The mental health impact of terrorism in Israel: A repeat cross-sectional study of Arabs and Jews


Objective: Since September 2000 Israeli society has been subjected to numerous deadly terror attacks. Few studies have studied the comparative mental health vulnerability of minorities and majorities to continuous terror attacks.

Method: Two telephone surveys (N = 512 and 501) on two distinct representative samples of the Israeli population after 19 months and after 44 months of terror. The Arab minority and Jewish majority were compared on measures of exposure to terrorism, posttraumatic stress symptomatology, feeling depressed, coping, sense of safety, future orientation, and previous traumatic experiences.

Results: After 19 months of terrorist attacks Arab Israelis and Jewish Israelis reacted roughly similarly to the situation, however after 44 months of terror, posttraumatic symptom disorder in the Arab population increased three-fold, posttraumatic symptomatology doubled and resiliency almost disappeared.

Conclusion: We suggest that certain conditions inherent to political conflict situations may potentially put minorities at risk and may only be observable as terrorism-related stressors become chronic.

Significant outcomes
- Terrorism has had a significant impact on the civilian Israeli population.
- Compared to civilian reactions after 19 months of terrorism, after 44 months some of the symptomatology worsened, some remained the same and some improved.
- After 44 months of terror the Arab minority was more symptomatic than the Jewish majority.

Limitations
- Repeat cross-sectional study, not a longitudinal, thus limiting assessment of causality.
- The Arab sample was under-represented in both samples.

Introduction
Since the ‘Second Intifada’ started in September 2000, Israel has experienced repeated deadly terror attacks that have claimed many civilian casualties, disrupted daily life and the economy and created an atmosphere of fear and insecurity. By May 2004, 1030 persons were killed and 5788 injured in more than 13 000 terrorist attacks (1). Current Israeli society has therefore become a test-case for the assessment of the effects of ongoing terror-induced stress.

Terrorism takes a significant toll on mental health, and may be expressed in posttraumatic
symptomatology (2), depression (3), pessimism (4), low sense of safety (5), functional problems (6), low resiliency (7) and distress that may require treatment (8).

At the height of the Intifada after 10 months of escalating hostilities against civilians in Israel Shalev et al. (9) found that 9.6% of directly exposed Jewish residents and 6.7% of indirectly exposed citizens in Jerusalem met posttraumatic symptom disorder (PTSD) criteria – including significant distress and functional impairment. A national representative survey 19 months after the beginning of the intifada (10), found 9.6% to have symptom criteria for PTSD, at the same period Gidron (11), found 10.1% of a Jewish convenience street recruited sample across five major cities to have PTSD. A further nationally representative survey 44 months after the beginning of the entifada (4) found 9% of participants with a symptom criteria for PTSD.

Variability in response to terror is great. Factors negatively impacting mental health after a terrorist attack include female gender (12), severity of exposure (2), reactivation of previous traumas (13), stressful life-events (14) ineffective coping (15), lack of optimism (16), low sense of security (17) and close time proximity to the terrorist attack (2).

Studies on the impact of the Intifada showed that a number of risk factors are associated with mental health symptomatology in adults, namely female gender (18), avoidant coping (19), a sense of insecurity (10, 20), immigrant status (4) disruption of daily routines (9) and resource loss (21).

One additional factor that may account for variability in reaction to disasters is minority status.

A number of reviews (22, 23) observed that belonging to an ethnic minority increased the likelihood for developing adverse outcomes following a disaster. Brewin, Andrews, and Valentine (24) in a meta-analysis found 22 studies with 8165 subjects that confirmed minority status as a risk factor for PTSD after major disasters. In studies assessing the impact of the 9/11 terrorist attacks, Stein et al. (6) reported in a longitudinal study more persistent distress in non-whites. Ford, Adams, and Daily (8) and Chu et al. (25) found Hispanic ethnicity to be a risk factor for reporting psychological problems. Rubin, Brewin, Greenberg, Simpson and Wesseley (26) found that being non-white as well as Muslim predicted substantial distress after the 2005 bombing in London.

A number of studies have also found that being part of the Arab minority in Israel during times of ongoing terrorism is a risk factor. Compared to Jews, Mussalem, Ginzburg, Lev-Shalem, and Solomon (27) found more distress in Arab-Israeli students; Somer, Maguen, Or-Chen, and Litz (28) found more PTSD and depression in Arabs in ethnically mixed towns, and Hobfoll et al. (20) found more posttraumatic symptomatology in a large sample of urban Arabs compared to Jews.

A number of reasons have been heralded as to why minorities are more at risk for mental health sequelae following traumatic exposure. Objective exposure-related factors have been cited. For example, minorities often have higher exposure rates (29) and live in at-risk areas (30). They often have high mortality, morbidity and injury rates (21) and less healthcare following disasters (8).

Psychological factors have also been cited. Empirical studies suggest that minorities may have higher risk perceptions (31), more emotion-focused coping (25), less behavioral adaptation to terror (32) and less psychological resources (20), all conducive to more distress.

Economic and social–political factors such as less education and economic resources (33), closed and overburdened social networks (34), acculturative stress (35), racism (36) and political stress (37) may also compound the burden on these populations.

Israeli independence in 1948 was a major collective traumatic event for the Arab population (38), following which they became a minority, and subjectively experienced a disintegration of society and culture (39). The aftermath of Israeli statehood led to traumatic situations for many Israeli Arabs, (e.g. the separation and relocation of families, refugee situations, loss of livelihood, land and lives).

The 1 350 000 Arab Israelis that make up 19.5% of the population reside within the internationally recognized borders of Israel generally have less education and a lower income due to political, cultural and historical reasons beyond the scope of this paper (40).

Arab resiliency may also be affected by ‘acclurative stress’ (41) felt when the traditional paternalistic Arab society faces the predominant Jewish culture and western democratic institutions.

Arab Israelis are citizens of the State of Israel with equal protection under the law, and full rights of due process. But nevertheless, there are feelings of discrimination and racism which may increase the likelihood of adverse reactions (41, 42). In October 2000, the police aggressively suppressed violent Arab demonstrations. This exacerbated the Arab feelings of alienation, discrimination, repression and loss of power (43).

Furthermore Arab-Israelis often have first- and second-degree relatives in the war-ridden
West-Bank and Gaza making them prone to secondary traumatization. They also identify with the Palestinian uprising (44) creating a stressful dilemma of dual allegiance at personal and community related levels.

Arabs also undergo daily inconveniences and hassles, as they may be scrutinized more thoroughly during routine security checks and may be considered as potential terrorists. Additionally, Arabs may fear being targets of hostile reprisals by Jews should they be caught in the vicinity of a terror attack (27).

Studies have suggested that lack of a coherent and empowering narrative in facing traumatic situations effects resiliency (45). While terrorism corroborates the narrative in which Jews are fighting for their survival, threats or victimization by Palestinian terrorism is difficult to inscribe meaningfully within the Arab Israeli narrative.

On the other hand, some factors may be relatively protective of Arabs. Mass terrorism in Israel has never been targeted towards Arabs. Arab society is also known to have strong close-knit social ties that provide support in times of need. Additionally, most are religious, and may find solace in religious practices, that may be efficient in buffering terrorism-related stress (46).

**Aims of the study**

The present study aimed to assess the psychological and psychiatric effects of exposure to terror on Jews and Arabs and assess a number of contributing factors over a period of 2 years. More specifically, we sought to assess the unique and cumulative contribution of social (e.g. minority status, income, education) and psychological (e.g. sense of safety, coping, optimism) resources to the development of posttraumatic symptomatology. Furthermore, we sought to assess change in posttraumatic symptomatology in the two communities over time.

**Material and methods**

**Background**

This was a two-wave cross-sectional telephone survey performed by a polling institute at a 2-year interval assessing the mental health impact of terrorism on two independent representative samples of the Israeli population.

**Sampling**

The samples were obtained using a within-strata random-sampling method (47).

In the first wave 902 individuals were randomly phoned, 742 reached (82% contact rate) and 512 (69%) agreed to participate.

In the second wave 828 were called, 702 reached (84.8% contact rate) and 501 (71.4%) agreed to participate.

Both waves yielded representative samples of the adult Israeli population with a maximum sampling error of 4.5%. Strata were identified by address, immigration status, religious status, ethnic belonging, age, and gender. The size of each stratum was based on information drawn from the Israel Central Bureau of Statistics. Demographics comparing the Jewish and Arab populations for both waves of the study are presented in Table 1.

**Data collection and timing**

Structured telephone interviews were conducted in Hebrew, Russian or Arabic. Interviews were carried out on April 30, 2002 for the first wave by which time Israelis had suffered 19 months of terror, and on May 5, 2004 for the second wave of the study, after 44 months of terror. During the period between September 2000 and May 2002 there were roughly twice the amount of victims (4318 vs. 2002) compared to the period between May 2002 and May 2004, although more people died during the second period (472 in the first period vs. 558). The reduced amount of attacks was due to improved security measures, but the increase in deaths was due to the increased number of suicide bombers.

The interviewers were telephone-survey professionals with at least 1 year of experience who received training by a psychologist (MG) and a graduate psychologist with experience in conducting telephone surveys. Ongoing in-listening was performed during the interviews and feedback was provided to the interviewers. A pilot study was carried out to choose from the pool of interviewers the best suited for this kind of study based upon their interview performance during the pilot study.

**Questionnaire**

The research instruments were two structured questionnaires. Participants were asked to reply to the questions with respect to the time that had elapsed since the beginning of the Intifada.

**Demographic factors.** Gender, age, years of education, ethnic background (Jewish/Arab), religiosity, area of residence (urban/non-urban), place of birth (Israel/elsewhere), and income were recorded.
Exposure. Subjects were asked i) whether they had been exposed to a terrorist attack, ii) whether they had a friend or family member who had been exposed, and iii) whether they or their friends or family members were physically injured in the attack. Based on these questions, the responses to the questions were aggregated to form three distinct exposure groups: i) no exposure, ii) friend/family (indirect) exposure (injured and non-injured), and iii) direct exposure (including personal physical injury).

Posttraumatic stress related symptomatology. Traumatic stress related symptoms (TSRS), probable PTSD and Traumatic Stress Resiliency were measured using a modified version of the Stanford Acute Stress Reaction Questionnaire [SASRQ; (48)]. The questionnaire consists of five groups of questions representing the five PTSD clusters as defined by the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) criteria. It includes 23 statements, each referring to a particular stress-related symptom or behavior. We used four persistent re-experiencing items (Cluster B). Six avoidance/numbing items (Cluster C), six hyperarousal items (Cluster D), four dissociative items, two impairment-cluster items (one work-related, and one social-related), and one distress item. The present questionnaire was used rather than a PTSD questionnaire due to the ongoing nature of the terrorist threat. Responses were on a 5-point Likert-scale (0 = disagree, to 4-totally agree). Duration of symptoms was also recorded: i) less than 1 month, ii) more than 1 month. The questionnaire showed an alpha Cronbach of 0.91 (10). Cutoff for TSRS and probable PTSD was determined by a score of ≥2 and a duration or more than 1 month. TSRS was defined by the sum of items reaching cutoff. The ≥2 cutoff was used as suggested by the author of the questionnaire (48) and as applied in Silver et al.’s (49) groundbreaking study on the impact of 9/11 because we considered the answer ‘somewhat agree’ significant, especially if the duration was more than 1 month. DSM IV criteria were used to assess probable PTSD, including functional impairment. A telephone pilot study using a student sample (n = 30) showed good test–retest properties over 2 weeks (Pearson r = 0.85).

TS resiliency was defined as having no TSRS symptoms. A similar approach to assessing the absence of stress related symptomatology was proposed by Bonnanno et al. (7) and Galea et al. (50).

Feeling depressed. The item: ‘I feel depressed or gloomy’ evaluated depressive mood. A response of two or more on the 5-point Likert scale from [‘not true at all’ (0) to ‘very true’ (4)] noted depression. Two-week test–retest on a sample of 30 students was r = 0.81 (10).

Future orientation

Two items were used, modified from the Future Orientation Scale (51), tapping the respondents’ optimism about their personal and the State of Israel’s future. Responses were on a 6-point Likert scale ranging from (1) very much agree to (6) don’t

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Table 1. Demographics, exposure to terror and past exposure to traumatic situations in the Arab and Jewish population in wave 1 and wave 2

<table>
<thead>
<tr>
<th>Wave 1: April 2002</th>
<th>Wave 2: May 2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arabs (n = 68), N (%)</td>
<td>Jews (n = 444), N (%)</td>
</tr>
<tr>
<td><strong>Women</strong></td>
<td></td>
</tr>
<tr>
<td>35 (51.5)</td>
<td>227 (51.1)</td>
</tr>
<tr>
<td><strong>Age (range 18–92)</strong></td>
<td></td>
</tr>
<tr>
<td>31.5 (10.5)</td>
<td>43.6 (15.9)</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
</tr>
<tr>
<td>0–8 years</td>
<td>7 (10.4)</td>
</tr>
<tr>
<td>9–12 years</td>
<td>39 (58.2)</td>
</tr>
<tr>
<td>13+</td>
<td>21 (31.3)</td>
</tr>
<tr>
<td><strong>Income</strong></td>
<td></td>
</tr>
<tr>
<td>Under average</td>
<td>42 (62.7)</td>
</tr>
<tr>
<td>Average</td>
<td>15 (22.4)</td>
</tr>
<tr>
<td>Above average</td>
<td>10 (14.9)</td>
</tr>
<tr>
<td><strong>Exposure</strong></td>
<td></td>
</tr>
<tr>
<td>No exposure</td>
<td>55 (80.9)</td>
</tr>
<tr>
<td>Direct</td>
<td>5 (7.4)</td>
</tr>
<tr>
<td>Indirect</td>
<td>8 (11.8)</td>
</tr>
<tr>
<td><strong>Objective risk</strong></td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Non-Urban</td>
<td>68 (100)</td>
</tr>
</tbody>
</table>

All n are as indicated except for education for the first wave (n = 503), and income for the first wave (n = 456) and income in the second wave (n = 467).

**P < 0.01, ***P < 0.001.
agree at all; a score of 3 or less indicated a positive response. Two-week test–retest on a sample of 30 students was found to be 0.90 and 0.92 respectively (10).

Sense of safety
This was tapped by two items which queried respondents’ sense of threat to themselves and their relatives. Responses were on a 5 point Likert scale from ‘not at all’ (0) to ‘very much’ (4). The score >1 indicated a positive response. Two-week test–retest on 30 students was 0.93 and 0.90 respectively (17).

Help-seeking
Respondents were asked whether they currently felt a need for psychological or psychiatric treatment and whether they were currently in psychological or psychiatric treatment (yes/no).

Coping
Ten questions were taken and adapted from the COPE (52) questionnaire, each referring to a different means of coping partly based upon the original factor structure: emotional social support/venting of emotions, instrumental social support, faith in god, acceptance, mental disengagement, denial, use of alcohol and cigarettes, use of tranquilizers, humor and engaging in activities. The full Questionnaire was first administered by phone to a student sample (n = 30). Items with the lowest test–retest reliability were removed, then specific questions were amalgamated to reduce the number of questions. Three questions related to coping in the immediate aftermath of a terrorist attack were added, namely whether the respondents had checked on the safety of relatives and/or friends, whether they avoided TV and radio news broadcasts, and whether they sought help from friends or family. Responses indicating frequency of coping methods employed were on a 5 point scale, ranging from ‘not at all used’ (0) to ‘used a great deal’ (4). A pilot study using a student sample showed good test–retest properties for the final questionnaire over 2 weeks [Pearson r = 0.79–0.98; n = 30; (10)]. This questionnaire was only administered in the second part of the study.

In the first part of the study, we also queried whether the current events reminded the respondents of the Holocaust, or previous wars.

Analysis of non-participants
Non-participants (n = 200) in the first study did not differ on sex, income, residence, immigration status, religion from participants. Non-participants were significantly younger [mean age 35.7 (SD, 15.4)] than participants [mean age 38.2 (SD, 14.2) years; t146; P = 0.04]. In the second study, non-participants (n = 201) had slightly lower income [Mean score 2.6 (SD, 1.3) vs. 2.8 (SD, 1.3); t700 = 2.0; P = 0.05] and were younger than participants [Mean age 42.0 years (SD, 17.1) vs. 44.8 (SD, 17.1); t700 = 2.0; P = 0.05].

Ethics
Both waves were separately reviewed and approved by the Lev-Hasharon Mental Health Center Helsinki committee.

Statistical analyses
Binominal tests were performed comparing Arabs and Jews on all the variables. We further assessed the binomial relationship between probable PTSD, TSRS, and TS Resiliency and all the independent variables available in each of the studies. The variables significantly related with the aforementioned outcome variables were entered in one
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forward stepwise linear regression for TSRS and two forward conditional logistic regressions for probable PTSD and TS Resiliency in each wave.

Results

Demographic, exposure and previous life events differences between Jews and Arabs

Table 1 shows that the Arab population was younger and had lower levels of education and income. Table 1 also shows that after 19 months of Intifada Jews were more exposed to terrorism but after 44 months this difference was not observed.

In the first wave, we observed that there were no differences between Jewish and Arab populations concerning whether the terrorism situation reminded them of the holocaust or previous wars [Arabs: n = 14 (20.6%), Jews: n = 121 (27.4%); \( \chi^2 = 1.4, P = \text{ns} \)].

In the second wave of the study, we observed that Jewish Israelis were more directly [Arabs: n = 15 (21.4%), Jews: n = 164 (38.2%); \( \chi^2 = 7.4, P < 0.01 \)] and indirectly [Arabs: n = 24 (34.3%), Jews: n = 229 (53.4%); \( \chi^2 = 8.8, P < 0.01 \)] exposed to life-threatening situations. Jews reported more economic downfalls [Arabs: n = 36 (51.4%), Jews: n = 289 (67.2%); \( \chi^2 = 6.6, P < 0.01 \)] and Arabs reported more ethnic discrimination [Arabs: n = 22 (31.4%), Jews: n = 48 (11.2%); \( \chi^2 = 20.5, P < 0.01 \)]. No differences were observed in major life events for the previous year [Arabs: n = 46 (66.7%), Jews: n = 242 (56.3%); \( \chi^2 = 2.6, P = \text{ns} \)].

Results are presented in Table 2. In wave 1 Jews had about twice more probable PTSD than Arabs, but this difference was not significant. In wave 2 Arabs had significantly more often probable PTSD than Jews. This same pattern is true for the severity of TSRS. After 19 months of terror, significantly more Arabs were TS resilient and had less functional impairment, while after 44 months the trend reversed and only very few Arabs were TS resilient and they had more functional impairment. In wave 2 more Arabs had feelings of depression.

Optimism concerning one’s personal future was found to be higher for the Arabs in wave 2, and their level of presumed threat to family and friends remained lower for the two waves.

No differences were observed between both population in either wave 1 or wave 2 in whether the individual was in treatment [Wave 1, Arabs: n = 1 (1.6%), Jews: n = 10 (2.3%), \( \chi^2 = 0.1, P = \text{ns} \). Wave 2, Arabs: n = 2 (2.9%), Jews: n = 16 (3.7%), \( \chi^2 = 0.1, P = \text{ns} \)] or felt the need for treatment [Wave 1, Arabs: n = 4 (6.2%), Jews: n = 22 (5.0%), \( \chi^2 = 0.2, P = \text{ns} \). Wave 2, Arabs: n = 7 (10%), Jews: n = 41 (9.6%), \( \chi^2 = 0.1, P = \text{ns} \)] following the terrorist incidents.

Coping differences between Jews and Arabs (wave 1 only)

Jews used more Social Activities [M = 9.2, SD = 3.7 vs. Arabs: M = 4.6, SD = 3.8; \( t(508) = 9.42, P < 0.001 \), ‘detachment’ [M = 2.4, SD = 2.0, vs. Arabs: M = 1.8, SD = 1.8; \( t(507) = 2.38, P < 0.05 \)].

<table>
<thead>
<tr>
<th>Posttraumatic symptomatology</th>
<th>Wave 1: April 2002</th>
<th>Wave 2: May 2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arabs</td>
<td>Jews</td>
<td>Statistics</td>
</tr>
<tr>
<td>Probable PTSD</td>
<td>4 (5.9)</td>
<td>45 (10.2)</td>
</tr>
<tr>
<td>Traumatic stress Resilient (no TSRS symptoms)</td>
<td>25 (37.3)</td>
<td>94 (21.3)</td>
</tr>
<tr>
<td>TSRS (Mean, SD)</td>
<td>3.5 (4.0)</td>
<td>41 (4.5)</td>
</tr>
<tr>
<td>TSRS: At least one intrusive symptom</td>
<td>21 (30.9)</td>
<td>168 (38.0)</td>
</tr>
<tr>
<td>TSRS: At least one avoidance symptom</td>
<td>28 (41.8)</td>
<td>254 (57.5)</td>
</tr>
<tr>
<td>TSRS: At least one hyper-arousal symptom</td>
<td>35 (13.9)</td>
<td>217 (49.1)</td>
</tr>
<tr>
<td>Functional impairment</td>
<td>14 (20.6)</td>
<td>222 (50.2)</td>
</tr>
<tr>
<td>TSRS: At least one dissociation symptom</td>
<td>22 (32.8)</td>
<td>115 (26.0)</td>
</tr>
<tr>
<td>Feelings of depression</td>
<td>43 (64.2)</td>
<td>255 (57.7)</td>
</tr>
<tr>
<td>Optimism</td>
<td>57 (87.1)</td>
<td>361 (81.7)</td>
</tr>
<tr>
<td>Optimistic about your personal future</td>
<td>43 (64.2)</td>
<td>294 (67)</td>
</tr>
<tr>
<td>Sense of threat</td>
<td>37 (54.4)</td>
<td>270 (51.5)</td>
</tr>
<tr>
<td>Threat to your own life</td>
<td>38 (55.9)</td>
<td>306 (69.9)</td>
</tr>
</tbody>
</table>

PTSD, posttraumatic stress disorder; TSRS, traumatic stress related symptoms.

\*P < 0.05, \**P < 0.01, \***P < 0.001.
Independent variables correlated with PTSD-related symptoms

Table 3 for wave 1 and Table 4 for wave 2 present the independent variables significantly associated with at least one of the PTSD-related measures. Female gender, absence of optimism concerning oneself and the future of the state, a sense of threat regarding oneself and regarding family and friends were positively related to all three PTSD related measures in both waves.

Immigrant status was related to the absence of TS resiliency and to TSRS in both waves. Low income was related to more TSRS in the second study only. More rural residents were found to be TS resilient in the first study. Being religious was
related to more TSRS in both waves. Racism was related to greater TSRS. Significant stressful events during the past year and substantial income loss was significantly related to all the PTSD measures in the second study. Age was not found to be related to any of the outcome measures.

Regarding coping styles factors, those with probable PTSD used significantly more ‘social activities’ (M = 10.44, SD = 4.15) than individuals without probable PTSD (M = 8.37, SD = 3.93), t(508) = 3.55, P < 0.001; more ‘avoidance’ (M = 2.71, SD = 1.96) compared to individuals without probable PTSD (M = 1.54, SD = 1.93), t(508) = 4.08, P < 0.001; and more ‘cigarettes, alcohol or tranquilizers’ (M = 1.00, SD = 1.77) compared to individuals without probable PTSD (M = 0.18, SD = 0.69), t(508) = 6.31, P < 0.001. Individuals with TS resiliency used less ‘social activities’ (M = 6.99, SD = 3.46) compared to those with no TS resiliency (M = 9.06, SD = 4.03), t(508) = 5.07, P < 0.001; they used less ‘avoidance’ (M = 0.95, SD = 1.46) compared to those without TS Resiliency (M = 1.87, SD = 2.05), t(508) = 4.54, P < 0.001; and less ‘use of cigarettes and alcohol’ (M = 0.01, SD = 0.10) compared to those without TS Resiliency (M = 0.34, SD = 1.01), t(508) = 6.27, P < 0.001.

Pearson correlations showed a significant positive relationship between TSRS and ‘social activities’ (r = 0.27; P < 0.001), the use of ‘avoidance’ (r = 0.26, P < 0.001) the use of ‘disengagement’ (r = 0.11, P < 0.02) and the use of ‘cigarettes, alcohol or tranquilizers’ (r = 0.40, P < 0.001). The use of ‘detachment’ was found to be related to less TSRS (r = 0.14, P = 0.002).

Exposure to terrorism, events reminiscent of the Holocaust and previous wars, and the need for treatment were not significantly related to the dependent variables.

Regression analyses

The summaries of the regression models are presented in Table 5 for wave 1 and in Table 6 for wave 2. The final models only are presented.

Probable PTSD and TSRS in the first wave were associated with female gender, low sense of safety, avoidance coping and coping via the use of alcohol, cigarettes and tranquilizers. Low optimism concerning the future of the state, low sense of personal safety, coping through social action, and coping through disengagement were also related to higher TSRS. Detachment coping was related to lower TSRS scores. Not being TS resilient was related to being Jewish, living in cities, endorsing low personal optimism, low optimism concerning the future of the state, coping through social action and avoidance coping.

The second wave revealed that being female and being Arab contributed significantly to reporting probable PTSD, having more TSRS, and not being TS resilient. Being born in Israel (compared to being born outside of Israel), optimism about the
future of the State of Israel contributed to being TS resilient. Less education contributed to more TSRS; sense of personal safety contributed to TS resilience and less TSRS, low sense of safety concerning close relatives contributed to TSRS, and a substantial loss of income in the past contributed to meeting symptom criteria for probable PTSD and to more TSRS.

Discussion

After 19 months of terrorism Arab Israelis and Jewish Israelis reacted similarly. This is in line with a number of previous studies that have also found Jewish Israelis reacted similarly. This is in line with previous studies that have also found that Arabs, Jews used more 'social activities' and 'detachment'. Arabs used more 'avoidance', which includes avoiding the media and distracting oneself through activity, as well as 'disengagement', that includes coming to terms with the situation and putting one's faith in God. Studies have suggested that 'avoidance', may initially result in reduced distress but over time increase distress (64, 65). A tendency for media avoidance may also reflect a growing feeling of alienation Arabs feel towards society. Together with the use of religion for coping this may lead to within-group confinement and being in touch with more activist elements within Arabic society that may exacerbate already existing dual allegiance conflicts.

Additionally, the traditional 'collectivism' and 'familism' (66) characterized by strong within-group ties found in Arab culture may lead to less help-seeking outside of the traditional family and kin-circle leading to increased stress due to familial obligations exceeding help giving capacities (67).

The repeated exposure to trauma of close kin living in the Palestinian territories, may also potentially be a significant source of secondary traumatization. This is compounded by the fact that Arab ethnicity is sometimes assumed to be synonymous with being pro-terrorist. This may cause not only significant distress but make it even more difficult for this population to express their cultural heritage, belonging and political views, that may be sympathetic to the Palestinian cause, without being accused of being the enemy. Indeed studies among Vietnam veterans of Asian American origin found...
PTSD to be associated with feeling of being culturally identified with the enemy (36).

A final but important point to consider, is that we have used the terminology of resilience, but in parallel we may also assume that what has been eroded is not so much the resilience of the Arab population, but its resistance (68). Further studies will have to elucidate this point.

Distinct from our focus on minority status, a number of additional interesting findings were observed.

First as we have noticed before, for the Jewish population some symptoms worsened, some remained unchanged and others improved, possibly due to interactive processes of stress accumulation, the ability to compartmentalize stresses and habituation. The level of TSRS worsened by 14.6%, the number of resilient individuals dropped by 5.3%. Less Jews were optimistic about the countries’ future (from 67% to 57.5%) and more felt the need for treatment (from 5% to 9.6%). This pattern seems to reflect an accumulation of stress and erosion of resiliency after years of ongoing terror. On the other hand, the percentage of respondents who met probable PTSD criteria remained roughly the same, as well as the scores on the intrusive and dissociation symptom clusters and functional disruption. These results suggest an ability to compartmentalize stresses so that even though the level of stress remained significant it remained relatively under control. Finally a number of measures point to an apparent reduction in distress for the Jewish population, namely less individuals with avoidance and hyper-arousal symptoms, less feelings of depression and sense of threat for family and relatives. This seems to point to a process of habituation, although it cannot be ruled out that the changes may stem from a reduction in the number and scope of terrorist attacks over the 2-year interval, and/or from the increased visibility of preventive measures in urban centers and offensive actions by the Israeli Army.

Second, supporting findings from previous studies, female gender (12), lack of optimism (16) and sense of threat (17) were found to be risk factors for the development of posttraumatic symptomatology.

Third, we observed that less education was marginally related to higher TSRS and that a substantial loss of income in the past predicted PTSD and TSRS in the second wave. This is in line with the previously described findings suggesting that certain risk factors may only become prominent in their influence as stress becomes chronic and resources are depleted. We also found that immigrant status affected TSRS and resiliency negatively in the second wave. This could suggest that immigrants may in times of existential crises be reminded of traumatic memories relating to the immigration process (69). Furthermore, post hoc analysis of our sample shows that most immigrants live in urban communities, have lower incomes and are older. For this group also, the impact of stress may only become symptomatic over time as resources become depleted.

Fourth, living in a city was a factor that affected resiliency negatively only in wave 1 and not in wave 2. A reason for this change may be that as the Intifada progressed more attacks were perpetrated in kibbutzim and villages resulting in feelings of lack of security across the population.

Relating to coping modes we found that avoidance, disengagement and the use of alcohol, cigarettes and tranquilizers were indicators of unhelpful coping. Interestingly, we found that coping through different means of social action was also not helpful while detached coping seemed to buffer distress. This suggests that in situations of chronic uncontrollable stress, social actions may exacerbate stress, and that a certain positive ‘detachment’ might be a positive means of coping with chronic stressors. Furthermore the results also suggest that in times of traumatic stress people in distress use many coping modes.

Repeated terrorist attacks and their threat may thus impact different populations differentially and certain conditions, often inherent to political conflict situations may put minorities at risk. Furthermore, this impact may only be observable over time.

Study limitations

Results should be considered cautiously as the Arab Israeli samples were small and under-sampled, making up for 13.7% of the two samples, compared to 19.5% of the general population. We must also take into account that this is a cross-sectional study on independent samples, and not a longitudinal study and that therefore questions about attitude and coping may be artifactually related to posttraumatic symptomatology due to state-dependent responding, and that we thus cannot assume causality. Some of the measures we used were also one-item questions whose validity can be questioned. Furthermore, it is also possible that certain cultural differences were overlooked in the expression of traumatic distress.

Implications for mental health policy

It is important that agencies helping the Arab community cope with terrorism understand that
even though exposure levels are low, posttraumatic distress is relatively elevated. Efforts should be made to develop local infrastructures to support this minority and to avoid further alienation and exacerbation of already existing conflicts. We also recommend therapeutic orientations that take into consideration feelings of oppression, dual-allegiance, secondary traumatization and the victim-status found in the Arab narrative as well as being sensitive to this specific culture. It is also important that both within-group resources as well as ties with the State be strengthened. Indeed approaches geared at strengthening racial-ethnic self-schemas incorporating both in-group empowerment as well as strengthening ties with society as a whole may be the most potent approach to strengthen resiliency of vulnerable minorities (70).

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References


