

Chapter 17 – ASSESSING PSYCHO-SOCIAL RESILIENCE IN DIPLOMATIC, CIVILIAN AND MILITARY PERSONNEL SERVING IN A HIGH THREAT SECURITY ENVIRONMENT: COUNTER INSURGENCY AND COUNTER TERRORISM OPERATIONS IN IRAQ

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17.1 INTRODUCTION

Currently thousands of military, diplomatic and civilian personnel are deployed under NATO, UN, and other multi-national, as well as national auspices in high security threat environments, including active conflict zones such as Iraq and Afghanistan. Soldiers are generally well trained and prepared psychologically to face armed conflict. Civilian contractors and diplomats on the other hand often are not. Moreover in today's high threat security environments terrorists, insurgents and even child soldiers may be the opposing force, creating a more uncertain and anxiety provoking environment and more difficult to identify security threat. These facts have serious implications for the psycho-social resilience of diplomatic, civilian and military personnel deployed in such environments. This paper investigates psycho-social resilience in a small exploratory sample of US embassy staff, contractors and US forces serving in Iraq during 2007, a time when IEDs, roadside bombings, mortar attacks, kidnaps, murders and sniper fire were an everyday occurrence in Iraq.

17.2 PSYCHO-SOCIAL RAMIFICATION OF US DIPLOMATIC, CIVILIAN AND MILITARY STAFF SERVING IN HIGH THREAT SECURITY ENVIRONMENTS

During the time period 2005 – 2007, the US Embassy in Iraq was responsible for a staff of approximately five thousand; the majority being civilian contractors supporting diplomats and military staffed there. At the time the US State Department was just beginning to consider the psycho-social ramifications of deploying a large share of its personnel in high threat security zones where they would be separated from family members and work long hours on a daily basis. Training at that time for deployment to Iraq for US State Department personnel included security and first aid training and a brief introduction to handling the psychological stress of dealing with serving in a war zone and facing terrorist threats (including car bombs, mortar attacks, and suicide bombers). In a similar fashion, United States Department of Defense contractors underwent pre-deployment training; however their training units had no briefing on handling psychological stress responses to a high threat environment. In 2007 State Department had no mandatory debriefing for those coming out of high threat security environments and no study had been done to assess if diplomatic and civilian personnel were resilient working in active conflict zones or becoming psychologically traumatized during their service in Iraq. There was no good data collection on psycho-social resilience in civilian and diplomatic personnel serving in Iraq (the military was conducting studies) and consequently no way of assessing if civilian and diplomatic personnel were suffering from negative psychological and social responses to being deployed in a high threat security environment combined with

the additional stresses of working long hours and being deployed for long periods of time away from family members and social support networks. This study was a first attempt to remedy that situation.

Two of the authors (Speckhard and Verleye) were at the time serving on the NATO Human Factors and Medicine, Research and Technology Task Group (140) – Psychosocial, Organisational, and Cultural Aspects of Terrorism which had as one of its mandates to study civilian and military resilience to terrorist and insurgent threats. Moreover the lead author's spouse (Speckhard) was serving as the US Deputy Chief of Mission in Iraq at the time, and she was going in and out of Iraq herself as a military contractor (designing and pilot testing the US Department of Defense's Detainee Rehabilitation Program). The confluence of these circumstances created an attractive possibility for carrying out an exploratory pilot study of the psycho-social resilience of US civilian, diplomatic and military personnel serving in Iraq in that time period. The current paper describes the authors' attempts to make a high tech, low budget exploratory study of the psycho-social resilience of US diplomats, civilians and military service personnel working in a high threat security environment (facing terrorism and insurgency operations).

17.3 ASSESSING PSYCHO-SOCIAL RESILIENCE IN PERSONNEL DEPLOYED IN A HIGH THREAT SECURITY ENVIRONMENT

Assessing psycho-social resilience to deployment in a high threat security environment is a challenging endeavor and requires creativity and the willingness to potentially confront danger in order to learn. In this case the researchers decided that there were two important areas to explore: the first being how resilient are our civilian and military personnel while serving in Iraq, and what variables influence positive and negative resilience? And the second being is it possible to carry out a study of resilience to a high threat security environment using available high technology (Internet and web-based technology) without having themselves to enter the high threat security environment to carry out the survey?

The lead researcher (Speckhard), a psychologist who had traveled to and been working inside Iraq on three different occasions and had a fair idea of the challenges faced by those serving there. She was thus able to build upon previous work of the team in studying and modeling psycho-social resilience to terrorism to design a resilience survey to reflect the "boots on the ground" experiences while the other team members were able to turn this survey into a high tech tool that could provide an assessment from afar. The steps in carrying this out included: theoretically defining resilience in a manner that applied to the high threat security environment, designing a survey tool that reflected the variables, and doing so in a manner that appealed to very busy professionals, turning this survey into a web-based design, identifying a sample, inviting participants, collecting results and analyzing them. This paper describes the process of this exploratory study and its outcomes.

17.3.1 Theoretically Defining Psycho-Social Resilience

The concept of resilience implies adaptability and a certain ability to "bounce back" in the face of a challenge or stressor. In this study the resilience model builds upon previous work of the authors studying societal resilience to terrorism in Belgium with the concept of resilience defined as a dynamic variable, influenced by many co-variables (defined below), and existing on a continuum of adaptability¹. According to this definition an individual who is resilient to serving in a high threat security environment must retain, or in the best case scenario even show gains in flexibility, adaptability, functionality and empathy. To show any losses in function, flexibility, adaptability or empathy is to show a loss in resilience. A loss of resilience likewise is indicated by the appearance of pathological symptoms interfering with normal

¹ See also Verleye, Gino; Maesele, Pieter; Stevens, Isabelle and Speckhard, Anne. Resilience in an Age of Terrorism: Psychology, Media and Communication in which an earlier jointly authored model of resilience was presented and tested in Belgium. The current model developed as a result of that earlier work and owes much to the previous authors contributions.

functioning including symptoms of posttraumatic stress (including flashbacks, high arousal states, loss of concentration, irritability, etc.), dissociation (a separation of normal cognitive functions, emotional numbing, inability to think, etc.), anxiety, depression, and panic, all of which interfere with and create a loss of normal functioning. Likewise a gain in xenophobia (hatred of outsiders such as Muslims or Arabs in this case) is also assessed in this model as contributing to a loss of resilience.

According to the model of resiliency used here, there are ten main covariates of resiliency. These include the following main categories: Posttraumatic Stress Disorder (PTSD), World Assumptions, Perceived Risk and Fear, Personal Preoccupation, Attitude towards Government Communications, Social Buffering, Social Capabilities, Life History, Sense of Mastery and Xenophobia. These concepts and the entire model of resilience is elucidated further in other publications [1],[2],[3] and space here does not allow for a lengthy explanation. However it is important to note that PTSD, a challenge to world assumptions, perceived risk and fear, and personal preoccupation all relate to how the individual may lose functions in the face of a high threat security environment, and become fearful and preoccupied by it. The life history, sense of mastery and social capabilities variables relate to previous challenges the individual has encountered (for good or for bad) and skills and losses that occurred as a result. Social buffering and Attitude towards Government Communications has to do with how well social ties and government communications aid in coping with a high security threat environment. Lastly xenophobia is included because it can be an ill effect of experiencing or witnessing terrorism that has been linked with Islam or other “outsider” groups, as in the case of the US and 9/11 for instance and this too is related to a loss of resilience (i.e., beginning to hate an ethnic or religious group as a result of exposure to terrorism). These ten variables both affect resilience to a stressor and may also be affected in turn by a traumatic stress event. They are defined at length in another paper [2] and the statistical clusters of variables that were examined are also discussed further in the results section of this paper. This paper focuses on the acute, posttraumatic and other psycho-social sequelae that occurred in response to serving in a high threat security environment and being exposed to terrorist event(s) all of which demonstrated a loss of resilience among significant portions of the sample.

17.4 METHOD

The design of the present study was to explore the concept the concept of psycho-social resilience to a high threat security environment for civilian and military personnel while working in theater while also exploring the assessment possibilities of carrying out the study via a web-based assessment tool served over the Internet. The use of high technology might prove a method to reach as large and varied a sample as possible while in theater, thereby keeping the costs low and bypassing the necessity to send survey researchers into a high threat environment while also exploring.

17.4.1 Web-Based Survey

The survey instrument was constructed from previous work by the authors building upon their multi-dimensional model of resilience to terrorism. In this case the questionnaire was designed to query about exposure to terrorist and insurgent acts as well as multiple questions covering the ten main categories of interactive variables. Where ever possible questions were closely matched to already existing items from previously validated tests (i.e., items for assessing posttraumatic stress disorder) in order for the present items to have validity. However, the researchers rejected the use of whole scale batteries of standardized assessment tools because the idea was to have a coherent questionnaire that would appeal to respondents and flow smoothly as it questioned them about their responses to serving in a high threat security environment. Offering a battery of psycho-social “tests” was judged as unlikely to garner a good response rate as it is an unappealing way to approach respondents who were already dealing with a great deal of stress. While the researchers had clusters of variables predefined at the outset of the study they were also interested to learn which variables would statistically cluster once the data was collected.

17.4.2 Sampling

The resulting questionnaire was then put into a web-based design to function as a high technology web page questionnaire. A website was designated and a letter was sent out by e-mail through contacts that the first author had in both civilian and military circles inviting participants to log onto the website and take part in the study. The letter outlined the study's rationale, risks of taking part and ways of making contact with the researchers in order to receive help for any adverse reactions to participating as well as simply to give further feedback or to ask for help in dealing with the high threat security environment. Likewise it requested potential subjects not only to take part in the survey but to e-mail the invitation to participate to their circle of contacts serving in Iraq. As a result the sample design followed a snowball method. The letter also made clear to the participants that the study was being conducted by a multi-national university team (Belgian and United States) that was completely independent of both the US Department of Defense and the State Department and the results would be reported in aggregate, thus the participants could take part in the survey without any worries of negative reporting of individual results inside the work place.

17.5 RESULTS

The high technology aspect of the study design turned out to be a double edged sword. While the web-based design was attractive and allowed for automatic scoring of the results it turned out the Internet speeds provided by the multi-national forces in Iraq were too slow to support this aspect of the study design. Within the first days of inviting study participants over one hundred potential participants had logged on to the website and completed two to three pages indicating interest in the study was high. However, only twenty percent of these participants finished the entire survey, most abandoning it because the web pages were too slow in opening for the subjects to complete the survey (some subjects told us that the pages took up to ten minutes to open at times). When this problem was discovered the survey was immediately repackaged as a word file and resent to all the original invitees asking them to please give the survey another try in a new easier electronic format and to mail it to their contacts as well. This design worked, although many potential subjects were lost with the first high technology failure resulting in a smaller sample size.

The final result was a sample size of fifty-three participants who took part in the survey during the time period of March 15 to April 1, 2007. This was enough for an exploratory study of the psychosocial responses of individuals serving in a high threat environment and large enough to receive feedback on the survey design as well as the high tech methodology used to conduct it but it lacked the size to make regression analysis of the results. The participants not only filled out the survey but over half also took the opportunity to provide detailed feedback to the research team, often in long letters explaining why certain items did not capture the full impact of what they were experiencing, nuances that they wanted to give to their answers, or how the study needed to be expanded to cover the additional stresses caused by separation from family for long periods of time and the long hours and weeks without breaks that many of the participants were working. It was clear that the participants trusted the researchers as independent as they made many intimate comments about their work places, colleagues and the challenges of working inside Iraq.

17.5.1 Sample

The final sample resulted in fifty-three participants, between the ages of twenty-seven and sixty-three. Nine were in active combat duty, the rest were diplomats and civilian support personnel. Thirty-eight were male, fifteen female. Eighteen were single, twenty-eight married and seven divorced.

17.5.2 Exposure to High Threat Events

By virtue of serving in Iraq everyone in the sample had exposure to multiple high threats including: mortar fire, improvised explosive devices (IEDs – vehicular and human borne); bombings of buildings; roadside

bombings and sniper fire in some areas. Exposure varied from witnessing on television, to learning from a witness, to witnessing a high threat event in person or being personally involved in the event. With IEDs, mortar and sniper fire and explosions occurring near the workplace at least weekly, and sometimes daily, all of the respondents had multiple exposures to high threats. For instance US embassy workers lived in trailers nearby to the embassy, one of which received a direct hit and was burned up during the time period of the study. Small cement bunkers for sheltering from incoming mortar attacks were located along the walkways to and from work and alarms were sounded frequently to alert of incoming mortar. Respondents also said they could feel the impact of bomb explosions in their trailers at night and in the mornings. Workers traveled in convoys with heavy protection and still suffered roadside bombing and IED attacks.

17.5.3 Posttraumatic and Acute Stress Responses to the High Threat Security Environment

After indicating the high threat events they had some level of exposure to, the respondents were asked to think of the one event that had impacted them most and to which they had the strongest response and to answer all of the acute and posttraumatic stress response questions keeping that event in mind. Regarding reference to their exposure to the high threat event, seventy percent said they felt fear, horror and a sense of helplessness (with forty-six percent endorsing these emotions on the sometimes, often and always level). This indicates that the majority of the sample experienced a stressor capable of causing Posttraumatic Stress Disorder (PTSD). Moreover, forty-seven percent of the respondents endorsed that they felt detached from the traumatic event as it occurred, even as if watching from outside of themselves. This type of response is known as peritraumatic dissociation, and is often a predictor of PTSD.

To learn about their acute and posttraumatic stress responses, the respondents were asked to reply to questions closely matched to items from standardized measurements of acute and posttraumatic stress disorder (PTSD) The six main axes of PTSD include: exposure to a traumatic stressor as defined by the PTSD criteria; psychological numbing and avoidance; flashbacks, intrusions and nightmares; hyperarousal and loss of concentration; inability to function in a significant aspect of life and duration of symptoms lasting beyond one month.

17.5.4 Posttraumatic and Acute Stress Symptoms

A significant portion of the sample evidenced posttraumatic and acute stress symptoms in the first month following exposure to the traumatic event. All of the PTSD diagnostic criteria were endorsed as present by at least some portion of the sample and in some cases items were endorsed by as high as forty-seven percent of the sample for the first month after exposure. (See Table 17-1) All of the responses in this section relate to the first month after exposure.

Table 17-1: Endorsement of Posttraumatic and Acute Stress Symptoms in the First Month Following Exposure to a Traumatic Event(s) in the High Threat Security Environment.

| Posttraumatic and Acute Stress Symptoms | Sometimes | Often | Always | Total Endorsement as Present |
|--|------------------|--------------|---------------|-------------------------------------|
| Criterion A: Traumatic Event | | | | |
| Fear, horror and sense of helplessness | 22.6 | 13.2 | 1 | 45.9 (with rarely 70.1) |
| Peritraumatic Dissociation | | | | |
| Became detached from it, even as if watching from outside of myself | 20.8 | 18.9 | 7.5 | 47.2 |
| Criterion B: Re-experiencing | | | | |
| Nervous in my body upon reminders (B-5) | 20.8 | 5.7 | 1.9 | 28.4 |
| Criterion C: Avoidance | | | | |
| Avoided reminders of it (C-1) | 22.6 | 1.9 | 1.9 | 26.4 |
| Tried not to think of it (C-1) | 19.2 | 13.5 | 7.7 | 37.4 |
| Tried not to talk about it (C-1) | 26.4 | 9.4 | 1.9 | 37.7 |
| Changed behaviors trying to avoid danger of this type | 17.0 | 17.0 | 3.8 | 37.8 |
| Avoided work assignments that could place me in a similar situation (C-2) | 15.1 | 1.9 | 3.8 | 20.8 |
| I had trouble remembering all of what had happened (C-3) | 11.3 | 1.9 | 0 | 13.2 |
| I felt alienated or isolated from others (C-5) | 15.1 | 1.9 | 0 | 17.0 |
| I felt emotionally numb (C-6) | 26.4 | 15.1 | 5.7 | 47.2 |
| Unease and uncertainty about the future (C-7) | 15.1 | 17.0 | 0 | 22.1 |
| Criterion D: Increased Arousal | | | | |
| Hard time concentrating (D-3) | 15.9 | 10.1 | 1.4 | 27.4 |
| Criterion F: Clinically Significant Distress or Impairment in Functioning | | | | |
| Trouble working or doing normal tasks | 18.9 | 1.9 | 1.9 | 22.7 |
| Social life affected negatively | 1.9 | 5.7 | 0 | 7.6 |
| Physical health problems | 7.5 | 3.8 | 1.9 | 13.2 |

17.5.4.1 Re-experiencing

Twenty-eight percent of the respondents felt physiological responses (sweaty palms, heart racing or irregular breathing) upon re-exposure to reminders of the event.

17.5.4.2 Avoidance

In regard to the traumatic event(s) thirty-seven percent of the sample said in the first month after exposure they tried not to think about it; thirty-eight percent avoided talking about it; and twenty-six percent avoided reminders of it. Thirty-eight percent changed their behaviors to avoid similar danger and twenty-one percent avoided work assignments that could place them in such danger. This latter type of avoidance is likely positive coping but it could also evidence impairment in ability to function well as a worker in the high threat security environment. Thirteen percent of the sample had trouble recalling the whole event; seventeen percent felt isolated or alienated from others; and forty-seven percent felt emotionally numb. Twenty-two percent felt unease and uncertainty about the future in response to the event.

17.5.4.3 Increased Arousal

Twenty-seven percent had trouble concentrating in the first month following the event.

17.5.4.4 Clinically Significant Distress or Impairment in Functioning

Twenty-two percent of the sample had trouble working or doing normal tasks in response to the event; eight percent said their social life had been negatively affected; and thirteen percent reported physical health problems as a result.

17.5.5 Posttraumatic Stress Disorder Symptoms

As could be expected the acute and posttraumatic stress responses damped down in the months following the event and less of the respondents endorsed symptoms in the present time for when they were filling out the survey (i.e., more than one month out from the attack and still in the high threat security environment when answering the survey – i.e., anywhere from two to twelve or more months following exposure). Despite the decrease in numbers of respondents reporting symptoms of posttraumatic distress a significant portion of the sample evidenced PTSD symptoms enduring beyond a month in response to the traumatic event(s) they had been exposed to while working in a high threat security environment. While most of the sample did well, all of the PTSD diagnostic criteria were endorsed at the level of present beyond one month after exposure frequently in ranges as high as thirty percent of the sample. (See Table 17-2) All of the responses in this section relate to responses enduring beyond one month following exposure.

Table 17-2: Endorsement of PTSD Symptoms More than One Month After Exposure to a Traumatic Event(s) in a High Threat Security Environment.

| PTSD Symptoms | Sometimes | Often | Always | Total Endorsement as Present |
|--|------------------|--------------|---------------|-------------------------------------|
| Criterion A: Traumatic Event | | | | |
| Fear, horror and sense of helplessness | 22.6 | 3.8 | 0 | 26.4 |
| Peritraumatic Dissociation | | | | |
| I became detached from it, even as if watching from outside myself | 11.5 | 15.4 | 7.7 | 34.6 |
| Criterion B: Re-experiencing | | | | |
| Thoughts of it kept intruding in my mind (B-1) | 15.4 | 3.8 | 1.9 | 21.1 |
| I had nightmares about it (B-2) | 3.8 | 0 | 0 | 3.8 |
| Nervous in my body upon reminders (B-5) | 7.5 | 1.9 | 0 | 9.4 |
| Criterion C: Avoidance | | | | |
| Avoided reminders of it (C-1) | 15.1 | 1.9 | 3.8 | 20.8 |
| Tried not to think of it (C-1) | 9.4 | 9.4 | 7.5 | 26.3 |
| Tried not to talk about it (C-1) | 13.5 | 7.7 | 5.8 | 27.0 |
| Avoided work assignments that could place me in a similar situation (C-2) | 7.7 | 1.9 | 3.8 | 13.4 |
| I felt alienated or isolated from others (C-5) | 3.8 | 1.9 | 0 | 5.7 |
| Became emotionally numb | 18.9 | 7.5 | 5.7 | 32.1 |
| Unease and uncertainty about the future (C-7) | 13.2 | 5.7 | 1.9 | 20.8 |
| Criterion D: Increased Arousal | | | | |
| Difficulty falling asleep (D-1) | 5.7 | 11.3 | 1.9 | 18.9 |
| Sleep patterns disturbed (D-1) | 15.1 | 13.2 | 1.9 | 30.2 |
| Hard time concentrating (D-3) | 9.4 | 3.8 | 1.9 | 15.1 |
| Jumpy or easily startled (D-5) | 20.8 | 7.5 | 1.9 | 30.2 |
| Easily agitated or angry | 15.1 | 1.9 | 1.9 | 18.9 |
| Criterion F: Clinically Significant Distress or Impairment in Functioning | | | | |
| Trouble working or doing normal tasks | 1.9 | 0 | 0 | 1.9 |
| Social life affected negatively | 1.9 | 5.8 | 0 | 6.7 |
| Physical health problems as a Result | 7.7 | 1.9 | 1.9 | 11.5 |

17.5.5.1 Re-experiencing

Twenty-one percent of the respondents evidenced thoughts of the traumatic event intruding in their minds, and nine percent felt physiological responses (sweaty palms, heart racing or irregular breathing) upon re-exposure to reminders of the event. Interestingly only four percent had nightmares, although we must keep in mind that as the respondents continued to be serving in the high threat environment they may have kept nightmares at bay until returning to safety. Likewise the author learned from conversations with many embassy workers and contractors that due to working long hours and their high arousal states which made it difficult to fall and stay asleep many made use of psychotropics to sleep. When one looks to arousal issues it's clear that sleep was disturbed.

17.5.5.2 Avoidance

In regard to the traumatic event(s) twenty-six percent of the sample said they tried not to think about it; twenty-seven percent avoided talking about it; and twenty-one percent avoided reminders of it. Thirteen percent of the sample avoided work that could place them in similar danger; six percent felt isolated or alienated from others; and thirty-two percent felt emotionally numb. Twenty-one percent felt unease and uncertainty about the future in response to the event.

17.5.5.3 Increased Arousal

Thirty percent of the sample said their sleep patterns were disturbed in response to the event; nineteen percent had difficulty falling asleep; fifteen percent had trouble concentrating; thirty percent were jumpy or easily startled; and nineteen percent were easily agitated or angered in the months enduring beyond one month following exposure to the traumatic event.

17.5.5.4 Peritraumatic Dissociation

Peritraumatic dissociation was reported even beyond one month following the traumatic exposure with thirty-five percent of the subjects still reporting feeling detached as if viewing it from outside of themselves. This effect perhaps persisted given that the subjects continued to be exposed to the high threat security environment and dissociation continued to be a useful defence mechanism.

17.5.5.5 Clinically Significant Distress or Impairment in Functioning

Twenty-two percent of the sample reporting having trouble working or doing normal tasks in the month immediately after the event, this decreased to only two percent who reported such trouble in the months after the exposure. A constant seven percent continued to report that their social life had been negatively affected; and eleven percent continued to report physical health problems that occurred in response to traumatic exposure.

17.5.6 Other Posttraumatic Responses

17.5.6.1 Fear

Additional posttraumatic responses were reported by the sample with the most reported symptom being fear that it could happen again; reported by fifty-seven percent of the sample in the first month after exposure, with that diminishing to twenty percent beyond one month after exposure.

17.5.6.2 Psychosomatic Symptoms

Psychosomatic symptoms included more than normal fatigue (thirty-eight percent diminishing to twenty three percent); stomach distress or nausea (twenty one diminishing to ten percent); general aches in the

body (fifteen diminishing to eight percent); headaches (twelve diminishing to nine percent) dizziness or difficulty breathing (six diminishing to four percent); and panic attacks (seven diminishing to three percent).

17.5.6.3 Depression

General depression was reported by twenty-two percent of the sample which diminished to four percent after the first month, and participants reported feeling sad for whole days (twenty-one diminishing to four percent) and feeling worthless (six diminishing to four percent) after exposure.

17.5.6.4 Obsessive Need to Talk about It

Obsession in the sense of feeling the need to talk obsessively about the event is a posttraumatic response that is sometimes overlooked. In this sample twenty-five percent endorsed the item, “I couldn’t stop talking about it” for the month immediately after exposure diminishing to eight percent for the months after the first month.

17.5.6.5 Fearlessness and Danger Seeking

An effect often noted in youth exposed to conflict and gang violence is increased fearlessness and danger seeking. This seems to be a way to gain control over high arousal states – if one seeks out danger the bodily arousal matches what one has chosen to confront by his or her own volition [4]. Becoming fearless was endorsed by twenty-nine percent of the sample in the first month after exposure diminishing to twenty-five percent of the sample in the months following. Likewise twenty percent of the respondents said they became excited by danger and sought it out more following the exposure in the first month with this diminishing to seventeen percent for the months following beyond one month. (See Table 17-3 for a Complete List of Other Posttraumatic Responses).

Table 17-3: Other Types of Posttraumatic Responses.

| Other Types of Posttraumatic Responses | Sometimes | Often | Always | Total Endorsement as Present |
|--|------------------|--------------|---------------|-------------------------------------|
| Depression | | | | |
| Depression | 22.6 (4.3) | 0 | 0 | 22.6 (4.3) |
| I felt sad for whole days | 11.3 (2.0) | 7.5 (2.0) | 1.9 (0) | 20.7 (4.0) |
| I felt worthless | 3.8 (3.8) | 1.9 (0) | 1.9 (0) | 5.7 (3.8) |
| Psychosomatic Responses | | | | |
| Panic attacks | 7.5 (2.9) | 0 | 0 | 7.5 (2.9) |
| Psycho-somatic responses | 7.5 (7.7) | 3.8 (1.9) | 1.9 (1.9) | 2.9 (11.5) |
| More than normal fatigue | 11.3 (15.1) | 22.6 (5.7) | 3.8 (1.9) | 37.7 (22.7) |
| Headaches | 9.4 (7.5) | 3.8 (1.9) | 0 | 12.2 (9.4) |
| Stomach distress or nausea | 15.4 (5.9) | 5.8 (3.9) | 0 | 21.2 (9.8) |
| General aches in my body | 11.5 (5.8) | 3.8 (1.9) | 0 | 15.3 (7.7) |
| Dizziness or difficulty breathing | 3.9 (4.0) | 2.0 (0) | 0 | 5.9 (4.0) |
| Fear and Obsessive Responses | | | | |
| Fear that it could happen again | 26.4 (14.5) | 15.1 | 15.1 (5.8) | 56.6 (20.3) |
| Couldn't stop talking about it | 13.2 (3.8) | 5.7 (1.9) | 5.7 (1.9) | 24.8 (7.6) |
| Increased Fearlessness and Danger Seeking | | | | |
| I became more fearless | 22.6 (17) | 3.8 (3.8) | 1.9 (3.8) | 28.3 (24.6) |
| I became excited by danger and sometimes sought it out more than before | 13.7 (9.6) | 5.9 (5.8) | 0 (1.9) | 19.6 (17.3) |
| *All values in parenthesis signify symptoms occurring at the present time period for the respondent which in all cases was more than one month beyond exposure to the traumatic event. | | | | |

17.5.6.6 Shattered World Assumptions

A common effect of traumatic exposure is to have one's world view deeply shaken. This generally occurs in regard to one's sense of predictability, safety in the world and sense of the goodness of others and is referred to as a shattering of world assumptions [5]. In this sample forty-five percent endorsed feeling that the world is less safe in reference to the month immediately after the trauma with this effect persisting in thirty-nine percent of the respondents for the months following that; twenty-six percent said it made them trust others less for the first month after exposure with this effect persisting for twenty percent of the respondents. Forty three percent disagreed with the statement that their world is relatively safe for the month after exposure with this persisting and increasing to fifty-four percent of the respondents for the following months. Thirty-six percent disagreed with the statement that life is fairly predictable and this also increased to forty-five percent of the respondents in the months following. Four percent of the sample disagreed with the statement that people are basically good in the month immediately following exposure and this increased to thirteen percent in the longer time period. Clearly traumatic exposure(s) within the high threat security environment shook many of the respondents world views and continued exposure to threats and traumatic events appears to have shattered these world assumptions were even more as time went on. (See Table 17-4).

Table 17-4: Shattered World Assumptions Following Traumatic Exposure*.

| Shattered World Assumptions | Sometimes | Often | Always | Total Endorsement as Present |
|--|-------------------------|-----------------|---------------|-------------------------------------|
| It made me feel that the world is less safe | 26.4 (23.5) | 13.2 (11.8) | 5.7 (3.9) | 45.1 (39.1) |
| It made me trust people less | 15.1 (15.7) | 5.7 (2.0) | 5.7 (2.0) | 26.3 (19.7) |
| | Totally Disagree | Disagree | | |
| My world is relatively safe | 3.8 (11.3) | 39.6 (43.4) | | 43.4 (54.7) |
| Life is fairly predictable | 9.6 (18.9) | 26.9 (26.4) | | 36.5 (45.3) |
| People are generally good | 0 (1.9) | 3.8 (11.5) | | 3.8 (13.4) |
| *All values in parenthesis signify symptoms occurring at the present time period for the respondent which in all cases was more than one month beyond exposure to the traumatic event. | | | | |

17.5.6.7 Suicidal Ideation and Self Harm

Suicide out of despair and inflicting harm to oneself in order to be sent home has been a large concern for military leadership but has not been something State Department or contractors have had to consider up to now. In this sample one person endorsed seriously considering suicide, inflicting self harm and thought that it would be better to die than to continue to face the high threat security environment. Likewise eight percent of the respondents entertained thoughts that it might be better to get injured and sent home than to continue to face the high threat security environment. State Department’s protocol is to medically evacuate those who present themselves as deeply distressed and it appears that more medical evacuations for PTSD related effects occur in the posting following the high threat environment posting than during it. This is perhaps because once out of the high threat environment the dissociative defences relax allowing the person to feel the full impact of what he has witnessed. Likewise, once in a “normal” setting high arousal states, flashbacks, traumatic nightmares avoidance, etc., can suddenly appear very abnormal where when working long hours, using psychotropics to sleep, working among others who feel the same way, etc., may mask these effects. (See Table 17-5 for a Listing of Suicidal Ideation and Self Harm Effects).

Table 17-5: Suicidal Ideation and Self Harm Responses to the High Threat Security Environment*.

| Suicidal Ideation and Self Harm Items | Sometimes | Often | Always | Total Endorsement as Present |
|---|------------------|--------------|---------------|-------------------------------------|
| I sometimes thought it might be better to get injured and go home than continue to face this | 3.8 (3.8) | 3.8 (1.9) | 0 | 7.6 (5.7) |
| I sometimes thought it might be better to die than to continue to face this | 1.9 | 0 (1.9) | 0 | 1.9 (1.9) |
| I sometimes considered hurting myself or putting myself in a situation where I would surely be hurt to be sent home | 1.9 (1.9) | 0 | 0 | 1.9 (1.9) |
| I seriously thought about suicide | 1.9 (1.9) | 0 | 0 | 1.9 (1.9) |
| I sometimes thought it might be better to get injured and go home than continue to face this | 3.8 (3.8) | 3.8 (1.9) | 0 | 7.6 (5.7) |
| I sometimes thought it might be better to die than to continue to face this | 1.9 | 0 (1.9) | 0 | 1.9 (1.9) |

*All values in parenthesis signify symptoms occurring at the present time period for the respondent which in all cases was more than one month beyond exposure to the traumatic event.

17.5.6.8 Posttraumatic Growth

Traumatic events also present opportunities for growth or positive resilience. In this sample sixty-four percent reported a sense of increased love and appreciation for those close to them in the first month after exposure with this persisting in months following for fifty-seven percent of the respondents. This follows closely with observations of increased community confusion after many varied traumatic events ranging from 9/11 to earthquakes and fires. Forty-five percent felt a sense of hope for a good outcome in the future and forty-seven-six percent tried to look for positive meanings and what they could learn from the traumatic event, with these effects persisting for the respondents beyond the first month following exposure. (See Table 17-6).

Table 17-6: Positive Posttraumatic Growth*.

| Positive Posttraumatic Growth | Sometimes | Often | Always | Total Endorsement as Present |
|---|------------------|--------------|---------------|-------------------------------------|
| Sense of increased love and appreciation for those close to me | 26.4 (21.2) | 22.6 (11.5) | 17 (25.0) | 64.0 (57.2) |
| Felt a sense of hope for a good outcome | 17 (17.3) | 17 (11.5) | 11.3 (17.3) | 45.3 (45.8) |
| I tried to look for the positive meanings in it, for what I could learn from it | 9.4 (7.5) | 18.9 (15.1) | 18.9 (18.9) | 47.2 (41.5) |

*All values in parenthesis signify symptoms occurring at the present time period for the respondent which in all cases was more than one month beyond exposure to the traumatic event.

17.5.7 Coping Mechanisms

The sample respondents were queried on a range of both positive and negative coping mechanisms. In terms of using positive coping mechanisms, fifty-seven percent reported using humor when talking or

thinking about the traumatic event; thirty-two percent reported working out more; thirty-eight percent used television or unrelated reading to distract themselves; thirty percent sought out more information to understand what had occurred and eleven percent watched or participated in sports more. In terms of negative coping twenty-two percent (diminishing to eleven percent in following months) reported eating more than usual and nineteen percent (diminishing to fifteen percent in following months) drank more alcohol than usual. A constant six percent reported increased sexual activities in all the time periods following traumatic exposure (see Table 17-7).

Table 17-7: Positive and Negative Coping Mechanisms for Dealing with a High Threat Security Environment*.

| Coping Mechanisms | Sometimes | Often | Always | Total Endorsement as Present |
|--|------------------|--------------|---------------|-------------------------------------|
| Used humor when talking/thinking about it | 30.2 (26.4) | 17 (15.1) | 9.4 (9.4) | 56.6 (50.9) |
| Working out more | 18.9 (13.5) | 5.7 (1.9) | 7.5 (11.5) | 32.1 (26.9) |
| Watching or participating in sports more than before | 5.7 (7.7) | 3.8 (1.9) | 1.9 | 11.4 (9.6) |
| Cope by distracting myself with TV or unrelated reading | 11.5 (13.7) | 19.2 (7.8) | 7.7 (3.9) | 38.4 (25.4) |
| Engaged in sexual activities more than usual | 3.9 (3.9) | 2.0 (2.0) | | 5.9 (5.9) |
| Sought out information to understand | 18.9 (17.0) | 5.7 (3.8) | 5.7 (5.7) | 30.3 (25.5) |
| Ate more than usual | 13.2 (5.7) | 7.5 (3.8) | 1.9 (1.9) | 22.6 (11.4) |
| Drank more alcohol than usual | 9.6 (9.6) | 7.7 (3.8) | 1.9 (1.9) | 19.1 (15.3) |
| Talked to chaplain, counselor or doctor to cope | 7.5 (3.8) | 1.9 (1.9) | 0 | 9.4 (5.7) |
| *All values in parenthesis signify symptoms occurring at the present time period for the respondent which in all cases was more than one month beyond exposure to the traumatic event. | | | | |

17.5.8 Attachment Relationships

Attachment relationships offer form a buffer for traumatic stress, although they can also be a source of distress as well. In this sample forty-five percent of the respondents agreed that it was very important for them to get in touch with loved ones following exposure to the traumatic event. Twenty-four percent said that discussion with loved ones calmed them while another thirty-four percent disagreed with this statement making it clear that for some discussion is useful whereas for others it is not. Likewise talking about the attack was helpful for twenty-nine percent of the respondents, whereas twenty-seven percent found it unhelpful to talk about it. It may be that the type and emotional tenor of the discussion is the deciding factor here or that individuals vary in whether or not talking after traumatic exposure is useful for them. Sixty-eight percent of the respondents felt it very important to reassure themselves that loved ones had not become victims of the attack. Seventeen percent of the sample said that distress from their loved ones was hard to detach from and that it transferred to distress for them. (See Table 17-8).

Table 17-8: Attachment Relationships Effect on Coping with a High Threat Security Environment.

| Items about Attachment Relationships | Totally Agree | Agree | Totally Disagree | Disagree | Total Presence |
|---|----------------------|--------------|-------------------------|-----------------|-----------------------------|
| Important to get in touch with loved ones after | 22.6 | 22.6 | | | 45.2 |
| Discussion with loved ones calmed me | 2.6 | 21.2 | 23.1 | 11.5 | 23.8 agree 34.6 disagree |
| Talking about the attack was helpful for calming myself | 13.5 | 25.0 | 5.8 | 21.2 | 28.5 agree 26.8 disagree |
| It is very important to me to reassure myself that loved ones are not victims | 34 | 34 | | | 68.0 |
| Distress from loved ones transferred to me | 3.8 | 13.2 | | | 17 |

*All values in parenthesis signify symptoms occurring at the present time period for the respondent which in all cases was more than one month beyond exposure to the traumatic event.

17.5.9 Posttraumatic Interventions

The sample was queried about potential and actual post traumatic interventions. Seventeen percent reported they would have liked someone to have explained to them the normalcy of their posttraumatic responses; twenty-three percent endorsed that they would have liked if their unit had some group discussion about such thoughts, feelings and responses. Eight percent endorsed that they would have liked individual counseling to help with posttraumatic responses. These figures remained steady over time. (See Table 17-9).

Table 17-9: Preferences for Posttraumatic Stress Interventions to Aid in Coping*.

| Intervention | Sometimes | Often | Always | Present |
|--|------------------|--------------|---------------|----------------|
| I would have liked someone to explain these symptoms as normal | 5.7 (7.5) | 3.8 (5.7) | 7.5 (5.7) | 17.0 (18.9) |
| I would have liked if our unit had some discussion about such thoughts, feelings and responses | 11.3 (9.4) | 3.8 (7.5) | 7.5 (5.7) | 22.6 (22.6) |
| I would have liked individual counseling to help me with my responses | 0 (3.8) | 1.9 (3.8) | 5.7 (3.8) | 7.6 (8.4) |

*All values in parenthesis signify symptoms occurring at the present time period for the respondent which in all cases was more than one month beyond exposure to the traumatic event.

17.5.10 Correlational Analysis

Correlational analysis was made for all of the variables in relationship to having been personally involved in a terrorist event; witnessed it in person, heard about it from the actual victims and witnessed it on television. There were seventeen variables that turned up with significant correlations at the $p < .05$ level of significance. Personal involvement in a terrorist event correlated to depression (.34); coping by engaging in sexual activities more often (.39); becoming excited by danger and sometimes seeking it (.39), feeling it better if one was injured and sent back home (.57); feeling it might be better to die than continue to face the high threat security environment (.53); and strongly endorsing feelings of horror, helplessness and

terror (.45). Personally witnessing events had strong correlations to family distress with reports of children having many posttraumatic symptoms (.56); with spouse or significant other having many posttraumatic symptoms (.64) and reporting that the spouse or significant other copes so differently that it caused distress (.63). These relationships likely reflect that when an individual in a high security threat environment personally witnesses violence his family is also likely to be traumatized when they learn of it and their distress can cause more stress for the individual in the high security threat environment. These same relationships were reported at similar levels for having learned of the trauma from another witness or watched on television. Having personally witnessed the traumatic event was also correlated to being afraid the self or loved ones would be hurt in such an incident (.29). (See Table 17-10 for a complete list of all the correlations with these four variables at the $p < .05$ level of significance.

Table 17-10: Correlation Table: Significant at $p < .05000$. Personally Involved (PI); Witnessed in Person (WP); Heard about from Actual Victims (HAV); Witnessed on TV (WOTV).

| | PI | WP | HAV | WOTV |
|--|------|------|------|------|
| I became detached from it | | 0.33 | | |
| I couldn't stop talking about it to the others | 0.28 | | | |
| I became depressed | 0.34 | | | |
| I engaged in sexual activities more often | 0.39 | | | |
| I became excited by danger and sometimes... | 0.39 | | 0.38 | |
| I sometimes thought it might be better if... | 0.57 | | | |
| I sometimes thought it might be better if I... | 0.53 | | | |
| For me being exposed to these events was... | 0.45 | | | |
| My children back home had many of these... | | 0.56 | 0.64 | 0.56 |
| My spouse or significant other had... | | 0.64 | 0.67 | 0.65 |
| My spouse or significant other copes so... | 0.38 | 0.63 | 0.63 | 0.56 |
| People are generally good | | | | 0.28 |
| I'm afraid I or those I care for will... | | 0.29 | | |
| I'm afraid I or those I care for will be... | 0.34 | | | |

17.5.11 Composite Variables

Analysis of the clusters among variables revealed four potential composite variables. Dimension One consisted of the following variables:

Thoughts of it keep intruding into my mind.

I found it hard to go to sleep.

My sleep patterns were disturbed.

I was jumpy or startled easily.

I felt afraid it could happen again.

I drank more alcohol than usual.

I tried to cope by distracting myself.

Clearly this dimension is made up of hyperarousal, avoidance and re-experiencing all symptoms of PTSD.

The second dimension that emerged was made up of the following items:

- For me being exposed to these events was traumatic.
- I avoided work assignments that could place me in a similar situation.
- I had panic attacks.
- It made me feel the world is less safe.

This dimension appears to reflect a shattering of the world assumption that the world is a fairly safe place with panic, avoidance and fear clustering in this dimension.

The third dimension was made up of the following items:

- I engaged in sexual activities more often than usual.
- I had headaches after.
- I had general aches in my body after.
- I had dizziness or difficulty breathing.

These are all psychosomatic responses.

The fourth dimension was made up of the following items:

- I felt sad for whole days.
- It made me trust people less.
- I changed some of my behaviors to try to avoid danger of this type.

This appears to be some level of depression and avoidance with alienation.

The fifth dimension concerns suicide ideation and self harm and consisted of the following items:

- I seriously considered hurting myself.
- I seriously thought about suicide.

17.6 CONCLUSIONS

The exploratory study revealed that it is possible to design and conduct a useful study administered from afar using high technology. The web-based automatically scored survey did not work given the slow internet speeds in Iraq necessitating tooling down to a word document that was e-mailed to participants and then hand scored when received. This made assuring anonymity impossible since participant's e-mail addresses were linked to the return of their survey but confidentiality still was assured. It was clear that many individuals were willing and tried hard to participate. Over one hundred respondents tried to use the web-based survey in the first days.

Even with the difficulties it was clear that the participants appreciated that an independent research group was interested to study their psycho-social welfare and that they trusted in the confidentiality of the study and gave honest and reliable answers. Many participants took the time to write detailed letters about their responses to the high threat security environment and gave comments on how to improve the survey. Many stated that it was not only the high threat environment but the posting away from family and long hours with few, if any weekends free, that also caused them significant distress. Some responded to the

questions about increased xenophobia stating their response was opposite: they had watched their Iraqi counterparts suffer and some had deaths among their staff that distressed them greatly and as a result they had come to greatly admire the Iraqi people they worked among. It was clear that the researchers had tried to ask too many questions and the questionnaire needed to be shortened. With analysis of the composite dimensions its possible to omit some questions and tighten up the survey to better model psycho-social resilience in a high security threat environment.

The reality of military, diplomatic and civilian government service today is that it often involves serving in high threat security environments. While military members have more training to deal with these threats, diplomats and civilian contractors have less pre and post deployment training and lack as much experience with high threat environments. Individuals cope with the rigors of working in high threat security environments in different ways and the hope is that few suffer major psychological consequences. However this study reveals that under the conditions of today's often high-tempo operations, with long separations from family and loved ones potentially significant numbers of diplomats, military personnel and the civilian contractors that serve them are subject to acute and posttraumatic responses and other psychological and behavioral health issues brought on by the high security threat environment. From our exploratory study it is clear that significant numbers of diplomats, contractors and even military personnel in high threat security environments likely suffer acute and posttraumatic responses to traumatic events in theater as well as psychosomatic responses; depression; anxiety and fear responses; shattered world assumptions; the obsessive need to talk; and even suicidal ideation and self harm responses. Coping methods vary from positive to negative and significant numbers stated that simple tools like learning that acute and posttraumatic responses are normal; group and individual counseling would be helpful.

On the whole, from this exploratory study it's possible to conclude that the present resilience model and preliminary survey is a useful one for measuring such effects and the high technology approach to studying psycho-social resilience in the high security threat environment works. People participate and appear to appreciate the effort the care put into the survey that asks them how they are doing while serving in a high threat security environment. Improvement needs to include shortening it; obtaining a larger more representative sample; and including items that take into account other factors that also cause significant distress other than the high threat environment (i.e., family separation and long work hours).

It is our recommendation to construct a tighter version of this resilience survey based on the tested questions in this model to be used in Iraq as well as other similar high threat security theaters (Pakistan, Afghanistan, etc.) where diplomats, civilian contractors and soldiers are serving. It could then be used to sample larger populations and used on a yearly basis for monitoring, comparing and benchmarking responses to working in such environments. Such a tool would be useful for designing improved services pre-, during deployment and post-deployment.

17.7 REFERENCES

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