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Living in the shadow of terrorism: Psychological distress and alcohol use among religious and non-religious adolescents in Jerusalem

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Abstract

This study examines the effects of prolonged exposure to terrorism in 600 religious and non-religious Jewish adolescents living in Jerusalem, particularly post-traumatic stress (PTS) symptoms, depressive symptoms, alcohol use, coping strategies and social support. The youth in Jerusalem reported high exposure to terrorist acts. This exposure was associated with high PTS, depressive symptoms and alcohol use. Despite an apparently greater exposure to terrorism, religious adolescents reported lower levels of PTS and alcohol consumption, but similar levels of depressive symptoms to non-religious adolescents. Problem-solving coping predicted higher depressive symptoms for religious adolescents exposed to terrorism but not for similarly exposed non-religious adolescents. In contrast, emotion-focused coping predicted more alcohol consumption among *highly* exposed *non-religious* adolescents, while emotion-focused coping predicted more alcohol consumption among *religious* adolescents with *low* exposure. The overall findings suggest that religiosity may buffer the negative consequences of exposure in other ways than through coping or support.

Keywords: Terrorism; Religiosity; Adolescents; Alcohol use; Substance use; PTSD; Depression; Israel

Introduction

Israeli children and adolescents have been exposed to wars and terrorist attacks since the founding of the State of Israel in 1948 (Neriah et al., 1998). However, the frequency and severity of terrorist attacks increased substantially, with the outbreak of the Al-Akza Uprising in September 2000. From this time till the end of August 2005, 889 terrorist attacks within the "Green Line" (Israeli borders up to 1967) killed 1064 Israelis and injured 7441 (Israel Defense Forces, 2004), among them more than 300 children and adolescents, half of whom were 15–17 years old (Children in Israel: Statistical abstract, 2004).

Jerusalem has been the focus of terrorist activity over the 4 years of the Al-Akza Uprising (Intelligence Terrorism Information Center, 2004). By November 2004, there were 600 terror attacks in the city, of which 288 were shooting attacks and 30 were suicide bombs killing 210 people (Intelligence Terrorism Information Center, 2004). Thus, unfortunately, Jerusalem has become a natural laboratory for examining the impact of terrorism on children and youth. Because the city has a large

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minority of religious Jewish residents, it is possible to compare the effects of prolonged exposure to terror between religious and non-religious Jewish adolescents.

Exposure to terrorism may include physical or psychological proximity to acts of terror (Galea et al., 2002). The accumulative effect of exposure to multiple traumatic events, including terrorism, appears more harmful than experiencing one distinct terrorist act (Garbarino & Kostelny, 1996; Rutter, 1983). Furthermore, psychosocial factors such as ethnicity, religiosity and gender are associated with different levels of psychological distress following exposure to trauma and terrorism (Galea et al., 2002; Klingman & Wiesner, 1982).

Consequences of exposure to terrorism

Perhaps the best-known and most widespread consequences of exposure to terrorism *are post-traumatic stress symptoms* (PTS) and post-traumatic stress disorder (PTSD) (see Joshi & O'Donnell, 2003; Pfefferbaum et al., 2005, for reviews). *Depressive symptoms* are also common in children at all developmental levels exposed to war and terrorism (Gurwitch, Sitterle, Young, & Pfefferbaum, 2002; Shaw, 2003). For example, a large-scale representative sample of New York City public school children 6 months after the September 11 terror attack revealed higher than expected rates of PTSD (11%) and major depression (8%) (Hoven, Duarte, & Mandell, 2003). Exposure to political violence in Israel is similarly associated with depressive and general distress symptoms (Slone, Adiri, & Arian, 1998; Slone & Hallis, 1999) Furthermore, the higher the level of exposure, the more negative are the psychological consequences (Pine & Cohen, 2002; Pfefferbaum et al., 2005).

Although the potential association between exposure to terrorism and substance use by adolescents has been recently acknowledged (Joshi & O'Donnell, 2003), no study has been published on the association between exposure to terrorism and *youth* alcohol or substance use. Among adults, a telephone survey of Manhattan residents 5–8 weeks after the 9/11 attack found nearly 29% of users reporting increased use of cigarettes, marijuana or alcohol (Vlahov et al., 2002). Furthermore, 19.3% of respondents who had not used these substances during the week before September 11 started drinking alcohol. A follow-up 6 months later found that although PTSD had substantially declined, the rate of substance use stayed almost the same (Vlahov, Galea, Resnick, & Klipatrick, 2004).

These findings suggest that substance use may be a long-lasting negative consequence of exposure to terrorism. Similarly, an exploratory study examining 1150 junior high and high school students in the greater Tel Aviv metropolitan area in Israel found that physical and psychological proximity to terrorist attacks were significant predictors of alcohol consumption (Schiff et al., in press). This holds true even when controlling for PTS and depressive symptoms. However, this study was conducted in an area much less exposed than that of the present study, included a shorter 2-item measure of exposure, and neither religiosity nor coping or social support were addressed.

Religiosity and adjustment to stress and trauma

Religiosity, like spirituality, is a belief in a power apart from one's own existence. In the case of religiosity, a belief in God defines the search for purpose and meaning (Connor, Davidson, & Lee, 2003). Religiosity, unlike spirituality, necessitates traditional rituals and practices dictated by the belief in God as a force transcending everyday sense-bound reality (Connor et al., 2003). The Jewish religion, the focus of the present study, is rich in rituals and practices, and thus a person who defines him/herself as a religious Jew engages in religious practices such as observing Shabbat and eating Kosher food (Levy, Levinson, & Katz, 2002).

Religiosity has been associated with better outcome following trauma and life stressors (Ashby-Wills, Yaeger, & Sandy, 2003; Tedeschi & Calhoun, 1996) and has consistently been associated with lower levels of alcohol consumption and marijuana use among adolescents (Brown, Schulenberg, Bachman, O'Malley, & Johnston, 2001). For example, a representative sample of urban US adolescents revealed that religiosity buffered the effect of negative life events on cigarette smoking, heavy drinking and marijuana consumption (Ashby-Wills et al., 2003). In contrast, the buffering effect of religiosity among adults is less clear. Connor et al. (2003) found that, following violent trauma, acceptance of spiritual belief predicted worse mental health outcomes. Similarly, in a cross-sectional study of Lebanese hostages of war, an increase in religiosity predicted *higher* psychological distress. Here the authors suggested that those already