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Identifying Resilience Axioms: Israeli Experts on Trauma Resilience

Eric Corzine, Charles R. Figley, Ronald E. Marks, Clare Cannon, Vicky Lattone, and Christopher Weatherly

Tulane University

This is a report of the process by which the Israeli expert panel on trauma resilience generated a set of axioms. The first part of the article discusses how the expert panel members were selected and polled to determine which among the membership were best qualified to be interviewed by the research team. The next section of the article describes the process by which 7 of the expert panelists were interviewed in Israel using professional video production equipment that generated over 8 hr of high quality video data for later analysis. The final section of the article describes the process by which each of the interviews were analyzed and indexed to generate a list of trauma resilience axioms and sent to interviewees for their review and editing. In addition to the list of axioms generated from their video interviews, the expert panelists were supplied with the video of their interview with Quick Time markers that linked each axiom with the exact point on the video interview. The article describes the final phase of the process: generating a final list of trauma resilience axioms for the expert panel to rate. The results of the expert panel’s ratings are described and establish 83 trauma resilience axioms which fall into 3 categories: those related to individuals, communities, and related contexts. The article then includes a discussion of the findings in terms of the potential utility of this approach for other projects with the goal of reaching consensus among experts.

Keywords: trauma resilience, video, Israel, expert panel, axioms

I was sitting on the ground and then I looked forward and I saw like 100 soldiers in a row. They started to move towards me and shoot at me with their rifles. I saw bullets all around myself and then I started to feel bullets also within my body. I got hit. There was 6–7 bullets in my body and then came a sergeant and he took his rifle and he shot me from like one and a half meters in the chest and I fell on the back like in western cinema and it felt as if it happened not to myself, that I am an actor in a movie.

—Itamar Barnea, Member of the Israeli expert panel on Trauma Resilience

Dr. Barnea’s powerful description of his experiences as an Israeli pilot shot down over Syria during the Yom Kippur war of 1973 provides an example of the graphic content covered in the interviews conducted in late 2012 in Israel. Barnea was one of the 16 members of an Israeli expert panel on trauma resilience (expert panel) that was commissioned to advance the understanding of trauma resilience in order to improve trauma resilience theory and research and promote trauma resilience both in Israel and worldwide. Dr. Barnea was one of seven expert panel members who were interviewed.

The purpose of this article is to describe the process by which the axioms noted by the expert panel members who were interviewed, were extracted by the Tulane Traumatology Institute team, confirmed by the authors, and provide a list of the top trauma axioms that were established by the expert panel. The methodology employed holds promise for helping to generate axioms in other areas of research. This article contains the rationale for a strategic and efficient research methodology tool that may increase public awareness and mobilize community forces to solve a collective problem.

Specifically, we intend to explain the variable generating activity (VGA) methodology for reaching agreement on what an interviewee said and identifying potential axioms from an interviewee and verifying this with fellow members through a survey. In seven separate studies, the VGA methodology has demonstrated considerable utility in generating a robust set of axioms about trauma resilience. We believe this methodology will be an effective tool to analyze data collected from other expert panel projects. We will also report the top consensus axioms obtained from the expert panel.

The Power of Axioms and Consensus

The study developed axioms from Israeli trauma resilience experts. According to the Oxford English Dictionary, an axiom is “A proposition that commends itself to general acceptance; a well-established or universally-conceded principle; a maxim, rule, law.” In other words, axioms are widely held beliefs that help us understand and frame the world around us. Axioms can be a useful vehicle to aid in understanding and clarifying new concepts or situations. These axioms in addition to providing a framework for greater understanding, are also comparable across countries and cultures, can help guide future research to either support or negate the axiom, and provide a benchmark of our current understanding to observe how our ideas have changed over time.

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The VGA methodology provides a method to reach consensus, and given that all experts do not agree, it can put a spotlight on where there is agreement in a contentious issue. The consensus axioms can lead to greater understanding and provide a foundation to build on even when there is not widespread agreement.

**Variable Generating Activity (VGA) and the Delphi Technique**

The variable generating activity (VGA) is an approach that emerged from studies of communities that had not been carefully studied until then. The VGA is a methodology for determining axioms about a phenomenon. The VGA methodology has been tested previously. Figley, Cabrera, Chapman, & Pitts (2011) addressed the question: What do combat medics believe are commonly known about dealing with trauma (trauma resilience) in and out of combat for self and soldier and civilian patients? (Figley et al., 2013) IRB approval, 2010, was used to address the following question: What do people outside the Parish (Terrebonne) need to know about the people and cultures down here, with the rising waters? Morris (Morris, 2013) addressed the question: What do musicians who returned to New Orleans after evacuating from Katrina think being resilient means? In each case spokespersons were selected by the community to speak for the community in a video interview.

The final phase is returning to the community that nominated the spokespersons who generated the axioms to have them complete a survey composed of all of the nominated axioms. This can be especially important in a little known community that is experiencing a crisis and there is uncertainty about the wishes or needs of that community.

The use of video in the VGA methodology provides advantages that are not available with only written or audio records. Videos provide researchers a record of nonverbal clues that would not be available if you were not present for the event. In addition, even if you were present, the video allows the researcher to watch the video over and over again (Hopper & Quiñones, 2012). A researcher does not have to rely on memory or the notes taken during the interview. The written and photos are static, videos provide a nonstatic view of the event. Researchers are able to have a record of the environment and the interviewee’s interaction with it, see nonverbal ques, and have a permanent record of the interview (Wang & Lien, 2013).

The use of an expert panel leverages a lifetime of experience from each panel member to seek consensus, however, they have various problems; such as geographic, logistics, time, and economics. It is difficult and costly to bring together experts together in one place. The Delphi technique is a method to overcome these obstacles and reach a consensus (Keeney, Hasson, & McKenna, 2006). The Delphi technique is a structured process to obtain the opinions of experts. In this instance the opinions were gathered from a subset of the entire expert panel in interviews and then questionnaires were then used to collect the feedback of the entire expert panel.

In order to develop axioms from an expert panel the VGA methodology and Delphi technique provides a unique advantages relative to a simple literature review; (a) not all panel members may be academics some may be practitioners with no or limited publications for review; (b) panel members may have a lifetime of experience, however, this wealth of experience may not be fully reflected in publications; and (c) the synthesis of this lifetime of experience and research also has value, given what they know and experienced, what has become axiomatic for them.

**The Israeli Context**

Israel and its people have experienced periodic and ongoing trauma—terrorist attacks, threats across all the borders, wars that can break out at any time, and universal expectations to serve in the military and defend the homeland.

Since Israel’s War for Independence starting in 1947 to 1949, there has been a long list of conflicts afflicting the country; the Six Day War (1967); fighting with Egypt (1967–1970); the Yom Kippur War (1973); invasions of Lebanon (1978 and 1981–1982); the first Palestinian Intifada (1987–1993); the second Palestinian Intifada (2000–2005); fighting in Lebanon and Gaza (2006); fighting with Hamas (2008–2009); fighting with Hamas (2012). The country has a unique and sustained history of war and conflict and therefore has had to learn to deal with the trauma that that history brings.

The Israelis have had a high exposure to terrorism and the trauma it causes. This exposure has provided an opportunity and a necessity to confront this trauma and to understand the resilience which can help not only the individual, but the country. This in turn has led to a professional class of practitioners and academics who have had to confront the trauma caused by this exposure and address the issue of trauma resilience. This professional class has obtained a unique and broad experience base; they have both lived and worked through traumatic events. Their consensus on issues dealing with trauma resilience can indicate areas that would be important for practitioners and academics that have less experience dealing with ongoing exposure to trauma and indicate areas for further research.

**Formation of the Expert Panel**

The outbreak of hostilities in November, 2012 led to an idea: form an Israeli expert panel on trauma resilience and generate the top axioms about trauma resilience. Who better to consider what it means to spring back in the face of horrific and threatening events?

Most often, some type of expert panel is used when specialized input and opinion are required to debate and discuss various courses of action and make recommendations for treatment, policy, interventions, and so forth. Expert panels most often meet together for an extended period of time to reach consensus on a specific set of questions. This process, however, poses logistical challenges since expert panelists are rarely available to meet at the same time and place.

To overcome these limitations the research team utilized a methodology that would quickly generate a set of axioms that could later be considered and rated by each member of the expert panel focusing on trauma resilience; as Israel faced yet another potentially historic challenge to its existence.

**Trauma Resilience**

Israel has been the world leader in understanding and adapting to trauma—be it medical or psychosocial/spiritual—world peace
might benefit from an appropriate application of trauma resilience and what better region of the world to apply such an application.

Early in December, 2012, Zahava Solomon, distinguished professor at Tel Aviv University and recipient of the prestigious Israel Prize for research in social work, accepted Charles Figley’s request to form a panel of Israeli experts. She responded with a list of names and e-mails; consisting of 16 social and health scientists and practitioners born and lived in Israel all their lives that have made significant and sustained contributions to our knowledge of trauma resilience. Within 1 month from when they were identified, the team interviewed six from the expert panel plus the chair, Dr. Solomon.

**Methodology**

The research team followed a five-phase process to identify which trauma resilience axioms were most important as determined by the expert panel (see Figure 1).

**Phase I: Selection of the Expert Panel**

Professor Solomon was asked by the research team to identify at least a dozen trauma resilience experts with the following two inclusion criteria: (a) they were native Israelis who were exposed to continuous traumatic adversities, and (b) they have made substantial and sustained contributions to our understanding of trauma and especially trauma resilience. Solomon identified the following Israeli scholars, based on these criteria:

Avi Bleich is the director of Lev-Hasharon Psychiatric Hospital, a Professor of Psychiatry in the School of Medicine at Tel Aviv University, and Chairman of NATAL’s, Israel Trauma Center for Victims of Terror and War, professional steering committee.

Rony Berger is a faculty member of Emergency Medicine at Ben Gurion University and the Stress, Crisis and Trauma program at Tel Aviv University, and also the Director of Disaster Relief and Rehabilitation Unit at Brit Olam, an International Relief organization.

Itamar Barnea is NATAL’s, Israel Trauma Center for Victims of Terror and War, Chief Psychologist. He previously served as the head of the Psychology & Psychiatry for the Israeli Air Force, and as head of the Casualties Department for the Israel Defense Forces.

Talia Levanon is the Director of the Israel Trauma Coalition. She has also worked in independent practice and in a Unit of the Jerusalem Branch of the Israeli National Insurance Institute for Treatment and Rehabilitation of Trauma Widows and Widowers.

Sam Tyano is a member of the Faculty of Medicine, Tel Aviv University.

Karni Ginzburg is a lecturer at the school of Social Work, Tel Aviv University.

David Senesh is a lecturer at Levinsky College of Education in Tel Aviv, a member of Restorative Justice in Israel, and the PsychoActive group of mental health practitioners against the violation of human rights, and the Public Committee Against Torture in Israel.

Mooli Lahad is the Professor of Drama Therapy and Psychology at Tel Hai College, Israel and Roehampton University, United Kingdom, the president of the Community Stress Prevention Center (CSPC), an NGO he founded 30 years ago.

Rachel Dekel is the Head of the School of Social Work, Bar-Ilan University, Israel.

Orit Nuttman Shwartz founded and heads the Department of Social Work, Sapir College, Israel, a member of the Sapir College Research Authority and a Lecturer in the Department of Social Work, Ben-Gurion University of the Negev.

Dan Sharon is a Senior Lecturer at the School of Social Work, Tel Aviv University, Israel.

Arieh Shalev is a Professor in the Department of Psychiatry at New York University Langone Medical Center, the former Chair of the Department of Psychiatry at Hadassah, Director and founder of the Center for Traumatic Stress at Hadassah, Jerusalem, the chair of the Israel Society for Biological Psychiatry, and the editor and founder of the Israel Journal of Psychotherapy.

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**Methodology Diagram**

Variable Generating Activity (VGA) Methodology

- **Phase I** Selection of the Expert Panel
- **Phase II** Selection of Panel Members to be Interviewed
- **Phase III** Interviewing the Selected Panelists (Video)
- **Phase IV** Video Data Analysis
- **Phase V** Expert Panel Survey (Vote on Axioms)

**Figure 1.** Methodology diagram. The figure illustrates the different phases of the methodology.
Phase II: Selection of Panel Members to be Interviewed

The research team contacted the colleagues identified by Solomon and invited them to be part of the trauma resilience expert panel and asked them to identify whom among the list of panel members should be interviewed. In addition to the panel chair, Zahava Solomon, six panel members were identified and invited to be interviewed in Tel Aviv in December, 2012, the panelists selected to be interviewed were: Avi Bleich, Rony Berger, Itamar Barnea, David Senesh, Mooli Lahad, and Rachel Dekel. Everyone accepted the invitation.

Phase III: Interviewing the Selected Panelists

During the third week of December, 2012, Charles Figley and Ron Marks interviewed the chair of the panel, Zahava Solomon, and six members of the panel with the highest recommendation rating by the expert panel. Everyone agreed and was able to make the interview as scheduled. The interviews were professionally videotaped with high definition (HD) videos for each of the seven interviews that were conducted over a 4-day period. This was critical in assuring that the best video quality would be utilized to study the interviewee panelist’s answers.

The living room area of a shore-front hotel in Tel Aviv was transformed into a professional studio. Authors Ronald Marks served as the interviewer for six of the interviews and Charles Figley interviewed one expert panelist while serving as video production director for the other interviews.

The interviews were guided by the following agenda: (a) description of the project and purpose of the interview; (b) questions about the expert panelist’s life in Israel growing up with a special interest in their lived experiences with trauma and resilience; (c) questions about their research as trauma scholars and their views about trauma resilience; and (d) follow-up questions that would illuminate the complexity of trauma resilience. The interviews lasted between 50 and 90 min.

The purpose of conducting the interviews was to generate a comprehensive list of trauma resilience axioms and generate examples of resilience from the Israeli lived experiences of the interviewees. Understanding resilience is learning to overcome adversity in ways that work for the individual, family, group, or community.

Phase IV: Video Data Analysis

The video production company transformed each interview into data files that could be assembled and analyzed by the research team in New Orleans. The first author was responsible for coordinating the analysis that generated the axioms identified in the videotaped interviews. The VGA methodology (Figley, et al., 2011, 2013), a systematic methodology for identifying informants’ observations, was utilized. This procedure enables the research team to quickly review the video interview data and identify the relevant axioms. The VGA protocol was developed to have the content of the interviews, specifically the direct words of the interviewees, shape the axioms. Interpretation from the research team does not alter the experts’ views. Furthermore, retaining statements in their original quoted form enhances validity of the axioms; it is not being interpreted. The investigators are trained to conduct the VGA protocol. This VGA protocol includes a system of checking the work of others thereby establishing a system of reliability.

Three researchers reviewed the video recording before developing the written transcript. These same researchers then develop a survey based on the video recording. The video allows for investigators to take into account tone, facial expressions, and gestures. This had advantages over the use of transcripts because transcripts alone do not capture much of this valuable context. Without the video, researchers need to be present, or to rely on the memory of the interviewee, or need to return to the interviewee to provide context. In addition, the VGA protocol requires researchers to return to the video to check and verify each other’s work and interpretations.

Each video had three reviewers that had the following responsibilities:

Primary reviewer was responsible for viewing the video all the way through and generating a list of at least five points made by the interviewee and identifying where each point could be found on the tape by providing a timestamp. The primary reviewer also reviewed the initial draft of axioms that were later prepared by the tertiary reviewer.

Secondary reviewer was responsible for viewing the video all the way through and verifying the major points and the timestamps of the primary reviewer.

Tertiary reviewer was responsible for viewing the video all the way through, settling any disputes between the primary and secondary reviewers, and developing the initial draft of axioms.

The initial draft of axioms was then sent back to the interviewee for review. In addition the interviewee was given a transcript, a copy of the video, and where each point could be found on the video. The interviewee then provided feedback on the axioms; the interviewee could approve, disapprove, change, or add to the list of axioms. The axioms were then changed based on interviewee feedback.

Phase V: Expert Panel Survey

The interviewee responses were combined into an online trauma resilience survey. An attempt was made to remove duplicates and keep the wording of the approved axioms unchanged; however, some minor rewording did occur to make certain items clearer.

Thirteen members of the Israeli expert panel voted on their level of agreement with each of the 83 axioms using a Likert scale (strongly disagree = 1 to strongly agree = 5). The average for each axiom was calculated and the top 20% were chosen for additional analysis. From these responses the following results were obtained.
Results

After all expert panelists completed the survey of the 83 axioms, the results provided a listing from most to least endorsed axiom. Table 1 lists in descending order the top 19 most endorsed responses which represents approximately the top 20% of all the responses, determined by the average response; some axioms have identical averages. The average column to the right of the axiom indicates the level of consensus or agreement with the axiom; the higher the average, the higher the consensus. The standard deviation column is provided to give some idea of the range of responses.

Discussion

Resilience can relate to the individual or to a larger group, or a community. The top 20% of axioms had 12 that related to the individual, five that related to the community, and two that pertained to related issues.

The Individual

The importance of a strong sense of purpose was emphasized by two of the axioms:

23. Strong sense of purpose can have a positive impact on resilience.
26. It is important to have a sense of mission, a sense of history and purpose.

The importance of being connected to others was emphasized by five of the axioms:

22. In a stressful and traumatic situation, it is very important to feel connected to other people.
57. Feeling a sense of belonging to the community gives you a sense of power and resilience.
59. Family support increases an individual’s resiliency.
60. Social support increases an individual’s resiliency.
75. Group cohesion increases resiliency within military units.

The importance of individual characteristics was emphasized in three of the axioms.

38. Trauma resulting in a loss of trust in oneself and others is a psychological barrier to peace.
41. Expressions of inner strength, coping skills, hope, and social support are the four major factors in building resiliency according to current research.
50. Being creative, courageous, and resourceful can allow people to find solutions for things that they once thought were impossible.

Table 1

<table>
<thead>
<tr>
<th>Trauma resilience axioms</th>
<th>Average</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>22 - In a stressful and traumatic situation, it is very important to feel connected to other people.</td>
<td>4.62</td>
<td>.51</td>
</tr>
<tr>
<td>23 - Strong sense of purpose can have a positive impact on resilience.</td>
<td>4.62</td>
<td>.51</td>
</tr>
<tr>
<td>2 - Strong social ties promote resilience in a community facing ongoing traumatic threats</td>
<td>4.62</td>
<td>.51</td>
</tr>
<tr>
<td>3 - A large portion of society is exposed to terror-related stress and trauma, but some sections of population are more at risk than others for developing mental health problems.</td>
<td>4.54</td>
<td>.52</td>
</tr>
<tr>
<td>57 - Feeling a sense of belonging to the community gives you a sense of power and resilience.</td>
<td>4.46</td>
<td>.66</td>
</tr>
<tr>
<td>57 - Feeling a sense of belonging to the community gives you a sense of power and resilience.</td>
<td>4.54</td>
<td>.52</td>
</tr>
<tr>
<td>59 - Family support increases an individual’s resiliency.</td>
<td>4.38</td>
<td>.77</td>
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<td>.51</td>
</tr>
<tr>
<td>75 - Group cohesion increases resiliency within military units.</td>
<td>4.38</td>
<td>.51</td>
</tr>
<tr>
<td>75 - Group cohesion increases resiliency within military units.</td>
<td>4.38</td>
<td>.51</td>
</tr>
<tr>
<td>77 - Vicarious experience of trauma can occur through working with traumatized individuals.</td>
<td>4.31</td>
<td>.63</td>
</tr>
</tbody>
</table>
The idea that trauma can produce additional negative consequences was emphasized by one of the axioms:

40. The negative effects of trauma are not limited to clinical psychopathology. Trauma can also produce negative personal and social circumstances.

One axiom showed that trauma does not have to be experienced firsthand:

77. Vicarious experience of trauma can occur through working with traumatized individuals.

The Community

The ideas that the community is similar to the individual in that both require feeling a sense of connectedness and trust was emphasized by two of the axioms:

2. Strong social ties promote resilience in a community facing ongoing traumatic threats.

68. Communities that are resilient tend to have a strong sense of belonging, solidarity and trust in their leadership.

The idea that community is not homogenous and different sectors face a different level of risk is explained by one axiom:

3. A large portion of society is exposed to terror-related stress and trauma, but some sections of population are more at risk than others for developing mental health problems.

The idea that community is affected by continuing trauma exposure is explained by one axiom:

4. Repeated traumatization can have negative psychological consequences for the communities that experience them.

The idea that a resilient community adapts and grows is explained by one axiom:

5. Resiliency is the capacity of a community to deal with a major crisis by adapting and growing while minimizing casualties and preserving a fair quality of life for all its citizens and maintaining its core values and identity.

Related Issues

The following issues do not fall neatly into the individual or community categories. The group also touched on two related issues; teaching resilience and the government’s role.

The idea that cultures are different and need to be taken into account is evident in the following axiom:

82. To teach resilience across cultures, one should be modest and learn strategies from the cultures of the affected.

The idea that government has a role to play in addressing trauma was explained by one axiom:

21. It is the central government’s responsibility to assist those who have unequal access to resources in the wake of disaster.

Implications for Future Research and Theory Development

The results of the interviews of established experts on trauma along with the use of the VGA methodology has led to an articulation and clarification of highly relevant aspects of trauma resilience. The experts based their comments on many years of firsthand observation and the results of scientific study; theirs and others. Thus, the process utilized both confirms and extends our knowledge in this critical and vitally important area. Having established these trauma axioms in the context of contemporary Israeli society, further research is needed to assess these in other contexts; for both the purpose of corroboration as well as to continually extend our knowledge of this area of human behavior.

Implications for Promoting Trauma Resilience

Eighty-three trauma resilience axioms were identified from this panel of experts; all of whom have deep connections through their work with the communities of which they are a member. Several of the panel members are highly acclaimed practitioners: psychologists, psychiatrists, social workers, and university professors. It was noted above that of these 83 axioms, the top 20% were comprised of 19 axioms that pertain to individual and community based issues. Each of these has direct practice implications and can be translated into behaviors that enhance the likelihood of resilience in the face of trauma. For example, the number one axiom addresses the importance of feeling connected to other people while the number two axiom recognizes the value of purpose in one’s life as a means to moderate the negative impact of trauma. These, along with the other identified axioms have direct clinical implications for working with individual, families, and communities. A valuable future effort in this area will be to translate these identified axioms into practice behaviors that can be taught in the context of clinical training.

References


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