Families in the Sealed Room: Interaction Patterns of Israeli Families During SCUD Missile Attacks.

AMITH BEN-DAVID, Ph.D. a
YOAV LAVEE, Ph.D. a

a Center for Research and Study of the Family, School of Social Work, University of Haifa, Mount Carmel, Haifa 31999, Israel.

This study attempted to delineate styles of family interaction and behavior during war. Sixty-six families were randomly selected during the first week of the Gulf War and were telephone-interviewed using a semi-structured questionnaire. Qualitative methodology was used to analyze the interview transcripts. Three themes emerged: the emotional atmosphere (degree of expressed stress), mode of family organization, and extent and form of interpersonal relationship. When these categories were considered, four types of families were found: (1) the Anxious Family, characterized by high level of stress, low role distribution, negative interaction style; (2) the Cautious Family, with high stress, clear role allocation, positive interaction among members; (3) the Confident Family, typified by low stress level, clear role allocation, and positive non-interaction; and (4) the Indifferent Family, characterized by low stress level, no role allocation, and negative non-interaction. These findings are discussed in terms of recent attempts to clarify the concept and describe the process of family coping, as well as in terms of understanding family behavior in other stressful situations.

On Friday, January 18, 1991, at around 2:00 a.m., eight SCUD Missiles were launched from Western Iraq and hit two densely populated areas of Tel-Aviv and Haifa in Israel. There were 22 casualties and hundreds of homes were damaged. During the following nights and throughout the first week of the Operation Desert Storm, a total of 22 SCUD missiles hit these areas. There were 219 casualties, twenty apartment buildings were totally destroyed, and several thousand other homes suffered damage.

For some time before the beginning of the Operation Desert Storm and during its first 3-4 weeks, there were explicit threats by Iraqi spokesmen to "burn out half of the State of Israel." Israeli citizens prepared for assault by nonconventional weapons, primarily gas warheads. Rooms were sealed at home and in the workplace, and everyone was instructed to carry gas masks and other protective measures with them at all times. When sirens sounded, families gathered in their sealed rooms, sealed the room’s door, put on their gas masks, put masks on their children, and placed babies in their gas-protected tents. The missiles were expected to hit within a few moments, but families were instructed to stay in the sealed room, with gas masks on, for a longer period of time, during which the authorities verified whether or not there was actual danger of gas.

The Gulf War imposed extreme stress upon individuals and families in Israel. As in other traumatic events (Figley, 1979, 1983), missile attacks were sudden, unexpected, life-threatening occurrences that often produced feelings of extreme helplessness and little control over the situation. Furthermore, the daily threat of attack pervaded everyday life, seriously disrupting the lifestyle and routine of families.

The purpose of this study was to learn how families perceived the war threat and how they attempted to cope with it. More specifically, this article describes modes of family interaction in the sealed room at the peak moments of stress, from the time alarm sirens sounded through the all-clear signal.

Related Research

What is the impact of war upon families? How do families cope with this type of catastrophic event? A review of the literature reveals that very little is known. Previous research on the impact of war centered on three target groups: the soldier (Figley, 1978), the soldier's family (Boss, McCubbin, & Lester, 1979; Hogancamp & Figley, 1983), and civilians in combat zones.

Research on the direct impact of war on civilians has focused primarily on the psychological reactions of children and youth (Freud & Burlingham, 1943; Mahjoub, Leyens, Yzerbyt, et al., 1989; Milgram, 1982) as well as on the adjustment of bereaved parents and war widows. The effects of war and border tension on Israeli adults has also been studied (Kaffman, 1977; Zuckerman-Bareli, 1979). However, studies on family functioning under war conditions are almost nonexistent.

Figley (1983) noted that when families experience a catastrophe together, a disruption of routine lifestyle occurs, and this can devastate the intricate family system. Various family rules, roles, and responsibilities change, although the basic lines of
authority usually remain. The experiences family members share as a family are the very elements that tend to calm them during a catastrophe.

Theories of family stress and coping have attempted to explain the short and long-term effect of stress upon family functioning (for example, Boss, 1987; Burr, 1973; Hansen & Johnson, 1979; Hill, 1949, 1958; McCubbin & Patterson, 1983b). Efforts to understand how families cope as collective entities (in contrast with the emphasis on the coping behavior of family members as individuals) are relatively new (Dyk & Schvaneveldt, 1987). McCubbin and his colleagues (1980), for example, viewed coping as a combination of both cognitive processes and behavioral responses by which the family tries to maintain balanced functioning.

Family coping research has drawn heavily from psychological and sociological theories (Dyk et al., 1987; McCubbin, Joy, Cauble, et al., 1980). Coping was conceptualized as denoting dynamic interaction of resources, perceptions and behaviors. Accordingly, coping strategies were studied in terms of the family's perceptions and attitudes toward stress and the use of their resources (internal and external) for easing the impact of stressor events and to enhance adaptation. For researchers, the question was what family members—or the family as a unit—do when faced with a problem or difficulty.

Two lines of research emerged. The first attempted to delineate dimensions of family coping strategies (McCubbin, Larsen, & Olson, 1982; Stetz, Lewis, & Primomo, 1986), or to study the effect of certain coping behaviors, such as problem solving (Klein, 1983). McCubbin et al. (1982), for instance, empirically categorized 29 coping behaviors into those that are related to internal cognitive processes (such as reframing and passive appraisal) and those that are related to acquiring external support. A large volume of research has emerged out of this line of inquiry, which attempted to examine the family's use of various coping strategies in different life situations (see McCubbin & Figley, 1983a).

The second line of research has attempted to describe family interaction and interpersonal processes under stress. McCubbin and Patterson (1983b) developed the FAAR model that describes the process of family adjustment and adaptation over time. Their model emphasizes interpersonal as opposed to intrapsychic coping processes. Reiss and Oliveri (1980) proposed that families develop constructs which define their own interaction and their relation to the environment (family "paradigms"). In stressful situations, they suggest, the family coping pattern follows a process of defining the crisis, trying out solutions, and committing to a course of action, all of which occurs in accordance with the family's own paradigm.

Although researchers have studied family coping strategies and coping processes in various stressful situations, there has been no research that examined family process under acute stressful situations such as times of war. The purpose of this study, therefore, was to examine family dynamics during the peak period of stress, from the time that warning sirens sounded through the period immediately following the all-clear signal. Specifically, we wanted to learn what actually happened in the family during their stay in the sealed room.

METHOD

Participants

Sixty-six married individuals responded to a telephone interview during which they were asked to describe the behavior of their families in the sealed room. The families were randomly selected from the telephone directory of the greater Haifa area, which suffered direct hits by SCUD missiles early on in the war. The interviews were conducted during the second half of the first week of the war (January 21-24, 1991).

Forty-three (65%) of the respondents were wives and 19 (29%) were husbands. Four of the respondents (6%) were adult children living with their parents. Of the families contacted, 55 (83%) had children under the age of 18 living with them. The rest were older couples with children living elsewhere (11%), or older single children who had moved back into their parents' home for the duration of the war (6%). It is important to state that, during the early phase of the war, many families decided to bring into their homes older parents living alone; alternatively, older single children moved temporarily into their parents' homes.

The Interview

The interview was semi-structured and included questions covering a range of experiences, behaviors, perceptions, and attitudes related to the war stress. Guided by family stress theory (Boss, 1987; Hill, 1949; McCubbin et al., 1983b), open-ended questions were asked about the following areas:

1. **Stressors:** hardships and specific difficulties of being under a missile threat (the sirens, the gas masks, the fear, concern for the children, having to wake up during the night), previous stressors, and specific problems that arose in and around the sealed room.

2. **Perception and understanding of the situation:** Questions covered issues such as, "What do you and your family think about this war?" and the extent of agreement among family members about the meaning of the situation.
3. Family coping behaviors included questions such as, "What did family members do when the siren went off?" "What did you all do in the sealed room?" "Were there any rules? Who was in charge, if anyone?"

4. Social support: questions such as, "who phoned your family and who did your family phone during and after attacks?"

5. Effect on the family: questions such as, "How was it for the family to be together in the sealed room?" "Did anybody want to leave before the all-clear signal was announced?" "How do you think your family will manage if the war continues for a longer time?"

This article reports on only one segment of the interview, namely family behavior and interpersonal interaction in the sealed room. Sources of stress and strains during the war, perception of the situation and its effect on the family are described elsewhere (Lavee & Ben-David, 1991).

Analysis

Qualitative analysis methods, namely analytic induction and constant comparison strategies, were used to detect forms of family interaction and behavior. Analytic induction (Bogdan & Biklin, 1982; Dillon, 1989; Goetz & LeCompte, 1984; Moon, Dillon, & Sprenkle, 1990) involves scanning the data for common themes, creating coded categories of the phenomena, and combining the categories into typologies. The second method, constant comparison (Glasser & Strauss, 1967), combines inductive category coding with a simultaneous comparison of all observed cases. This procedure is intended to provide "universal rather than probabilistic explanation; that is, all cases are to be explained—not merely some distribution of cases" (Goetz et al., 1984, p. 180).

In the present study, the analysis was conducted in the following way: the authors initially read through the entire pool of transcribed interviews to detect common themes. These themes were then coded, and linkages in the data connecting similar instances of the same phenomenon were discerned, thereby creating categories of behavioral patterns. A constant comparison was then conducted by comparing all interviews with one another. Specifically, interview protocols were cut up according to interview items, and collages were made composed of each category for all respondents. To determine reliability of the coding procedure, an independent rater was trained and coded the same interviews. The percentage of agreement, constituting interrater reliability, was .89.

RESULTS

Three Dimensions of Family Dynamics

Three dimensions seemed to characterize the dynamics of the families in the sealed room: (1) emotional atmosphere, (2) mode of organization, and (3) interaction style among family members.

Emotional Atmosphere

This dimension refers to the general ambience and expressed emotions that characterized the family. Generally speaking, families could be divided into those marked by fear (high-expressed anxiety) and those characterized by a sense of security, a belief that the chances of anything happening to them was very low (low anxiety).

Two variations of high-expressed anxiety were found in the data. First, there were families in which the fear was so high that all the family's functioning was subordinated to the fear of the sirens. For example, one of these families reported: "It was like a nightmare ... I don't even remember very clearly anymore. We were shaking and very frightened. We thought that if we did not put on the masks, we would all die." A second group of families was characterized by fear of the missiles, along with a belief that if something did happen, the masks and the sealed room would protect them effectively.

Families in which there was low-expressed anxiety during missile attacks also were of two types. First, there were families who believed that nothing would happen to them, since the chances of a missile falling in their exact spot were very slim. Second, some families were characterized by a fatalistic streak that, paradoxically, protected them from the fear. They expressed the belief that if a missile were to hit in their surroundings, nothing could help them anyhow, and so there was no point in getting frightened. One of the respondents put it this way: "Whatever will be, will be. The law of chances works in our favor, but if a missile does hit the neighborhood, or if there's a direct hit, then the sealed room will not save us anyhow.... There is nothing we can do to protect ourselves anyway."

Mode of Family Organization

The second dimension, mode of family organization, refers to how roles or tasks were distributed or allocated in the family when preparing to go into the sealed room and in the room itself. Two main modes emerged: (1) distinct, well-defined roles, and (2) no clear role allocation. In some families, members had distinct roles concerning tasks, such as sealing the door, bringing the radio into the room, helping young children don their masks, or putting babies in their tents.
For example, one family said: "We found ourselves being immediately active. I sealed the door with the tape and opened the mask boxes. Then I took one child and my wife took the other. We knew what we were doing, and the division of labor was very clear. If you are ready, I said to myself, you are protected! So we both knew what each one had to do. My wife was the one to put the masks on the children."

Other families did not have any definite role division. These families said that everybody did everything, and in the rush of the few minutes between the siren and the possible SCUD missile falling, they all shut off lights, turned off the cooking stove, and anybody could be the one to take care of the children. One participant described it as follows: "There was no division of labor, but there was not much that had to be done. I told him to bring in the dog and the radio and I brought in the children. On the second night, he took the children in ... lights in the house remained on, I think. Inside the room there was some confusion. I sealed the door. He put the masks on the children ... I didn't know what to do with them, since I had denied all along that this could happen."

**Interpersonal Interaction**

The third dimension refers to the nature of interaction among family members during their stay in the sealed room. Some families reported being in constant interaction with each other ("... we laughed and we took pictures of each other with the gas masks on"), while others reported that each one kept to himself or herself in the sealed room, not interacting with each other: "It was very quiet there... the girls took their books and read... my husband and I listened to the radio."

In addition, interaction among family members could either be "positive," meaning that family members talked or supported each other ("...we talked about different things, about the war, we told jokes, we heard the announcements on the radio"); or the interaction could be "negative," when family members quarreled and shouted at each other ("...we fought with the kids about putting on their masks, and also between us about whether the kids should put on their masks. There was much shouting and noise").

Likewise, non-interaction could either be "positive" or "negative." "Positive" non-interaction in families was expressed by family members sitting quietly, but with a sense of togetherness, watching TV or listening to the radio: "I was quiet, immersed in my thoughts. We were all around the radio ... nobody talked much. We all sat there and we were trying to listen to what was happening outside so as to know what was going on outside our door." "Negative" non-interaction was displayed in families by quietness, accompanied by tenseness and non-supportiveness: "Mother sat on the bed and did not say a word. Father also was very quiet, but it was clear he wanted to leave the room, which he actually did before the all-clear signal was sounded. I took a game to the room, one of those puzzle cubes, and played with myself. I was not very successful, though."

**Four Coping Styles**

When all these categories were considered, four types of families emerged, and all families could be categorized into one of these types. Table 1 depicts the four different types.

<table>
<thead>
<tr>
<th>Family Type</th>
<th>Emotional Atmosphere</th>
<th>Role Allocation</th>
<th>Interpersonal Interaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxious</td>
<td>High anxiety</td>
<td>No role division</td>
<td>Negative interaction</td>
</tr>
<tr>
<td>Cautious</td>
<td>High anxiety</td>
<td>Clear role division</td>
<td>Positive interaction</td>
</tr>
<tr>
<td>Secure</td>
<td>Low anxiety</td>
<td>Clear role division</td>
<td>Positive non-interaction</td>
</tr>
<tr>
<td>Indifferent</td>
<td>Low anxiety</td>
<td>No role division</td>
<td>Negative non-interaction</td>
</tr>
</tbody>
</table>

**The Anxious Family**

The anxious family reported a high level of stress and fear. They described feeling that every siren brings in its wake a SCUD missile that will fall on their home. Seeing the horrors of the destroyed buildings on television did not help to alleviate their fears. However, the family as a whole did not manage to delegate roles and tasks so as to make the entrance to the sealed room a less frightening experience; thereby, the confusion contributed further to their fear and stress. In the sealed room, they experienced a lot of interaction, but this was characterized by loud shouting or requests for everybody to be quiet. For example, the S. family reported:

It is hard to say who took control of what had to be done; sometimes it was my husband and sometimes it was me.
The first time, my husband was more frightened and stressed out than me, so I took control of what happened. The next time, it was me who was more shaky, and so my husband took control. In the sealed room we mainly took care of the children. The baby cried, and the two boys had to be calmed down. We fought also because one of the boys did not want to put on his mask, and we did not agree as to how to deal with it.

The Cautious Family
The cautious family was also characterized by a high level of anxiety and open discussion of fear. However, as opposed to the previous type of family, in this instance, family members were much more organized and each individual had a role to perform when the siren was heard. The coping style in the sealed room also involved interaction; but for this type of family, the interaction was positive in the sense that there was supportive talking, use of humor as a way of dealing with the fear, and in general, a more optimistic view. For example, the F. family reported:

The situation was very frightening. We went into the sealed room and did not know what to do, whether to put on the masks or seal the room with the wet rag first. The funny thing is what comes to mind when sitting in the room. One of the things we discussed was what we would do if we needed to go to the restroom. We decided that we would put on the mask, leave the sealed room, and go to the restroom. Nobody was in a panic and nobody was overly optimistic. We discussed all the possibilities, the possibility that there would be a chemical warhead on the SCUD and what it could do. We talked about how different people reacted, and laughed at those that had injected atropin because they were so frightened.

The Secure Family
The secure family displayed less anxiety, and its members reported referring to statistical probabilities as a way to deal with the fear; in other words, they considered that since the chance of anything happening in their exact spot was very low, there was no need to be frightened. They had a very clear division of labor prior to entering the sealed room, such as who would turn off the electricity and gas in the house, and who would bring essential items into the room. Their style of coping in the sealed room was characterized by a low level of interaction, with all family members preoccupied with their own private thoughts. The general atmosphere, however, was positive, one of quiet support. The M. family reported:

The children were very quiet, and did not make any trouble since they knew what was ahead of them. There was tension, but we tried not to show it to the children. In the sealed room I watched TV and listened to the radio. Each one chose a corner in the room and was wrapped up in his or her thoughts. The children were fine. We did what had to be done.

The Indifferent Family
The last family type displayed a kind of indifference to what was happening. They did not express any kind of emotional response, such as fear or anxiety, to the situation, and sometimes they did not even go into the sealed room. There was no role allocation, and sometimes there was redundancy of task performance whereby one family member would shut off the lights and another would intend to do the same thing but instead put them back on. The coping style in the sealed room was one of non-interaction, and each family member was engrossed in his or her thoughts, but without a feeling of togetherness; on the contrary, much tension prevailed among the family members. Indifferent families with children poured all their energies into the children; but instead of feeling relieved, the children absorbed the unspoken tension of the family. The R. family reported:

On the first night, we did not wake up. We only woke up when we heard the big boom after the SCUD landed. After turning on the radio, we heard the war had started an hour ago. There was no division of labor, but there was not much that had to be done. Inside the room there was confusion. The last time it happened it was much easier, since it was at eight-thirty in the evening and nobody had to be bothered too much. I told the children a story, but my heart wasn’t in it. Every time there was something on the TV, we asked them to shut up and let us listen. Between my husband and myself, there was nothing; the focus was on the children, and listening to the radio and TV.

DISCUSSION AND CONCLUSIONS
To date, research on family coping strategies has been focused primarily on the coping abilities of individuals and subsystems within the family. Few studies have identified the whole family as the unit of analysis. In this study, we took a systems approach with the premise that the elements within the system are interdependent, and an individual family member can only be understood in the family context (Minuchin, 1985). Hence, if the individual is interdependent with
other family members, individual problems become family problems involving the entire family unit (Dyk et al., 1987).

This study sought to describe and understand family interaction in times of acute stress, as occurred during the Gulf War when civilian populations in large cities in Israel were under the threat of SCUD missile attacks. The results from the qualitative analysis of the in-depth interviews revealed that three dimensions may explain family reactions under acute stress: the family's expressed-anxiety level, their organization in terms of role allocation, and interaction style among family members.

The general expressed-anxiety level in the family has received little attention in the family stress literature, perhaps because it lies in the intersection between psychological and family variables (Haan, 1977). In addition, family members' perceptions of stressful situations refers more to the emotion-focus coping than to the problem-focus coping of the family (Folkman & Lazarus, 1980).

In contrast, role allocation has received ample attention. Hansen and Hill (1964) emphasized the role organization in the family as part of the family structure just prior to or during family crisis. Stetz et al. (1986) found that the predominant coping strategy identified in their study involved alterations in household management, which included coordination of roles, distribution of aid between family members, and affirmation of family members. Our dimension of role allocation corresponds also to Olson and McCubbin's (1982) application of the adaptability dimension of the Circumplex Model to family stress as one of the resources or internal attributes of the family unit.

An important outcome of this study is the description and classification of interaction styles in the family (positive and negative interaction and non-interaction). In some ways, this variable is comparable with that of communication. Lavee, McCubbin, and Patterson (1985) found supportive communication as one of the elements that affected adaptation directly in times of stress. Communication, or interaction style, has been identified as important in coping effectiveness.

It seems that in families in which the expression of fear and anxiety was more open, and family members felt that they were free to verbalize openly and express their feelings, the coping style was one of more interpersonal interaction, either in the form of support (“positive” interaction) or in the form of tension (“negative” interaction). In those families, however, in which open expression of fear was sanctioned, the interaction style, in the face of acute stress and forced intimacy, was one of distancing and non-interaction, and this could be either calm or tense.

It appears that the three dimensions of family response (mood, role organization, interpersonal interaction), as identified in this study, are not independent of each other. The classification of families, therefore, revealed four types of families—the anxious, "cautious," "secure," and "indifferent"—which are characterized by distinctive combinations of the three dimensions. In this study, the four family types were exclusive, in that all families could be categorized into one of these types.

While this article focuses on the family's reaction pattern, or coping style, at the peak moments of stress, this reaction certainly is related to the various sources of stress and the family's hardships and internal strains. As family stress theory predicts (Hansen et al., 1964; Hill, 1949; McCubbin et al., 1980; McCubbin et al., 1983b), it is also related to the perception of the situation and to the perceived effect of the war on the family. These aspects of the war experience are further explored in a separate publication (Lavee et al., 1991).

The coping behaviors and mechanisms described in this study derive from a specific context and situation. However, as Dyk and Schvaneveldt (1987) suggested, "[A]s we gain greater insight into the functions coping serves by studying specific family life events, broader trans situational coping styles may be induced, thus enhancing theory-building efforts" (p. 31).

This study attempted to comprehend what transpires when families are under extreme stress and are forced to be together to protect themselves. It seems that the four family interaction styles identified in this study can be applied to other situations in which the family as a whole, or part of the family, experiences a stressful situation, such as a tornado or other natural disasters, or a medical emergency of a family member. Future research should examine these interaction styles in other situations, as well as explore the process of internal organization and the complex interrelationships among the different dimensions that determine how the family copes with stressful situations.

REFERENCES

5. Dillon, D. R., (1989) Showing them that I want them to learn and that I care about who they are. American


Manuscript received September 28, 1991; Accepted November 19, 1991.