in the field of crisis intervention. Indeed the author believes that intervention will best be served if the impact of a “disaster or catastrophe” is understood in terms of its magnitude, such as in Chernobyl, where the radio active matterial spread to other areas or earthquakes like Los Angeles in 1994 where most of community life was disrupted (Quarantelli, 2000).

What sticks to mind is the use of the word “qualitative”, yet in the same breath Quarantelli mentions magnitude: degree of destruction, property, building, people and so on. First, magnitude is quantity (buildings etc.), while quality is a subjective experience regarding the impact. Second, this seems as an attempt to objectify and measure an event by evaluating it from outside the point of impact (ground zero). By placing the event on a scale and based on “magnitude”, derive meaning so that intervention may be informed. How exactly would one classify the systematic rape of women as a policy of population control? (Pisik, 2009); how is magnitude understood in this case, are we looking at a “disaster” or “catastrophe”? Clearly popular understanding of mass events has filtered into the field, is obscuring the professional view, and in turn has created a problem for discourse.

The problem in cultural context

To say that the English language is an international language is an understatement. English is the *lingua franca* of the modern world; because of this, the theoretical problems in the English language that may be inherent, may exist in various disciplines or may exist because of popular cultural influence are transferred systematically to other cultures. The problem mentioned in the previous section is one such problem that has been transferred without any examination by anyone to the Greek perspective of psychology. This transfer is so complete that we have failed to note the obvious: psychology is the study of (normal and abnormal) *behaviour*; in Greek the same referent referring to this, is “*συμπεριφορά*”. The two terms do not have anything in common! Yet psychology continues to inform us from *behaviour*.

The referent “*συμπεριφορά*” is a compound word with the root *morphemes* “*συν-περί-φορά*”. Translated, it means that one is the “*sum of ones environment*” (Babiniotis, 1998) suggesting a relational nature between the individual and environment or community; one exists in relation to a contextual “whole”. In contrast, “*behaviour*” with the compound root *morphemes* “*be-haviour or have*” suggests a self containing activity in isolation of the whole; to *exist and possess* (Harper, 2012). In reference to psychology, these terms are irreconcilable.

Of course, one can argue that etymological references are obsolete and there is, in any case, a *denotative* meaning and *connotative* meaning that describes and prescribes behaviour. Thus, the meaning of “behaviour” is the same in all languages. Not so, first, just because a referent is out of use, it does not mean that it has not influenced a population. As Beck et al., (2005) would argue, day-to-day activity is not mediated by

conscious thought, but by automated, non-conscious, patterns of behaviour learned both in the present, like driving a car or having a fear of heights. Yet other behaviours are acquired by the built-in evolutionary “*information-processing system*”. Therefore, influences are still relevant in the current. The mind is not a hard drive that is blank and new “stuff” is written on it every generation (Pinker, 2002). We evolve along with our past behaviours as well as new ones.

Second, one should remember that “*συμπεριφορά*” produced “*δημοκρατία: δῆμος - κρατώ*” (democracy), where one can find the value of the individual in relation to the whole, and the value of the whole, can be found in relation to the individual. In contrast, “*behaviour*” produced “*capitalism*” as a relational system between individual and society: to *exist and to possess*. These parallel examples of meaning derived from meaning, are not simply an etymological coincidence. How one “behaves” in a catastrophe is dependent on psychological and sociocultural context; the referent *catastrophe* has been evolving along side Greek psychology as long as the event it self. Therefore, it is perceived in a different “*behavioural*” context than its English counterpart.

As a prominent Greek linguist, Babiniotis, (1998) said, a language that spans more than 40 centuries captures the reality of the world through meaning and express it through its own language; and every nation or ethnicity has their own way of approaching, grasping and expressing this meaning of reality.

Catastrophe in context

Therefore by extending the evolutionary principle to language and mind, we shall understand the term *catastrophe* as the “event” to mean: “*κατά – στροφή*”; a radical change of direction (Babinotis, 1998). In other words, a sudden and unexpected change of course that lies outside the usual range of experience, to the extent that it may be or perceived as irreversible. Interestingly, McNally, (2003) in his article “*Conceptual Problems with the DSM-IV Criteria for Posttraumatic Stress Disorder*”, clearly states that before the early 80’s this was the conceptual understanding of what the “event” entailed. In fact, the term *catastrophe* itself was in use: “This state of affairs [referring to today] is drastically different from the late 1970s and early 1980s when the concept of trauma was confined to catastrophic events falling outside the perimeter of everyday experience”.

Along this path, the term *catastrophe* lends itself as the psychological referent to the *idea* of sudden change, to a physical reference of an *event* as causing a sudden change in the normal of day-to-day experience. Note that this change must be or perceived as “*catastrophic*” – irreversible. The personal perception of irreversibility can only be understood in relation to the environment (the “whole” as conceptualized from *συμπεριφορά* “*behaviour*”).

An important feature of the term *catastrophe* is that it lends itself cognitively, emotionally and behaviourally to the application of both individual and population levels of referral. For example, if an earthquake strikes a population of people, they may describe it in their post-experience as a *catastrophe*; equally catastrophic is a sexual assault or diagnosis of cancer – they all lie outside the normal range of actual and

perceptual experience. In effect, the term catastrophe expresses the cognitive and emotional experience of an individual or population in relation to the physical nature of the event-impact. Having changed the course of their lives to such a degree and given that it is perceived irreversible the consequences place them in a *crisis-state of mind and body* and possibility developing a mental disorder. As Bryant, (2004) states, “there is evidence that psychopathological responses to trauma are characterized by catastrophic interpretations of events. It may be that catastrophic appraisals of peritraumatic dissociation predict subsequent PTSD more than actual dissociative reactions”.

Crisis in context

Most international organizations including the World Health Organization (WHO) define mass events as a sudden *disruption by a precipitating event*, more often than not definitions include the “*out-stripping of resources*” (al-Madhari and Keller, 1997). Take look at its current definition of WHO:

1. A serious disruption of the functioning of a community or a society causing widespread human, material, economic or environmental losses which exceed the ability of the affected community or society to cope using its own resources (ISDR).
2. Situation or event, which overwhelms local capacity, necessitating a request to national or international level for external assistance (CRED).
3. A term describing an event that can be defined spatially and geographically, but that demands observation to produce evidence. It implies the interaction of an external stressor with a human community and it carries the implicit concept of nonmanageability. The term is used in the entire range of risk-reduction activities, but it is possibly the least appropriate for response (WHO, 1993).

The tsunamis of 2004, 2005 and particularly the effects of the 2010 Japanese “triplets” clearly fit the definition; however, not all nations have the same resources, even among western nations, a “small” event may be unmanageable. It is not always a matter of resource. For example, some events such as the 1986 space shuttle explosions in the

USA certainly did not outstrip the nation’s resources. Yet it was perceived as a “national disaster”. Similarly, the accidents in Greece involving the death of 22 children in the Maliakos school buss accident in 2004 and the Helios airplane accident in 2005, was labeled a catastrophe. They were elevated to this status because all events were in fact “catastrophic”; people’s lives and perception of those events altered their life-course.

We experience changes and give meaning to these changes every second of our lives, this understanding of “change” however, falls within our homeostatic threshold. A catastrophe on the other hand, pushes us beyond this threshold, and this is precisely the point, the *consequence* of such a “change” in the natural course of events foretells of an impending *crisis*. Both cognitively and physically the perception and meaning of catastrophe leads into a possible crisis for any individual or population. Mentally-linguistically and physically, the terms catastrophe and crisis can only exist in relation to each other, and more importantly contextually (see figure 1). A catastrophe exists within the context of a crisis; catastrophe is epicentre of the reverberating trauma that results in a crisis.

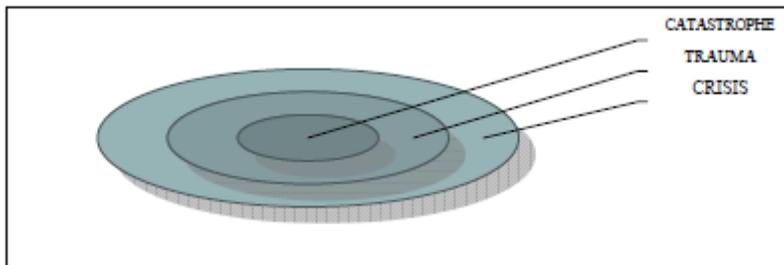


Figure 1. Catastrophe and Crisis Context.

In terms of intervention, the crisis is the point of intervention; however it is the *nature* of the crisis and interpretation of it’s meaning from the subject that will determine

the approach of intervention. The nature and subsequent meaning is determined by the trajectory or direction the trauma will take as time goes by. To fully appreciate why the nature of the crisis is the determining factor of intervention, we must also understand the definition of the term *crisis* “κρίση”: *the ability to decision, judgment or appraisal toward a orthological end – the right description of things* (Babinotis, 1998).

Therefore, a crisis is said to ensue and persist when an individual or population is *unable* to take a direction. Another way of looking at the experience of a crisis is like the perception of surpassing ones resource-ability to appraise the event experienced and therefore unable to take action. This inability can be seen in the symptoms of post trauma such as avoidance, immobility, heightened anxiety and others, appendix D provides the symptomatology.

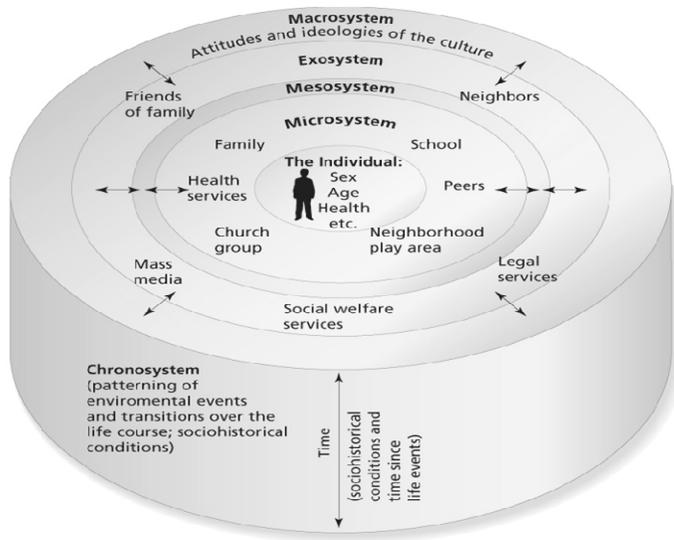
A crisis then is obviously experienced within a particular context of *time and place* where it is defined in meaning. In this light the crisis in context will change as time goes by (trajectory) for the *trauma* and the crisis (appraisal). Appendix C illustrated a multidimensional model catastrophe.

A point about being unable to make a decision and take a direction is particularly important when attempting to understand *trauma* in relation to catastrophe and crisis. The *inability* it self is an indication of trauma. Trauma is the physical manifestation of a crisis that occurs during an event-impact and may continue after the event-impact. If you will, the crisis is the intellectual counterpart of trauma experienced in an event-impact. A psychological trauma is like a physical trauma that may change as time goes by; it may get worse, spread, or subside. The traumas biopsychosocial character is manifested by the

familiar symptomatology noted in the DSM IV-TR and ICD 10, see Appendix D (APA, 2000, WHO, 1993).

Crisis in Context Theory

As illustrated the term catastrophe lends it self as the natural and correct term to precede the terms trauma and crisis. It follows not only logically but psychologically to produce the mental concepts, imagery, emotions and behaviours necessary to reflect the experienced event. In many respects this approach fits well with the contextual-ecological model proposed by Myer and Moor (2006), referred to as Crisis in Context Theory (CCT), formulated as the theoretical background of understanding the *impact of a crisis*. CCT makes use of Bronfenbrenner's (1995) ecological theory, in Figure we can see the nested layers of each system: Microsystem, ecosystem, exosystem, macrosystem, chronosystem. Each system with its roles, norms, rules and so on, focuses on the relationship between the individual, and sociocultural context as an influencing factor. In CCT however, the individual and the system are seen as independent of each other as well; not all dilemmas associated with a crisis are dependent on the system. To a degree, many dilemmas have a linear relationship with the experience of the crisis event. The individual however, may not have contributed to the problems troubling an organization across the street that may have experienced the same event and conversely. It is possible dilemmas resulting from the same crisis can be both dependent and independent (Myer and Moore, 2006). Figure 2 gives a diagrammatic view of the theoretical premise. Three premises compose the model: *the layers of a crisis, the reciprocal effect and time factor*.



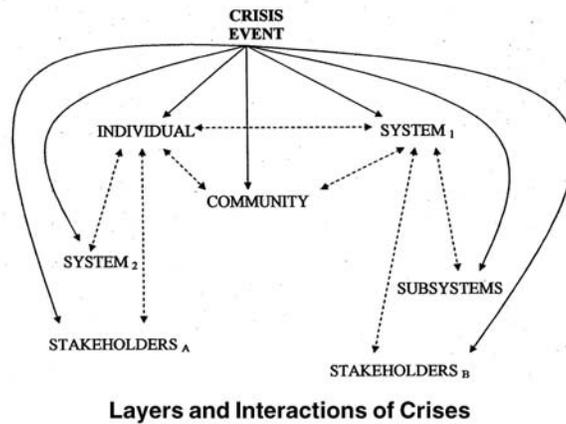
Source: Taken from FELDMAN, R. S. 2011.

Figure 2. Bronfenbrenner's Bioecological Theory.

The physical *proximity* to the event regulates the various *layers of the crisis* and in turn, the layers present a unique opportunity for *perception* of the event. For example, families of cancer patients, they set aside their own life and grief to address the suffering of the primary victim; there is higharchy of suffering as they “feel” it is not right for them to suffer more than the afflict. If death follows, their life ends as they feel guild over moving on. Think of a parent losing a child, how does a parent “dare” to go on by suggesting that their lives are equally important as their child’s? The guild is enormous as proximity dictates who has primary right to suffer.

Reactions therefore are *modulated by the meaning* derived from context. Support in this perspective can be seen in the literature from a wide range of sources, including the way organizations function when managing a crisis. To understand this, one has to refer to the *Onion Model* with the various layers and complex interactions among the stakeholders. In the organization failure to understand this relevance of layers and how unique the experience is, will result in harmful intervention (Mitroff and Anagnos, 2001).

Appreciation for the impact is therefore considered in context of each layer – this consideration is the *appraisal* of determining affective, behavioural, and cognitive reactions for both individual and system (Myer and Moore, 2006). In other words, assigning meaning – is the very essence of crisis *management*; it is also one of the reasons so many therapies focus on the personal meaning and memory of the event (Hart et al., 1989, Ehlers et al., 2010, Rauch and Foa, 2006, González-Prendes and Resko, 2012). Therefore the first premise can be summed up in the following way: “The layers are dependent on two elements: (a) physical proximity to the disaster with respect to physical distance and (b) reactions that are moderated by perception and the meaning attributed to the crisis event” (Myer and Moore, 2006).



MYER, R.A. & MOORE, H. B. 2006. Crisis in Context Theory: An Ecological Model. *Journal of Counseling & Development*, 84, 139-147.

Source: Taken from MYER, R.A. & MOORE, H. B. 2006.

Figure 3. Crisis Context Theory Diagram.

The second critical aspect of crisis impact in CCT is recognizing *reciprocal* nature of the *primary* and *secondary* relationships among the individual and systems. This may be understood in the *direct or indirect* nature of the relationship; if at least one, individual or system mediates the relationship it is secondary, while the absence of

mediation is considered a primary relationship to the crisis-event. Modulating this is direct and indirect is reciprocity. For each relationship there is the *degree of change* triggered by the event that is unique and can only be understood contextually and relationally according to Myer & Moore (2006).

In other words, as Bronfenbrenner (1995) describes, the theory takes into account the individuals relationships with their systems and extends well beyond into the larger community and cultural context that the individual lives in. In this light, we see that the crisis has ramifications well beyond the immediate circle of survivors. In organizational behaviour this aspect of inter-connectedness/relatedness is at times overlooked and when this occurs systemic problems arise (Mitroff and Anagnos, 2001). To sum up the main points, “Understanding the reciprocal effect involves recognition two elements: (a) the interactions among the primary and secondary relationships and (b) the degree of change triggered by an event” (Myer and Moore, 2006).

The final premise of CCT is the idea that *time* influences the impact of a crisis. Unlike a physical injury where the impact is a singular instance in time and place, in a trauma the impact is on going and development of trauma is definitely affected; much like the bioecological elements of a person’s lifespan (Bronfenbrenner, 1986, 1995). Interestingly a number of sources argue that time has a special meaning in terms of intervention and recovery. Litz (2008) recognizes that conceptually in trauma there are two timeframes of intervention, the *immediate* the *acute*. Indeed this conceptualization leads in the same direction as CCT. However, while Myer, (2006) certainly recognizes time has a moderating effect on the crisis, the considerable difference in the types of trauma (sexual assault, combat, motor accident, terrorist attack, earthquake et.), Litz

(2008) suggests, that intervention should to *lead-into a therapeutic model* that has the depth and breadth to include contextual variables. This is important and we will return to it as we consider CBT for this role.

More to the point of time as a modifier, as the individual or system moves through the timeframes they seem to slowly acquire a sense of resilience or state of new *equilibrium* (Myer and Moore, 2006). Surprisingly it is at this point that we see society spontaneously reorganize itself in the aftermath of a catastrophe. Indeed, Fritz (1996) says, the catastrophe produces a new “community of sufferers” that provide even the essential human needs, that under ordinary conditions are difficult to find. The final element that adds to the potency of time, are special dates marking the event if they coincide or are near the event (Myer and Moore, 2006). For example, during Christmas, we note a higher rate of morbid mood; Christmas has become a marker for family, joy and overall happiness. The perception of loneliness in the absence of loved ones reduces the meaning of personal joy even if this is not true. Consequently, Christmas becomes a trigger for morbid moods behaviour (Sansone and Sansone, 2011). To outline the final premise of CCT: “Two elements compose time (a) the amount of time that has passed since the event and (b) special occasions such as anniversary dates and holidays following the event (Myer and Moore, 2006). Figure 3 summaries in formula format and to reiterate:

The impact of a crisis is consistent with the function of the interaction of proximity to the crisis event, the unique reaction of the individual or system, the interactions of primary and secondary relationships, and the degree of change, all of which are moderated by time (Myer and Moore, 2006).

$$\text{IMPACT} = f \frac{(\text{Layers} = \text{proximity, reaction, relationship, change})}{\text{TIME}}$$

Source: Taken from MYER, R. A. & MOORE, H. B. 2006.

Figure 4. CCT IMPACT as a Formula.

In Figure 4 we note that the formula is an extension of Lewin’s theory, in Figure 5, of *behaviour* stated as *a function of the person and the environment*, and in fact simplifies Bronfenbrenner (1986, 1995).

$$\text{BEHAVIOUR} = f (P/E)$$

Source: Lewin 1959 cited in MYER, R. A. & MOORE, H. B. 2006.

Figure 5. Lewin's Formula for behaviour.

One cannot help but notice the corresponding conceptualization between the two formulas and indeed the conceptualization of “*behaviour, catastrophe and crisis*”. *Pragmatism* dictates, that behaviour is a result of the interaction with the environmental-“whole”, no single element is considered to operate independently (only conceptually we consider them as separate). In other words, we can say that close proximity does not necessarily lead to higher absorption of the impact. The other elements in the formula may serve to lessen the impact – any variable combination of the elements may occur with many possible results. In this respect, the conceptual model of Crisis in Context Theory seeks to inform mental health intervention in crisis circumstance.

Part III

Mental Health Intervention

Framework for intervention

In terms of mental health intervention, there seems to be more agreement among professional about what *not* to do than what to do. One of the few points where there seems to be a concurrence regarding early intervention, is on prevention goals: to “provide evidence-based interventions and strategies for those most vulnerable to prevent chronic posttraumatic mental health problems and impairments in functioning” (Litz, 2008). Unfortunately, even with the agreement on prevention goals, the actual strategy of (how-to) apply early intervention seems to hold much discord. In fact, one of the central issues identified is the question “early” intervention.

Ruzek et al., (2007) for example, generalizes the concept of early intervention by describing it, as a need to provide support for reducing the event-impact with the aim of facilitating short term and long term adaptive functioning. He goes on to states that little research has go into understanding early intervention as practiced within the fist 14 days of the event-impact. It is still quite unclear how exactly to go about intervening since no one is certain how “crisis intervention” actually works (Wilson et al., 2000). Little is understood about the first few hours and days that follow the event (Litz, 2008).

Our lack of understanding is clearly proven by current debates regarding the ineffective and possibly harmful effects of various forms of Psychological Debriefing (PD) methods. Including in this is Crisis Incidence Stress Debriefing (CISD) (Injae, 2005, Wessely and Deahl, 2003, Regehr, 2001, McNally et al., 2003, Ruzek *et al.*, 2007,

World Health Organization War Trauma Foundation and World Vision International, 2011, Kutcher et al., 2005). Regardless, for Ruzek et al., (2007) early intervention is a general concept description, which is a common point of view in the field; it is accepted as a maxim.

Here however, we will sketch out the concept a bit further. Early crisis intervention can be analyzed and seen in two basic time intervals (as mentioned in the previous section): the *immediate* and *acute*; the immediate represents the time interval between ~0–48h and the acute after the 48hour mark up to 3–4 weeks later (Litz, 2008). Structurally this fits well within the diagnostic criteria of ASD and PTSD (APA, 2000). On the other hand, Kurtz et al., (2005) taking into consideration the Israeli experience with various terrorist attack strategies, suggest a further breakdown of the timeframes and symptomatology. The suggestion is that Acute Stress Reaction (ASR) based on the diagnostic criteria of ICD 10 (WHO, 1993) and ASD exist in different timeframes (see Table 2). ASR exists almost immediately after the event-impact and is a mediator to more serious psychopathology. One thing to keep in mind is that combat related post trauma is deferent than environmental related post trauma however human reactions tend to overlap as perception mediates the experience.

Although there is considerable overlap in the symptomatology of ASR and ASD, the idea is that it may simply be a good way of distinguishing who might be a candidate for immediate intervention by being focused on biological responses, psychological symptoms and cognitive factors of acute reaction (Bryant, 2003). A crucial point about ASR is that the survivor(s) stand a better chance of recovery if the acute-stressor is not

present (or they if they have been moved to a safe place) during the first few hours (Kutz *et al.*, 2005). Clearly, this is a point of entry for the Emergency Response Teams (ERT).

Something to note however about the point of entry, as indicated in the previous section, intervention takes place at the point of crisis and the nature of a crisis determines the type of intervention. Keeping this in mind and a crisis is not always found at the point of impact (ground zero) and it may not always be within the 8-hour optimum opportunity.

Again, Table 2 gives a good point of view on the timeline of disorder development, and clearly, we can see that even 6 months after the event a person may experience the onset of PTSD – this is a point of intervention far away from the initial catastrophe and 8-hour optimum and away from ground zero as discussed by CCT. In this point in time perception and practical consequences of the event may have altered its meaning. Intervention may look considerably different for individuals in this biopsychosocial context. This may mean that victims may develop other disorders that are independent of PTSD (Bryant, 2003). This is why gathering information during the early stages is important; addresses the specific needs of victims may help them combat the initial trauma and may foster resilience as they will be connected to resources as the need may arise (Vernberg *et al.*, 2008).

Just like primary intervention begins at ground zero and within a few hours, indicated in Table 2, the last point of intervention that may be considered pre-emptive in is the 30-day mark where the onset of Acute PTSD is clearly diagnosable. This tells us that just as in emergency medical care where there is a “golden hour”, it seems, there might be a “golden month” of opportunity for emergency mental health care. It is then within this month that PFA and Psychological Triage and PSA is applied. In deed, at this

point we can re-conceptualize PFA as being extended beyond zero hours and ground zero to a 30-day intervention; if we can borrow a term from epidemiology, we would say that *the incubation period for mental trauma is anywhere from ~0 hours to 30 days*. Therefore any PFA intervention must keep this as a general rule and be prepared to extend its resources accordingly (see Table 2). One thing to note here is that being “technically” engaged in PFA, does not exclude engaging in assessment for and SPA. SPA, is connecting people to the resources needs to prevent onset, facilitate recovery and engage in therapeutic intervention in a clinical setting if need be.

Table 2
Theoretical Frameworks: PFA, Triage and SPA

Mental Health Ref.	Syndromes (In Ref.)	Symptom Progression (In Time)	Relative Stages	Intervention Type & Timeline		
ICD 10	ASR	0 – a few hours (8) ^I	IMMEDIATE	PFA Intervention ^V	PFA + PrimPsyTriage ^{II} for Risk and additional aid	GOLDEN MONTH ^{IV}
		----- maximum 48 hours			SecPsyTriage ^{III} for PSA	
DSM IV-TR	ASD	2 – 30 days (1M)	ACUTE STAGE	SecPsyTriage for PSA additional assessment		
ICD 10 DSM IV-TR	Acute PTSD	1 month – 3 months	PTSD Diagnosed			
ICD 10 DSM IV-TR	PTSD	after 6 months	PTSD Delayed	Follow-up SecPsyTriage		
^I Contingent upon safety, symptoms seem to dissipate and reduce statistical probability of further development of psychopathology. ^{II} Primary Psychological Triage- initial risk for secondary intervention and connects people to a respective support networks. ^{III} Secondary Psychological Triage - current mental state and allows for intervention on the specific state of mind. ^{IV} Window of opportunity ^V the incubation period for mental trauma is anywhere from ~0 hours to 30 days -- Represents transitional frame of reference.						

Psychological First Aid

As indicated by Table 2, PFA begins in the immediate stage along with Primary Psychological Triage (ppT). The heterogeneous reactions and trauma require that PFA is adaptable and therefore applicable to specific situations (Forbes et al., 2011, Hobfoll et al., 2007). A popular definition and methodology for PFA that many agree on (Ruzek *et al.*, 2007) comes to us from Brymer, et al., (2006) working with the U.S. National Child Traumatic Stress Network (NCTSN) and can be seen in Table 3. However, caution is called for. The term PFA is used indiscriminately in many cases with direct interventions to survivors. According to Bisson and Lewis, (2009) there is no evidence that any psychosocial intervention in the immediate or acute stages prevents or reduces mental health symptoms. The only exception to this is with trauma-focused Cognitive Behavioural Therapy (T-CBT); and *only if*, the symptomatology is diagnosable (symptoms fit DSM IV-TR criterion) in these stages – note, this means in a clinical setting not ground zero.

In the same table we can see the difference in definition provided by the WHO. There is no mention of evidence-based and is considerably more open-ended in its definition with a direct contrast to what it is not – clearly noting that it is not a therapy nor is it psychological debriefing (World Health Organization War Trauma Foundation and World Vision International, 2011).

Table 3
PFA, What is it?

What is Psychological First Aid?
NCTSN
Psychological First Aid is an evidence-informed ¹ modular approach to help children, adolescents, adults, and families in the immediate aftermath of disaster and terrorism. Psychological First Aid is designed to reduce the initial distress caused by traumatic events and to foster short- and long-term adaptive functioning and coping. Principles and techniques of Psychological First Aid meet four basic standards. They are:
<ol style="list-style-type: none"> 1. Consistent with research evidence on risk and resilience following trauma 2. Applicable and practical in field settings 3. Appropriate for developmental levels across the lifespan 4. Culturally informed and delivered in a flexible manner
Psychological First Aid does not assume that all survivors will develop severe mental health problems or long-term difficulties in recovery. Instead, it is based on an understanding that disaster survivors and others affected by such events will experience a broad range of early reactions (for example, physical, psychological, behavioural, spiritual). Some of these reactions will cause enough distress to interfere with adaptive coping, and recovery may be helped by support from compassionate and caring disaster responders.
¹ Bisson and Lewis, (2009) commissioned report to the World Health Organization states there is no evidence to support such claims. Source: taken from Brymer et al. 2006. PFA Manual
WHO
According to Sphere (2011) and IASC (2007), psychological first aid (PFA) describes a humane, supportive response to a fellow human being who is suffering and who may need support. PFA involves the following themes: providing practical care and support, which does not intrude;
<ol style="list-style-type: none"> 1. assessing needs and concerns; 2. helping people to address basic needs (for example, food and water, information); 3. listening to people, but not pressuring them to talk; 4. comforting people and helping them to feel calm; 5. helping people connect to information, services and social supports; 6. protecting people from further harm.
Source: Taken from WORLD HEALTH ORGANIZATION WAR TRAUMA FOUNDATION AND WORLD VISION INTERNATIONAL 2011.

Responding to the call by experts for approaches that are of a non-formal intervention, currently PFA is delivering what is a *practical* and *pragmatic* support to survivors. As stated earlier however, even this approach is problematic since there is a lack of research regarding the first 14 days of intervention and in general regarding PFA. Bisson and Lewis, (2009) commissioned report to the WHO and Forbes et al., (2011) supports this understanding; that PFA is presented as an evidence-based model but clearly indicated there no support to this claim . Despite this, studies did reveal two factors as being associated with the development of Acute PTSD: *a) perception of poor social support, and b) peritraumatic disassociation*. In other studies, such as Hobfoll et al., (2007) *five essential elements* were identified through consensus with a panel of

experts as having indirect empirical support to be used as guiding principles of intervention 1) *safety* 2) *calming* 3) *self/communal-efficacy* 4) *connectedness* 5) *hope*.

Self-efficacy is a particularly important principle in developing resiliency and there is considerable literature outlining its potency (Vernberg *et al.*, 2008). Self-efficacy is also important to first responders in particular, before the event impact, since it has been tied into self-esteem and performance as well as general coping ability (Jex *et al.*, 2001). With respect to self-efficacy relating to survivors, one study in China (Jun Yangyebing Yangxufeng Liu Jianquan Tianxia Zhudanmin, 2010) concerning earthquakes found weak support in the initial stages, however as time progressed a positive correlation was found between subjective-social support, problem focused coping and self-efficacy. It is quite possible that cultural element interferes with self efficacy since this idea requires a more individualistic behaviour and perspective on life and events. This is not to suggest that individualism does not thrive in China, however, comparatively, the Chinese culture is more collectivist oriented than western cultures (Shiraev and Levy, 2010). In collectivist cultures people expect to contribute to the society, but they also expect support in return (Fijeman *et al.*, 1996). This may explain the positive correlation of perceived social support and problem focused coping and self-efficacy. Clearly making the case for context based interventions (and research).

Karademas, (2006) on the other hand, found that *optimism* correlated positively to daily *emotional social support* and “*resilience self-efficacy*”:

Optimism reflects an overall positive appraisal of the future and of the things to happen. A positive view of the future requires a positive appraisal of the current person-environment interaction, or a relatively strong belief that things are going to become better. In order to formulate and maintain such beliefs the person is relying on a sense of personal capability, as well as on a positive evaluation of the social context and its ‘ability’ to provide the necessary support (Karademas, 2006).

The concept has a long and test history within the applied field of Organizational Behaviour in psychology and has been applied in organizations including the armed forces with similar outcomes (Everly and Castellano, 2009). In addition, recently an EU funded Delphi study, The European Network for Traumatic Stress (TENTS), reached a similar consensus on the previously mentioned principles and in addition, intruded a number of provisions: *a) general support b) psychological c) social and d) physical support* (Bisson et al., 2010).

PFA in this respect has merit; still it is recommended that it should not be followed as a “how-to” manual but rather PFA should be designed specifically, piloted and retested (Bisson *et al.*, 2010) and indeed updated. Caution is also warranted with respect to viewing this approach as “one-size-fits-all”; as we have seen from past mistakes with other “PFA” initiatives implemented as therapeutic interventions for PTSD what the results might be (Injae, 2005). PFA is not a universal “how-to” manual – having said that, the guidelines and analysis provided should prove valuable in order to synthesize a *context based approach for training for primary intervention, assessment, and secondary support*.

In addition, since current approaches have been developed within the context of western nations, additional considerations must be taken. On a side note, and in support of above statement, interestingly enough it has become apparent from the EU economic crisis that *psychosocial differences* among its member states are profoundly more important than their similarities. These differences have brought countries like Greece, Portugal, Spain and others to their knees! Ultimately, these differences represent “behavioural” perspectives on the economic domain.

Getting back to the specifics, hence the need for flexibility of application, particularly within specific cultures as one focus on addressing *who is at Risk*. Risks have a contextualized nature and it is best that they are determined by Triage methods. Table 4 summarizes and maps over the key actions mentioned in TENTS, WHO and NCTSN operation manual. The key to understanding the PFA guidelines is by not thinking about the guidelines as serial-steps of activity. It is unlikely that the situation will follow a logical by-the-book process; rather, the guidelines are concept-driven. For example, one key component in fostering self-efficacy is *listening* as opposed to hearing – hearing is what most people do. It takes a special skill to actually *listen* and not just hear the other person.

As a point of comparative reference Appendix A summarizes the definitions and key components of PFA as understood within the context of their organizations: NATO, IASC and a joint UK-USA project.

Table 4
 Psychological First Aid Principles Outline

Core Actions				Goals
TENTS and others	WHO	NCTSN*		
PFA Core Provisions	PFA Converging Core Action			
General Support	Safety	Look	Contact and Engagement	Engage people to contacts initiated by staff or to initiate contacts in a non-intrusive, compassionate and helpful manner
			Safety and Comfort	To enhance immediate and ongoing safety and provide physical and motional comfort
Psychical Support	calming	Listen	Stabilization	To calm and orient emotionally overwhelmed or disoriented survivors.
	Self-Efficacy		Information Gathering: Current Needs and Concerns	To identify immediate needs and concerns, gather additional information, and tailor psychological first aid interventions
Psychological Support			Practical Assistance	To offer practical help to survivors in addressing immediate needs and concerns.
Social Support	Connectedness	Link	Connection with Social Supports	To help establish brief or ongoing contacts with primary support persons or other sources of support, including family members, friends, and community helping resources
			Information on Coping	To provide information about stress reactions and coping to reduce distress and promote adaptive functioning
			Linkage with Collaborative Services	To link survivors with available services needed at the time or in the future.
Secondary Psychological Assistance (SPA)				B-CBT, T-CBT, Pharmacotherapy
				Computer CBM, ABM (individual and mass implementation)
--- Transitional and inter-exchangeable actions. The nature of every context will dictate how steps will progress * Most popular guide at present				Sources: Adapted from (Bisson <i>et al.</i> , 2010, Brymer <i>et al.</i> , 2006, World Health Organization War Trauma Foundation and World Vision International, 2011)

Psychological Triage Methods

The manuals presented, and others, advocate assessment of risk from an early stage. This represents certain difficulties, as an assessment requires some degree of aptitude on the part of the provider. Although Primary Psychological Triage (ppT) is referred to in manuals in a conceptual manner (as assessment), it is left up to each “interpreter” to conceive of how it may be implemented and with what tools. In any case, ppT is not a straight forward process that anyone can do and requires some degree of training. Not anyone can be arbitrarily assigned to any role and all roles simply because they have read the “manual” or they have been formally introduced to it.

In Greece since 2001 over 190 volunteer organizations have registered offering support in emergency circumstance. They are called on a need to basis or where it is assumed they have expertise. Training however for these organizations is not the responsibility of the state; the state has responsibility for state-owned programs only. There is however an effort to cooperate on various training projects with some degree of success (Nivolianitou and Synodinou, 2011). In the case of mental health crisis intervention, it is unlikely these groups share a common theoretical and methodological perspective to intervention. Mental health intervention is not a stand alone activity, it must be considered within a national and local policy enveloping various organizations; as such, people must be trained specifically to take up roles and responsibilities (Forbes *et al.*, 2011).

More to the point, ppT is carried out to identify current risk cases and needs; to link *survivors* with *additional resource* and *risk cases* with *Secondary Psychological Triage (spT)*; a more comprehensive assessment aimed toward therapeutic intervention.

The faster this process moves along the least likely the survivors will develop a resilient psychological and physiological deregulation (Yehuda, 2002). Another reason triage is carried out is to *prioritize* survivors and resources so as to not overwhelm the health system.

Depending on the type of catastrophe survivors may present themselves to on-site facilities or in medical centers in waves. The *first wave* starts from the onset and peaks about 2 hours later. This group of people is referred to as the “walking wounded” since they are able to take themselves out of the area and seek further assistance and information. The importance of this timeframe in ppT is that if not handled appropriately resources may be depleted and not be sufficient for more serious cases that will arrive. *The second wave* of survivors begins after the 2 hour mark. These people require assistance to move around and have physical and psychological injuries that need attention (Murdoch and Cymet, 2006).

This may be a critical point in the timeframe; people in this timeframe may be at more risk since they are not mobile due to injury or psychological factors. A point to note is that the nature of the physical injury is not the only indicator of mental health risk but the inability to seek help and resource autonomously is an equally probable risk. In fact some studies suggest that immobility is directly related to the development of PTSD as the body engages in an adaptive mode of defence (Bovin et al., 2008, Schore, 2002). This characteristic is a part of a cluster of symptoms that we have referred to as peritraumatic dissociation and is called Tonic Immobility. It is theorized that it is part of our EP adaptive/defensive mechanisms (Cantor, 2009) – a characteristic quite potent and a solid indicator of someone in trouble.

In other words, *looking* and *listening* carefully as time progresses into the second wave is important in *linking* people to resources and SPA (World Health Organization War Trauma Foundation and World Vision International, 2011). The final wave consists of people with chronic illness that may be at a loss for who, where and how do they get help (Murdoch and Cymet, 2006) Table 5 summarizes the waves.

From this description one can understand the importance of triage and the idea of connecting people to support networks and resources; *communication is critical and the only way to have command over it is if, your networks have been pre-established.* Of equal important is that contextually, looking at it from the survivor’s point of view, they may not have the slightest idea of how bad or how good communication may be. To have the ability to link people immediately diffuses an already catastrophic situation from escalating and places people on the calmer side of the equation. On the other hand, perceptions are just as important and in the absence of real communication managing people’s emotional disposition is crucial.

Table 5
Three Waves of Survivors

Waves	Timeframes	Window of Opportunity	
First Wave	~0 – 2 hours	L L L	“Walking wounded”
Second Wave	2 hours +		Look, Listen Link
Third Wave	Later Stages of Time	L L L	Chronically ill
<ul style="list-style-type: none"> • After the second hour and as time goes by increases the probability they will need more attention • Rapid and accurate assessment is required to sort out survivors and move them down the line for SPA and other help • Again this is a conceptual structure and ERT on site need be aware of the change in nature of survivors encountered • Criteria to consider <ul style="list-style-type: none"> ○ Tonic Immobility ○ Fear ○ Neuroticism <ul style="list-style-type: none"> ▪ Low self-efficacy (verbal and emotional outbursts inability - seek validation from others) ▪ Social Support mechanisms seem always not enough ▪ Severity is perceived as higher 			

As a rule, survivors should not be all screened since we know from many sources that most people have a built-in resilience component that helps them cope and do not develop any psychological issues. Therefore, the optimum would be to single out individuals that fit the high risk profile. As stated Tonic Immobility is one, another such criterion is neuroticism; individuals exhibiting high levels of neuroticism and low levels of self-efficacy stand a higher probability of developing psycho-physiological disturbances. Such individuals tend to see things as considerably more severe than what they may be, consequently creating obstacles for them selves. Furthermore, a common complaint with such individuals is lack of social support in relation to high stress situations (Sterud et al., 2008).

A number of crisis-assessment instruments (tools) have been developed over time in the hope of identifying mental health problems before they become resilient and to gauge the magnitude of symptoms for priority purposes. Disappointingly, none of the instruments are either not able to measure duration and intensity (Lewis and Roberts, 2001), or they are not suited (in triage format) to population based deployment. Within the scope of this research however, two fairly recent proposals were identified as being possible candidates for ppT and spT.

psySTART

With respect to ppT, such an approach was developed in the last few years that goes beyond simply offering a semi-structured conceptual approach to triage, called: *Psychological Simple Triage and Rapid Treatment (psySTART)*. A recent report on the use of psySTART concluded by stating, that the evidence-based model gave local and

federal public health personnel along with ERT, a strategy based approach that matched, (through the use of information technology) available clinical resources with high-risk survivors. It also consolidates an otherwise fragmented picture of the event, providing a single unified view of operations (King et al., 2012).

psySTART is described as rapid mental health triage strategy for managing large-scale incidences. psySTART is a key component to a nation wide model for children in disasters (Schreiber, 2005) that has been tested to some degree on a broader subject-base. There are three components to this model: a) a theoretical framework for linking between “disaster systems of care” b) evidence-based triage “tag” for field use, and c) an Management Information System (MIS) that calculates triage risks and needs, and provides recommendations in real time (Schreiber, 2010).

Many incidence systems operate on heterogeneous technology infrastructures; the psySTART’s MIS bridges the different IT infrastructures and groups of people. The “tag” is a pragmatic tool that needs little training; it does not require a mental health professional to complete it. Most responses to the items are “yes” or “no”, Appendix B shows a sample of the tag in current use. The tag captures a number of trauma-inducing circumstances (injury, perceived or witnessing loss of life etc.) and is capable of following a survivor through to post-event stressors (secondary stressors like housing issues, employment etc.) and other daily stressors related to the precipitating event. The “tag” captures also one peri-traumatic event such as *extreme panic*. The “system” behind the tag measures (calculates) the relative risk based on the exposure to the trauma-inducing events. Therefore the system has an objective measure built-in (since it is not symptom based), in other words, the system measures “*what happened*” and not the

symptoms of that (Schreiber, 2010). A very strong pre-determined communication component, however, like it was pointed out in the previous section, absolutely necessary if one does not have strong emotional management capability. We would suspect that this model may be over inclusive in its diagnostic criteria with out trained human discrimination. The “what happened” is certainly a good way to reduce the need for trained individuals, but “what happened” is subject to interpretation that goes beyond the physical components. It will be interesting to see the statistics between those qualified for disorders, against those that actually developed disorders.

In addition the color coding schemes provide a visual cue for on ground personnel, Table 6:

Table 6
psySTART Colour Coding

Colour	Brief Definition
Purple	Acute danger to self/others: Psychological Emergency
Red	High Risk: display one or more multivariate evidence - based risk factors based on studies using PsySTART
Yellow	Moderate Risk: display some presumptive risk factors
Green	Low Risk: do not currently present with any of the PsySTART risk factors

Source: Adapted from Schreiber, 2010

In many respects the system (not the “tag” per say) is the focal point of intervention. The “system” can be described as a *pre-event MIS* that operates behind the scenes to funnel through individual information and obtain a population aggregate of “needs”, thereby calculating initial resource availability and cost against future “needs”. The system does have far reaching coordination that extends into the community as part of the “human” backbone to the “system” and is essential for successful execution of an intervention.

At the risk of digressing, note the primary nature of the system is not a socially relational component, but a physical, cost affective strategy that deals with resources rather than people; people are at the rear. In the end, the network of social support in the back may be the systems real strength!

Triage Assessment System

As stated earlier, the point of ppT is to identify people in distress and transfer them onto SPA. It therefore becomes important that the degree of distress is considered and psySTART accounts for only a single emotional-risk factor “extreme panic”. As argued earlier, a number of other peri-traumatic risk factors can be included such as neuroticism, fear, tonic immobility in particularly during the peak timeframe (see Table 5). Although psySTART appears to have the conceptual basis of CCT, it lacks a critical perspective, namely the interpretation of events by the survivor. It does seek to contextualise but does so only on the surface as the system simply logs information and personnel does not assess emotional distress. A more accurate picture of trauma can be captured by augmenting psySTART with the Myer and Conte, (2006) Triage Assessment System (TAS).

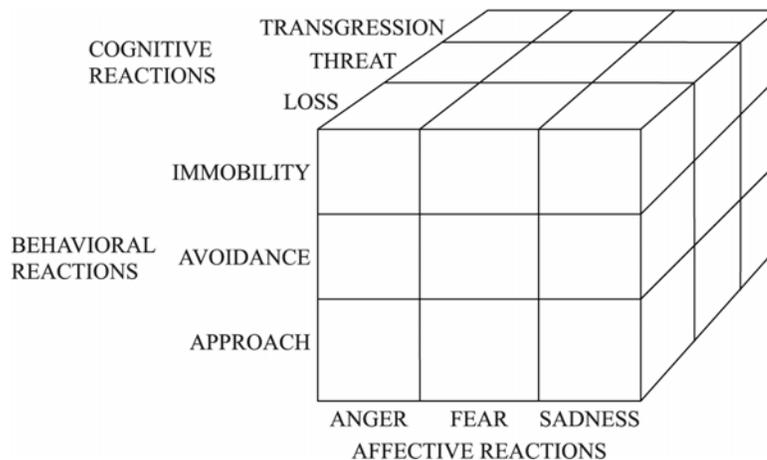
Even though TAS can be adapted to function in the front lines as a ppT system, (unlike psySTART) it focuses on the *consequences* of what happened, it’s considerably more involved and does require some degree of training and aptitude to deliver. TAS captures the symptomatology intensity on three dimensions: *Affective, Cognitive and Behavioural*, Figure 6 provides a three dimensional view of the model. This approach

was designed to monitor the state of mind of individuals in a state of crisis at any given moment (Myer and Conte, 2006).

All three dimensions interact with each other on a base level, for example, if we recall introductory psychology, at the bottom of Maslow's pyramid are basic needs and these needs are obtained by basic emotional drives. Any other type of behavioural response depends on the negotiation of primary needs. Therefore, in a catastrophic moment biopsychological reactions mask-over the more subtle emotional expressions that tend to be modulated by culture. The basic emotional reactions are *fear, hostility and sadness* and are simple and universal emotions (Myer and Conte, 2006). It is only during later timeframes that individuals are able to provide a subjective interpretation to these emotions. Thus the focus for providers is to identify the most frequent emotion and rate its intensity (and capture duration through repeated measures under SPA), as seen in Table 7.

On the behavioural dimension responses that are natural in unusual cases of stress: *immobility, avoidance and approach*. (Note that extreme fear, hostility and immobility has been identified through out this paper, in some form or other, as centerpieces for risk or resilience). In the cognitive area: *physical, psychological, spiritual and social* are the affected areas and subjective reactions include: *transgression, threat and loss* (Myer and Conte, 2006). In this dimension the areas of psychological (self-image, i.e. self-efficacy), and social have been identified as centerpieces of risk/resilience. Clearly this is a contextual approach to spT which grants clinicians a contextual conceptualization of an individual's mental disturbance.

Clearly as a clinical tool the TAS is indispensable. Looking at Table 7, the suggestion however, is that first, TAS is indeed used in its full mode as spT to guide “...clinicians in the identification of the complex interaction among the three domains and helps prevent protracted mental health concerns” (Myer and Conte, 2006) i.e. *Affective, Cognitive or Behavioural*. Second, TAS is used as a “thermometer” in each encounter with the survivor throughout the therapeutic relationship since the TAS identifies current state of mind. For example, the survivor may be having a specific family problem or may be experiencing primarily a behavioural disturbance, a type of immobility. Finally, components of TAS should be simplified and adapted to psySTART for more accurate ppT.



Source: Taken from Myer et al., 2007.

Figure 6. Triage Assessment Model.

Table 7
 TAS Simplified for use with psySTART

Degree of Impairment									
1	2	3	4	5	6	7	8	9	10
None	Minimal	Low		Moderate		Marked		Severe	
RISK / RESILIENCE FACTORS									
Affective		Behavioural			Cognitive			EP INDEX	
Anger/Hostility*		Approach*			Psychological*			Avoidance	
Fear/Anxiety*		Avoidance			Moral/Spiritual			Attentive	
Sadness		Immobility*			Social Support			Immobility	
Melancholy					Physical			Withdrawal	
								Aggressive	
								Defence	
								Appeasement	
								Tonic	
								Immobility	
Score	<input type="text"/>	Score	<input type="text"/>	Score	<input type="text"/>	Total	<input type="text"/>		
* retain									
The table is a conceptual adaptation of the original for illustrative purposes – the original can be found in (Myer and Conte, 2006)									

Indicated in Table 7 is how TAS may be modified to provide a cross reference for and with psySTART. The system should retain the risk/resilient (*) and drop the other items. They are listed currently as a point of reference for theorising. Simply note frequency of expression and intensity. By retaining the “approach” category under the behavioural dimension it provides a quick error checking rational-formula. For example, “approach” behaviour is defended as a self-help seeking behaviour (Myer and Conte, 2006). Such behaviour requires a highly positive “self-image” in the face of catastrophe (positive/negative/defeatist self-image (Taylor et al., 2011) falls under the category “psychological” and is related to self-efficacy). In other words a degree of self-efficacy and low neuroticism (not being hostile) would result in high “approach” behaviour (Sterud *et al.*, 2008). Therefore you would not expect to have a high score in “hostility” or a low score in “psychological” and at the same time a high score on approach “approach”.

Two things to note here, first “approach” behaviours are a cultural extension of our primordial survival mechanism of *fight-flight or freeze* (although this is an oversimplified popular view of looking at primal emotional reaction, and this will be clarified in the next section), and it doesn’t take much abstract thought to grasp the conceptual parallel: *approach-avoidance-immobility*. Second, as stated mediating behaviours is self-efficacy, however self-efficacy works in relation to *locus of control*; a personality characteristic (Greenberg, 2011). While self-efficacy in part has to do with past experience and acquired skill-sets, locus of control is rooted in biology. In other words, primarily cultural factors modify self-efficacy, while primarily biological factors modify locus of control. Both interact and result in the basic behavioural consequences of *approach-avoidance/fight-flight*.

Locus of control is a general belief of how much control people have over their lives. People that believe they have primary control over their lives have an *internal* locus of control, while people that believe their life is controlled by chance, fate or powerful others have an *external* locus of control. Externals feel in control when they are in familiar settings. However, their predisposition to locus of control becomes apparent in situations where locus of control is ambiguous and there are very few things more ambiguous than a catastrophic situation; acute crisis is a result of an ambiguous situation. In contrast, moderate-strength internals exhibit higher “approach” behaviours – they seek information to resolve problems (resolve crisis) on their own (McShane and Von Glinow, 2008). These risk/resilience factors fall under the psychological dimension of Table 8 and represent a conceptual outline of triage engagement.

Although TAS was conceptualized initially as a clinical triage tool (spT), it does hold the promise to be affective in the field as well. With the some degree modification of TAS it can be adapted to support ppT and with some degree of training intervention can prove to be a more accurate and contextual assessment. Thereby, providing survivors with the proper secondary psychological support and possibly preventing post trauma.

Part IV

Post Traumatic Stress Disorder
An Evolutionary Defence Adaptation

Most treatment manuals on PTSD recognize that *fear* is a key emotion in PTSD (Australian Centre for Posttraumatic Mental Health, 2007, APA, 2000, WHO, 1993), however they do not offer a frame work for that key emotion or the symptomatology that follow a catastrophic incident. Most approaches conveniently point out the event-impact and the consequences; they confine themselves to event descriptions and patterns of behavioural consequences. Since fear seems to be an obvious and prevalent “symptom” then explanations follow from that point in a logical manner.

Of course this problem of addressing the *whys* is not just in relation to PTSD, but it is problem with psychology it self, as it is unable to answer the *whys* in any respect. For example, using learning theory you can explain how someone seemingly acquired a phobia of snakes, just as you can explain how someone acquired a fear of fires after being burned, and you can explain how someone can “un-learn” this phobia of snakes or fire. But, leaning theory (or any other psychological theory) can not explain how someone acquired *fear* it self and why fear can not be un-learnt at the same time as the phobia for snakes or fire. The problem is clarified and illustrated further by the fact that the DSM does not define *fear* and *anxiety*. Expatiations of one refer to the other; creating a circular argument with no real understanding (APA, 2000). If we understand not just *how* but *why*, fear mediates in our behaviour we would have a clear understanding of the dynamics surrounding the acquisition of PTSD.

It is well understood now that for psychology to continue producing as a field of study, it must seek to enlist the aid of other disciplines. This entire work has been an exercise in exactly that; the borrowing of conceptual frameworks from other areas to shed light on various places in the field of crisis intervention. Here we shall do the same thing. We shall enlist the aid of Evolutionary Psychology (EP), a multi-disciplinary field in itself that may offer an explanation into the *why*.

Right from the start lets clear up the concept of *fear* and *anxiety*, in EP theory *fear relates to direct threats, while anxiety relates to potential threats* (Cantor, 2009). For example, snake phobia comes to us from our deep (primal) evolutionary past (Ohman, 2009), it represent of the direct threat that requires a precise and organized pattern of behaviour to defend against. In other words, fear and emotions in general, in EP theory, are considered behaviours that have been shaped by natural selection because they provided a *reproductive advantage* over other response behaviours (Cantor, 2009). This means that emotions motivate survival by telling us how important an event is (Gilbert, 2004). In the case of danger (snake or fire) the organism finds some strategy or tactic to reduce danger and increase survival probability. Therefore it is possible that the symptoms we now cluster and label as PTSD provide and *adaptive* function.

Therefore, since fear is a key component of PTSD then we should ask what adaptive advantage could they symptoms of PTSD have provided in the past. Indeed, we could even question whether or not the symptoms of PTSD are a disorder (Cantor, 2009) since we are discussing the symptoms in terms of an advantage as opposed to the clinical disadvantage.

This approach of examining PTSD rests upon current EP theory, behavioural information processing and neuroscientific theory (Cantor, 2009). Although it seems there are more factors contributing to evolution than adaptation, such as *epigenetic* factors (Yehuda et al., 2008, Lickliter and Honeycutt, 2003), because we are concerned with behaviour in the context of crisis assessment, we will confine our selves to understanding behaviour as *a set of process that developed in their current state as a result of successfully solving adaptation problems in the ancestral environment* (Gilbert, 2004). More specifically, we are concerned with the adaptive responses elicited by predatorial threat – fear, as suggested, is an adaptive behaviour that resulted from a direct threat such as a predator.

According to theories on brain evolution, the human brain reflects *three basic periods of evolution: reptilian, paleomammalian and neomammalian*. Human brain divisions reflects this pattern of evolution: *reason(neo)*, *emotion(paleo)* and the oldest, reptilian – *non-conscious*, regions of the brain that were inherited before the mass extinction of the large reptiles and dinosaurs (before 65 million years ago). The brain regions can work independently or together (MacLean, 1990).

Human *survival strategies* correspond to three types of threat: *predatory*, *conspecifics* and *environmental*. The complex survival strategy observed in mammals and humans have been stimulated primarily by the need to defend against predators, simply because predators are a more imminent and a more frequent threat. Therefore human survival strategies are *predator-defensive driven*; based on the oldest part of the brain, thus behaviour is characterised by a specific pattern aligned with a *direct* or a *potential* threat .

Today's studies of PTSD are mainly on conspecific (same species threat - war, sexual assault, air plain accidents etc.) and environmental (floods, earthquakes etc.). These threats are a more recent development in the evolutionary chain. It is interesting how symptoms of war veterans seem to be somewhat more prevalent than in the environmental groups, and have a particular complexity surrounding them (Cantor, 2009). Similarly, the unique picture of PTSD in sexual assault and assault victims is correspondingly complex. For example, victims are characterised by tonic immobility and peritraumatic cluster of avoidance and numbing. Thereby, tonic immobility mediating, between fear and re-experiencing and complex PTSD (Bovin *et al.*, 2008). This symptomatology would suggest origin in predatorial defence, regardless of any overlap of symptoms; war and sexual assault does have a predatorial nature.

Predatorial behaviour has a disenable pattern of behaviour and anti-predator tactics mirror this pattern of behaviour. In other words what we have is a *predator – pray competitive relationship* evolving thought time. In the extreme context, failure of a pray-defence results in termination, of not just life, but of all future reproductive activities and the end of a particular mode of behaviour (Buss, 2005). Perhaps in this context, a survivor's post-trauma is a blessing and not a disorder.

If we could position this idea in a broader context we would say, animal behaviour targets elements, “perceived threats”, within its environment: natural phobias (thunder, lightning, night, heights, water), social phobias (unknown person, areas, ambiguous situations), and animal phobias (spiders, snakes, birds) (Ohman, 2009). Therefore defence strategies evolved around these “perceived threats” to aid the organism in managing its survival (Tooby and Cosmides, 2005).

In the current context humans are afraid of flying, less so of guns and even less afraid of cars. Individually cars and guns kill more people than airplanes. Yet people are more afraid of flying. This is because just like snakes, airplanes represent a *prototypical* fear (heights or threats from above), therefore a fear of flying has its origin in the ancestral past (Ohman, 2009). The symptoms that accompany this phobia are parallel to a predatorial or perhaps even an environmental defence strategy; intense anxiety, avoidance and other behaviours more specific to the perception on “imminent threat vs. potential threat”.

Anti-predator defence requires two main strategies, *avoidance and escape*. Avoiding predator’s sensory field (sound, smell, sight) and escape from capture. In total six tactics have been identified that counter predator-strategies: *avoidance, appeasement, immobility, tonic immobility* and a more active defence *withdrawal and aggression*. A closer evaluation of these behaviours suggests that prey-defence is *distance-dependant*; decisions and reactions are based on *cost-benefit assessment* (built-in non conscious mechanism) accounting for the physical and psychological *proximity* of the predator (the threat) (Cantor, 2009). In Table 1 we can see the possible correspondence for some behaviours and PTSD outcome.

Table 1
Evolutionary-Defence Behaviour and PTSD

Behaviours	Predatorial		Conspicifics *		Environment	
Mirror behaviours	1. Detection 2. Identification 3. Approach 4. Subjugation 5. Consumption	PTSD	Human pressures are broad – possibly epigenetic pressure - ongoing threat?	PTSD	Natural or human made mass impact events - ongoing threat?	PTSD
1. Avoidance	Primary: reptilian origin, energy-limited, change food patterns, stay close to home	Field of vision or vicinity of event, noise, crowds, smells		Strangers, people not known well Crowds, supermarkets, noise, few meals		Field of vision or vicinity of event
2. Attentive Immobility	Primary:	hyper arousal, high vigilance, decision-based-flight or fight, cardiac deceleration, startles, muscle tension		Confrontational (fight) and anxious		Contemplating – assessing what to do - risk
3. Withdrawal	Possible convergence:	Slow to react, flight possibility increases	Possible convergence:	Talk about flight, with “hiding away” for long periods	Possible convergence:	Confining to home and perhaps to safe areas
4. Aggressive Defence	Primary:	anger, and possible fight threats, warning signal		High emotional outbursts, intimidation, scare, threats, warning-fight signal	Finds no support	
5. Appeasement	Possible convergence Provides hierarchy and promotes inclusive fitness		Possible convergence: Provides hierarchy and promotes inclusive fitness	Complex-PTSD, de-escalation, flight to source of threat (abused children and spouse), dominated-defeated relationship	Possible convergence Trapped for long period	Hopelessness, Inescapable
6. Tonic Immobility	Possible convergence predatory imminence, activated by immediate fear of death	Extreme fear, fully conscious, motor inability, de-stimulate predator killing reflex	Possible convergence: Imminent danger from more powerful	Submissive deterrent to prevent injury or death, unresponsive to external stimulus, combat, rape & child victims exhibit symptoms – peri-traumatic dissociation, anxiety, depression, Fear-avoidance-numbing maintained by cognitive perception	Possible convergence: Trapped and sees no way out	Hopelessness, Inescapable
<p>At this point as it is a first attempt to map PTSD to evolutionary pressures. PTSD in this context may not be a single disorder but three different clusters with a primary origin and possible overlap of other. Therefore, diagnosis and therapy may be approached differently</p> <p>* Conspicifics – same species pressure (humans vs. humans)</p>						

Some interesting observations to note (Table 1), responses have a hierarchical order. Response to sudden and violent environmental changes (i.e. earthquakes) stimulates *avoiding* both visually and physically the area of impact, in a post-event state the earthquake is a potential threat. On the other hand, during the event, one may experience *attentive immobility* since a decision must be made for what do to.

Appeasement is a relatively newly evolved tactic (conspicific) and one that is sustained by cognitive interpretations. It is associated with complex-PTSD and a range of other disturbances. It has been documented in cases of captivity and abuse; where ever there is a dominant-subordinate abusive relationship. It may be the case that, PTSD taken in this light may not be one disorder, but *three* different disorders with overlapping characteristic acquired from corresponding evolutionary pressures: predatorial, conspecific and environmental.

Of course an important question is why some people are able to regulate their initial defensive responses and others continue to maintain a heightened level defence-poster (predator, conspecific or environmental PTSD symptomatology)? Possibly the answer may lie in the context, perception, prediction and control variables, along with individual variance, as animal studies would suggest (Foa et al., 1992). Studies with war veterans indicate that context is critical component in prevalence. In addition even the perception that a situation is controllable works as a resilience factor. The loss of autonomy (defeat) in the face of adversity is a cognitive perceptual factor that modifies outcome prediction (Taylor *et al.*, 2011). The more un-predictive (ambiguous) a situation becomes, the less control is experienced; in turn anxiety increase, this is only compounded by the duration (time) of the experience.

Each of these defence strategies (predator, conspecific and environmental) represent a conceptual framework by which assessment and treatment can be informed (Cantor, 2009). Without a theoretical framework for PTSD, as is the case now, as McNally argues, cited in Rosen, (2004): "...the concept of a traumatic stressor has broadened to such an extent that today the vast majority of American adults have been exposed to PTSD-qualifying events. This state of affairs is drastically different from the late 1970s and early 1980s when the concept of trauma was confined to catastrophic events falling outside the perimeter of everyday experience". Today, studies rang from natural catastrophes, to giving birth, to school-bulling as PTSD stressors (Livanou et al., 2005, Reynolds, 1997, Mynard et al., 2000). It is important at this point to place PTSD in the proper theoretical context; the EP approach to PTSD offers a foundation to inform qualifying criteria, assessment and therapy.

CBT Theoretical foundations and PTSD

The question here is what type of therapy is suited to mental disturbances that resulted from a catastrophe induced trauma? One comprehensive list of therapies/techniques that are in current use can be found in the electronic version of “*VA/DoD clinical practice guideline for the management of posttraumatic stress*” (Department of Veterans Affairs Department of Defence, 2010). From this list of approaches however, very few have a theoretical foundation and even fewer are in fact evidence-based.

It is recommended that approaches relating to Cognitive Behavioural Therapy are considered over others for a number of reasons. One, CBT does have a theoretical foundation to work from and consequently is one of the most researched area of clinical psychology. Hence evidence-informed with notable success where anxiety and PTSD is concerned, particularly when therapy is trauma-focused (Ehlers *et al.*, 2010, Foa *et al.*, 2006). Two, CBT theory, in part, states that distress is linked to *cognitive bias*, which extends from *core beliefs*; Evolutionary Psychology agrees, and explains *why*. Humans have a semi-hard-wired inclination for *biased information processing* particularly when it is *self serving* and for *protection and defence* (Gilbert, 2004). PTSD is understood as an evolutionary *defensive adaptation strategy* (Siegmund and Wotjak, 2006). Therefore EP and CBT have a corresponding theoretical basis to support research into therapeutic approaches. Three, CBT and derivatives lend themselves to information systems theory and technology, thereby providing an opportunity to advance the field of therapy using new methods. CBT theoretical premises can be adapted and delivered using information technology platforms to explore new therapy models such as computerised cognitive bias

modification, attention bias modification and virtual reality therapy and other types of therapies in current research.

One example of cognitive behavioural therapy that has shown to be successful is *prolonged exposure therapy*. This approach is informed by CBT and is based on *emotional processing theory* focuses on trauma (Rauch and Foa, 2006).

Patients are asked to remember as clear and vivid as possible the traumatic event. This occurs systematically over a number of sessions until the event does not elicit unwanted emotional reaction. As survivors recount the event each time, they begin to recall more and more information, often the quality of experience changes during the recollection i.e. smells, sound, images, and texture may come to mind more as they may have been avoided. This exercise sometimes is explored through writing rather than spiking at first.

In addition to this procedure, repeated exposure or in some cases extended exposure *in vivo* or imagined to what is objectively a harmless stimuli that the survivor tends to be avoid because of intense fear associated with it. Exposure can be complimented by various relaxation techniques, assertiveness training. Because of the nature of exposure therapy, it has a high drop out rate. It is therefore important that the client-therapist relationship and environment elicited trust, safety and support.

More recent, Ehlers et al., (2005) developed a CBT approach to the treatment of PTSD on the model that states PTSD becomes presistant when people perciece their experience as an imminent, direct threat rather than something that happened in the past. CBT specifically is designed to target and modify beliefs that do not reflect a maladaptive ideas and behavioural strategy.

In this light CBT lends it self as a natural extension to EP theory, and CBT in turn is extended by the use of technology. For exmple, exposure treatment has been taken to *virtual reality* (Reger et al., 2011). The advantage to computerised therapeutic approach is that it is adaptable to a catastrophe affecting large number of people. It is not a replacement of the traditional therapy support mechanism, but rather an extension to it.

Conclusion

In this brief work, an attempt was made to identify and bringing a number of theories from multiple fields of study in order to provide a possible foundation by which to approach the field of Mental Health Crisis Intervention as a unified body of knowledge. To this end, *catastrophe* was redefined as *a radical change of direction; a sudden and unexpected change of course that lies outside the usual range of experience, to the extent that it may be irreversible or perceived as such*. This definition allows for inclusion, yet has specific parameters based on contextual interpretation.

In line with this, *Crisis in Context Theory* was presented and discussed. CCT informs us of how a crisis will impact both individuals and systems in a catastrophe, a critical matter in crisis intervention. In considering intervention, principles of *Psychological Fist Aid* were presented and a number of clarifications were introduced relating to *intervention timeframes*, disorder development: *Acute Stress Reaction, Acute Stress Disorder and Post Traumatic Stress Disorder*. *Triage Methods* were introduced in relation to the aforementioned.

Finally, regarding the primary disorder of catastrophes, PTSD, a theoretical framework was proposed within the context of Evolutionary Psychology and postulated

PTSD as a defence-adaption to direct or potential threats. In compliment to this approach, Cognitive Behavioural Theory was put forth as therapy and as a model of further research, combining information technology to produce new and innovative therapeutic techniques.

Far be it to suggest, that at the end of this work one finds a comprehensive theoretical foundation as was attempted, however, if even a small portion of this seems to have some “validity” then it was worthwhile perusing.

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Appendix A

Comparative Components of PFA

Table 8
NATO, IASC and UK-USA project

<i>NATO</i>	<i>IASC</i>	<i>UK-USA project</i>
Active listening	Providing comfort and consolation	Protecting from further harm
Reassurance through normalization	Protecting people from further threat and distress	Providing the opportunity for survivors to talk about the events, but without Pressure and respecting the wish not to talk
Provision of appropriate and supportive advice and information to include self care and self monitoring	Providing immediate physical care	Listening patiently in an accepting and non-judgmental manner
Helping people to identify problems they cannot handle	Encouraging goal orientated and purposeful behaviour	Conveying genuine compassion
Modeling helpful reactions to traumatic stress	Helping people to reunite with loved ones	Identifying basic practical needs and ensuring that these are met
Advice and guidance on maintaining a lifestyle favorable to mental health and wellbeing	Enabling voluntary sharing of experiences	Asking for people's concerns and trying to address these
Providing information on how and when to refer themselves	Linking survivors with sources of support	Discouraging negative ways of coping (specifically through use of substances)
Specific attention to the needs of children, young people and other specific groups	Facilitating a sense of being in control	Encouraging participation in normal daily routines (if possible) and use of positive means of coping
Helping people understand the needs and reactions of others and how they can support others	Identifying people who need further help (triage)	Encouraging, but not forcing, company from one or more family member or friends
Referral to other more specialist or supportive services where indicated		As appropriate, offering the possibility to return for further support
Considering and addressing ethical matters		As appropriate, referring to locally available support mechanisms or to trained clinicians
Evaluating risk (including suicide risk)		
Sources: Adapted from BISSON., J. I. & LEWIS., C. 2009		

MENTAL HEALTH CRISIS INTERVENTION

Appendix B

Sample of Triage Field “Tag”

Figure 3: PsySTART Triage Tag

PsySTART™ Disaster Mental Health Triage System

LAST NAME		HOME ADDRESS (PRE-EVENT)	
		SAMPLE	
FIRST NAME		Not for use	
DOB	GENDER	CITY	STATE
MM DD YYYY	MALE FEMALE		
ZIP CODE		©2006-2012	
MEDICAL RECORD NUMBER:			

		MARK POSITIVE TRIAGE BELOW	
EXPRESSED THOUGHT OR INTENT TO HARM SELF/OTHERS?	<input type="checkbox"/>		MARKING EXAMPLES  CORRECT  WRONG  WRONG
FELT OR EXPRESSED EXTREME PANIC?	<input type="checkbox"/>		
FELT DIRECT THREAT TO LIFE OF SELF OR FAMILY MEMBER?	<input type="checkbox"/>		
SAW / HEARD DEATH OR SERIOUS INJURY OF OTHER?	<input type="checkbox"/>		
MULTIPLE DEATHS OF FAMILY, FRIENDS OR PEERS?	<input type="checkbox"/>		
DEATH OF IMMEDIATE FAMILY MEMBER?	<input type="checkbox"/>		
DEATH OF FRIEND OR PEER?	<input type="checkbox"/>		
DEATH OF PET?	<input type="checkbox"/>		
SIGNIFICANT DISASTER RELATED ILLNESS OR PHYSICAL INJURY OF SELF OR FAMILY MEMBER?	<input type="checkbox"/>		
TRAPPED OR DELAYED EVACUATION?	<input type="checkbox"/>		
HOME NOT LIVABLE DUE TO DISASTER?	<input type="checkbox"/>		
FAMILY MEMBER CURRENTLY MISSING OR UNACCOUNTED FOR?	<input type="checkbox"/>		
CHILD CURRENTLY SEPARATED FROM ALL CARETAKERS?	<input type="checkbox"/>		
FAMILY MEMBERS SEPARATED AND UNAWARE OF THEIR LOCATION/STATUS DURING DISASTER?	<input type="checkbox"/>		
PRIOR HISTORY OF MENTAL HEALTH CARE?	<input type="checkbox"/>		
CONFIRMED EXPOSURE/CONTAMINATION TO AGENT?	<input type="checkbox"/>		
DE-CONTAMINATED?	<input type="checkbox"/>		
RECEIVED MEDICAL TREATMENT FOR EXPOSURE/CONTAMINATION?	<input type="checkbox"/>		
HEALTH CONCERNS TIED TO EXPOSURE?	<input type="checkbox"/>		
NO TRIAGE FACTORS IDENTIFIED?	<input type="checkbox"/>		

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Original – Patient Chart

FORM APPROVED FOR USE UNTIL 11/01/2010
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Appendix C

Multidimensional View of Catastrophe

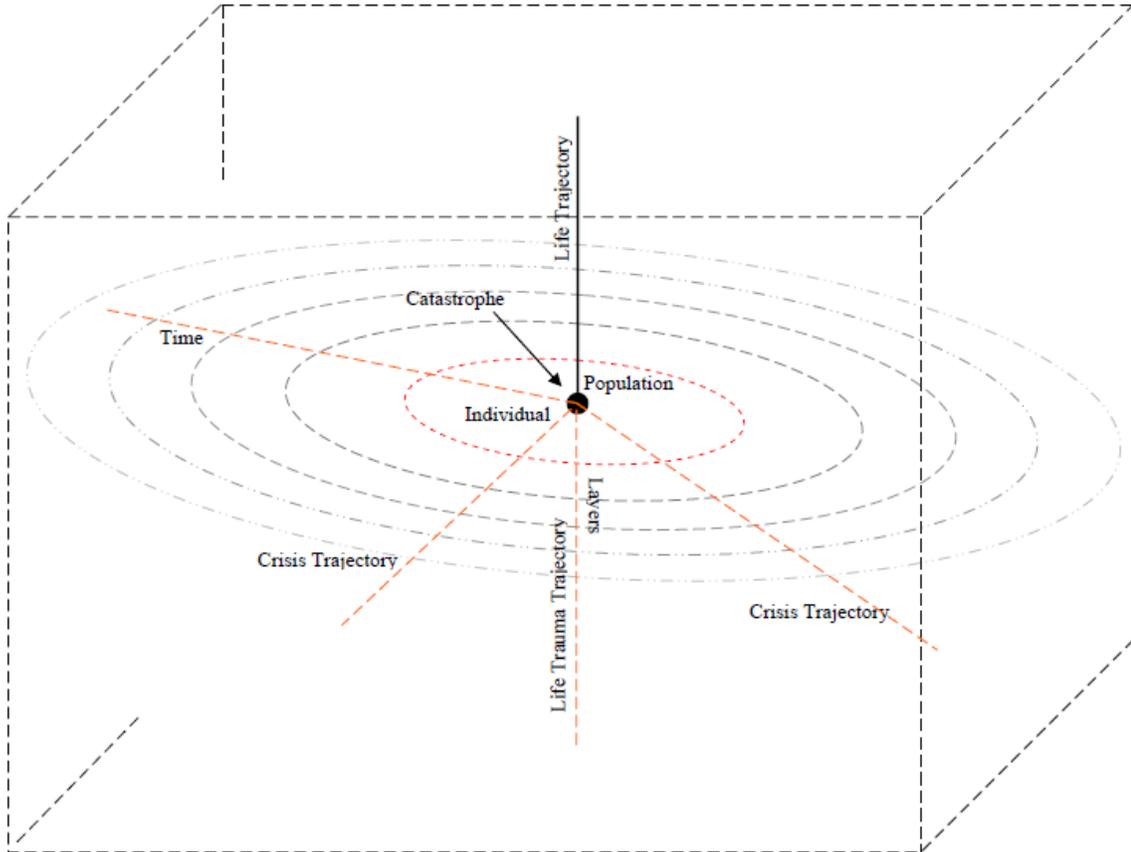


Figure 7. Multidimensional view of Catastrophe

Appendix D

DSM & IDC: ASR, ASD & PTSD

Table 9
ASR, ASD & PTSD Diagnostic Criteria

Acute Stress Reaction

There must be an immediate and clear temporal connection between the impact of an exceptional stressor and the onset of symptoms; onset is usually within a few minutes, if not immediate.

In addition, the symptoms:

- (a) show a mixed and usually changing picture; in addition to the initial state of "daze", depression, anxiety, anger, despair, over activity, and withdrawal may all be seen, but no one type of symptom predominates for long.
- (b) resolve rapidly (within a few hours at the most) in those cases where removal from the stressful environment is possible; in cases where the stress continues or cannot by its nature be reversed, the symptoms usually begin to diminish after 24-48 hours and are usually minimal after about 3 days.

Source: Taken from WHO. 1993. IDC 10

Acute Stress Disorder

A. The person has been exposed to a traumatic event in which both of the following were present:

- (1) the person experienced, witnessed, or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others
- (2) the person's response involved intense fear, helplessness, or horror

B. Either while experiencing or after experiencing the distressing event, the individual has three (or more) of the following dissociative symptoms:

- (1) a subjective sense of numbing, detachment, or absence of emotional responsiveness
- (2) a reduction in awareness of his or her surroundings (e.g., "being in a daze")
- (3) derealization
- (4) depersonalization
- (5) dissociative amnesia (i.e., inability to recall an important aspect of the trauma)

C. The traumatic event is persistently re-experienced in at least one of the following ways: recurrent images, thoughts, dreams, illusions, flashback episodes, or a sense of reliving the experience; or distress on exposure to reminders of the traumatic event.

D. Marked avoidance of stimuli that arouse recollections of the trauma (e.g., thoughts, feelings, conversations, activities, places, and people).

E. Marked symptoms of anxiety or increased arousal (e.g., difficulty sleeping, irritability, poor concentration, hypervigilance, exaggerated startle response, motor restlessness).

F. The disturbance causes clinically significant distress or impairment in social, occupational or other important areas of functioning or impairs the individual's ability to pursue some necessary task, such as obtaining necessary assistance or mobilizing personal resources by telling family members about the traumatic experience.

G. The disturbance lasts for a minimum of 2 days and a maximum of 4 weeks and occurs within 4 weeks of the traumatic event.

H. The disturbance is not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition, is not better accounted for by Brief Psychotic Disorder, and not merely an exacerbation of a pre-existing Axis I or Axis II disorder.

Post Traumatic Stress Disorder

A person must have been exposed to a traumatic event.

The event involved a perceived or actual threat to the person's own life or physical integrity or that of another, such as a physical or sexual assault, rape, a serious accident, a natural disaster, combat, being taken hostage, torture, displacement as a refugee, sudden unexpected death of a loved one, and witnessing a traumatic event.

The person's response to the event involved fear, helplessness, or horror.

The person persistently re-experiences the event in at least one of several ways:

The person has intrusive recollections of the event.

The person has nightmares.

The person has flashbacks, which are particularly vivid memories that occur while he or she is awake and make him or her act or feel as though the event was recurring.

The person has intense psychological distress in response to reminders of the traumatic event.

The person has intense physiological reactions in response to reminders of the event (including palpitations, sweating, difficulty breathing, and other panic responses).

The person avoids reminders of the event and has generalized numbness of feeling, as indicated by the presence of at least three of the following:

The person actively avoids pursuits, people, and places that remind him or her of the event.

The person avoids thinking of or talking about the event.

The person is unable to recall aspects of the event.

The person has lost interest in or participates less in activities.

The person has felt detached or estranged from other people since the event.

The person has a restricted range of emotions or a feeling of numbness.

The person feels as though his or her life has been foreshortened or as though there is no need to plan for the future, with respect to his or her career, getting married, or having children.

The person has symptoms of increased arousal, as evidenced by the presence of at least two of the following:

The person has difficulty falling or staying asleep (sometimes related to fear of having nightmares).

The person is irritable and has feelings or outbursts of anger.

The person has difficulty concentrating.

The person has become more vigilant and concerned about safety.

The person has exaggerated startle reactions in response to sounds or movements.

The three types of symptoms must be present together for at least one month.

The disorder must cause clinically significant distress or impairment in social, occupational, or other areas of functioning.