
Brief Report

Correlates of Psychological Distress Following Armed Robbery

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Although mental health professionals have long been aware of the impact of traumatic events, it was not until 1980 that the term posttraumatic stress disorder (PTSD) was introduced into the DSM-III. Since then, one major goal of research has been to identify factors associated with distress following trauma; as yet, few reliable indicators have emerged. Within the population of armed robbery victims, this is particularly true. The purpose of this study was to investigate possible correlates of posttrauma distress in armed robbery victims, and to assess the overall level of distress within this group. A questionnaire was mailed out to 57 robbery victims, aged 15 to 65, who were recruited as study volunteers via community outreach. Severity of the trauma, vulnerability attributions, and avoidant coping were significantly related to distress level, and victims exhibited a high level of distress.

KEY WORDS: armed robbery; victims; psychological distress; trauma.

In most western countries, the incidence of armed robberies has increased dramatically since the 1960s, and there is growing evidence that as the frequency of armed robberies has increased, so too has their brutality (Herlofsen, 1992). It has been established that all armed robbery victims suffer psychologically to some degree following their experience; however, there is little agreement about the extent of the impact and the amount of time it takes victims to recover (Bamber, 1992; Wakefield, 1993).

Gabor and Normandeau (1989) interviewed owners of small businesses that had been robbed and found that about two thirds of victims reported one or more physical complaints including chronic nervousness, insomnia,

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and headaches. Over 90% of victims also reported a growing fear of hold-ups, general distrust of others, increased aggressiveness, moodiness and depression. In a sample of 219 bank robbery victims, Leymann (1985) found that although physiological stress symptoms disappeared within 3 weeks for most victims, between 5 and 8% complained of having such symptoms for at least six months following the event. Dyregrov, Kristoffersen, and Müller (1991) studied 26 bank and postal employees who had been victims of an armed robbery, and found that 1 month after the event victims scored highly on intrusion and avoidance as measured by the Impact of Event Scale (IES), but for most victims, intrusion and avoidance symptoms had abated considerably at a 6-month follow-up. Finally, in an Australian study of female bank employees, Tunnecliffe and Green (1986) reported that 11 of 16 armed robbery victims interviewed up to 2 years after the event could be classified as "clinical cases," and six of these cases were rated as suffering from posttraumatic stress disorder (PTSD).

Clearly people differ markedly with respect to the specific posttrauma symptoms they exhibit, as well as the severity and duration of these symptoms. While one person may develop chronic PTSD, another who has had the same experience may exhibit no lasting symptoms (Green, Wilson, & Lindy, 1985). Recognition of this fact has led to a plethora of studies attempting to identify factors which distinguish those who recover quickly after a traumatic experience from those whose recovery is slower or less complete.

In these "impact studies," researchers usually group predictors into a number of conceptually or theoretically distinct categories. One such approach is the temporal model which conceptualizes factors along a time line, with the impact of earlier factors being mediated by later ones. Pretrauma variables are seen as person variables, midtrauma factors are seen as environmental variables, and posttrauma factors represent the interaction between the two.

Pretrauma Factors

A number of person variables have been studied in attempting to identify determinants of those at risk for posttrauma distress. While there is inconsistency in findings, it appears that younger (Kaniasty & Norris, 1992) married females (Freedly, Resnick, Kilpatrick, Dansky & Tidwell, 1994) of low socioeconomic status (SES, Kaniasty & Norris, 1992), who have experienced prior trauma (Leymann, 1985) and have a history of either psychological problems (Blanchard et al., 1995) or a history of drug or alcohol abuse (Ruch & Chandler, 1983), cope more poorly following trauma.

Midtrauma Factors

The severity of the stressor is seen as a significant determinant of post-trauma distress; however, severity is not clearly defined in the DSM-IV, and researchers have employed a wide range of objective and subjective variables to measure this construct. Clinical observations and empirical evidence suggest that a combination of subjective and objective measures of severity may be better predictors of distress than either alone (Dooley, 1991; Freedy et al., 1994) as physical injury and perceived life threat are both strongly associated with the development of PTSD (Kilpatrick et al., 1989).

Posttrauma Factors

There is strong consensus that social support is crucial in reducing posttrauma distress (e.g., Leymann & Lindell, 1990; Moscarello, 1990). However, perceived social support has consistently been found to be a better predictor of distress than an objective measure of the same construct (Kaniasty & Norris, 1992).

Following a traumatic experience, the victim's cognitive appraisal of the incident may play an important role in whether or not problems develop (Kilpatrick et al., 1987). Often the victim's feeling of invulnerability is shattered (Janoff-Bulman, 1989), and research suggests that a perception of unique vulnerability (i.e., the belief that one is particularly vulnerable to victimization) is significantly more maladaptive than the more objectively accurate perception of universal vulnerability (i.e., the belief that all people are vulnerable to victimization; Winkel, Denkers, & Vrij, 1994).

Given that avoidance is a key symptom of PTSD, it is hardly surprising that the use of avoidance as a coping strategy following trauma has consistently been linked with greater distress (Bryant & Harvey, 1995). It has been hypothesized that high avoidance, particularly in conjunction with high intrusion, prevents victims from cognitively processing the traumatic experience, with the result that they remain in a highly aroused, psychologically distressed state (Creamer, Burgess, Buckingham, & Pattison, 1990).

The Present Study

While we have advanced our knowledge about determinants of post-trauma distress in general, it is unclear at this time whether these findings

can be extrapolated to victims of armed robberies. Thus, the aims of the current study were to: (1) examine the overall level of distress in a sample of armed robbery victims, and (2) investigate correlates of that psychological distress. We hypothesized that the level of distress would be comparable to that found in victims of other major traumas reported in the literature, and that greater distress would be associated with lower socioeconomic status (SES), a more severe trauma, poor social support, greater use of avoidant coping strategies, and attributions characterized by high unique vulnerability beliefs.

Method

Procedure and Sample

Details of the study were advertised in newspapers and on the radio, and flyers were sent to community counseling agencies for victims of crime. Potential participants were asked to contact the researchers by phone. Selection criteria were such that the participant had to have been a victim of an armed hold-up in the last 5 years, was aged 15 to 65 years, English speaking, and willing to participate in the study. If selection criteria were fulfilled, initial demographic information was obtained, and the aims of the study were explained along with the requirements of participation. A questionnaire package and a postage-paid envelope was then mailed to the participant.

The final sample consisted of 57 English-speaking armed robbery victims aged between 15 and 65. Of the 79 people who were mailed questionnaires, 57 responded, yielding a response rate of 72%. This response rate compares favourably with similar studies, in which response rates are often in the range of 20–50% (Kleber & Brom, 1992). The typical respondent was 45 to 54 years of age, female, married, and born in Australia. Approximately 60% of the robberies had occurred within the preceding 12 months, and 40% of the sample reported incidents that had occurred between 1 and 6 years ago. Typically, the robbery had occurred in a bank, and debriefing was provided. The same was true of the average nonrespondent. Sample demographics are summarized in Table 1.

Measures

Questions were designed to measure the following pretrauma demographic and background information: age, gender, income, education, mari-

Table 1. Demographics of the Sample

Variable		Percentage
Age	Range 18–63 years	100
Sex	Male	39
	Female	61
Ethnicity	Australian born	77
	Born overseas	23
Education	Primary	4
	Secondary	60
	Tertiary	36
Marital status	Married	68
	Not married	32
Psychiatric history	Yes	12
	No	88
Prior trauma	Yes	28
	No	72
Debriefed	Yes	65
	No	35
Where robbery occurred	Bank	49
	Other counter job	21
	Driving job	18
	Other	12
Time Since Incident Range 2 weeks–6+ years	0–1 month	3
	1–2 months	2
	2–3 months	2
	4–6 months	13
	7–12 months	40
	13–18 months	10
	19–36 months	9
	37–72 months	7
	>72 months	14

tal status, prior trauma, prior stress, and history of mental illness. SES was measured by asking respondents to indicate their level of education on a scale ranging from 1 “some or no education” to 9 “completed postgraduate degree.” Current level of income was reported on a scale 1 “less than \$10,000” to 8 “more than \$50,000.” Total SES was calculated by summing scores on these two items, giving each item equal weight.

As no adequate measure of trauma severity was available, a set of questions scored on Likert scales was developed. Items assessed degree of physical violence, duration of incident, type of weapon, physical injury sustained, medical attention required, level of verbal threat, perceived life threat, number of victims present, number of assailants, and extent of personal involvement. For example, physical violence was scored on a Likert scale ranging from 1 “not violent at all” to 7 “extremely violent”; duration

was scored on a scale ranging from 1 "less than 5 min" to 6 "longer than 1 hr"; the eight remaining items were scored on 4-point Likert scales. An overall severity score was calculated by summing responses on these items, giving each equal weight. The total possible severity score was 40.

Posttrauma variables included perceived social support, attributions and coping style. Perceived social support was measured using the social support scale developed by Pollack and Harris (1983), which includes 23 items based on themes of alienation and satisfaction. Respondents were asked to indicate the extent to which they agreed or disagreed with each item, on a scale ranging from 1 "not at all" to 4 "extremely." Scores on the scale can range from 23 to 92, and a test-retest reliability of .90 has been reported (Pollack & Harris, 1983).

Vulnerability attributions were measured by asking the participants to respond on a Likert scale to the question, "To what extent do you believe the incident was more likely to happen to you than someone else?" Responses were scored 1 = "not at all" to 6 = "completely believe". In addition, perceived stability was measured by the question, "Do you think the cause(s) of the incident was something that will change over time, or something that is permanent?" Responses were scored 1 = "entirely changing, unstable over time" to 6 = "entirely permanent, unchanging." Scores on these items were summed to obtain an overall vulnerability score. A principal components analysis (varimax rotation) was used to check the unidimensionality of the derived scale (eigenvalue = 1.78; mean factor loading = .77).

Coping style was measured by the Ways of Coping Checklist, revised (WCCL-R; Vitaliano, Russo, Carr, Maiuro, & Becker, 1985). Respondents are required to indicate their use of 42 coping strategies with respect to the particular stressor (the hold-up). There are five subscales: problem solving, wishful thinking, seeking social support, blaming self, and avoidance. The items are scored on a 4-point Likert scale where 1 = "not at all," 2 = "slightly," 3 = "moderately," and 4 = "very much." The avoidance scale was of particular interest in this study. The total avoidance score can range from 10 to 40. Example items include "avoided being with people in general," "refused to believe it had happened," and "tried to forget the whole thing." The WCCL-R has significant predictive validity for depression and anxiety, has an internal reliability of .82, has been used to measure coping style in a range of populations including psychiatric outpatients, spouses of Alzheimer's patients and medical students, and has been linked to both cognitive appraisal and psychological distress (Vitaliano et al., 1985).

Psychological distress was measured using two instruments—the Trauma Constellation Identification Scale (TCIS; Dansky, Roth, & Kronenberger, 1990) and the Impact of Event Scale (IES; Horowitz, Wilner, & Alvarez, 1979). The inclusion of two distress measures was considered nec-

essary in order to assess a broad range of traumatic symptoms and reactions. Whereas the IES measures current distress associated with a trauma, the TCIS does not specify a time frame, but measures symptoms which the victim believes are a result of the incident.

The TCIS is a 30-item scale designed to measure maladaptive cognitive schemata and negative affect associated with a traumatic event, and is a general measure of psychological distress. Responses are scored on a scale ranging from 1 = "strongly agree" to 7 = "strongly disagree." Possible scores range from 30 to 210 with a mean of 81.08 based on a sample of 228 undergraduate psychology students (Dansky et al., 1990). The TCIS has an internal reliability of .94 (Dansky et al., 1990). Respondents are asked to indicate their level of agreement that various symptoms have been experienced as a result of the event, with no time period being specified. Factor analysis of the items has identified two higher-order factors: "negative self-schemata & affects" and "hostile world." Scores on both these factors and the total score have been found to have significant predictive validity, and are related to a range of coping and outcome variables including intrusion, denial, and approach and avoidance (as measured by the IES) and stress-related symptomatology as measured by the SCL-90-R (Dansky et al., 1990).

The IES, a scale commonly used in trauma research, is a 15-item measure designed to measure psychological distress as well as two key diagnostic criteria of PTSD, intrusion and avoidance. Respondents are asked to indicate the extent to which they have experienced various symptoms during the past 7 days, on a scale ranging from 1 "not at all" to 4 "often." The scale has a split-half reliability of .86 and a test-retest reliability of .87 (Horowitz et al., 1979). Scores range from 15 to 60 with a score of 30 or above being considered indicative of significant posttraumatic stress.

Results

Level of Distress

Frequency analyses were conducted on the IES and TCIS scores. Means and standard deviations are presented in Table 2. Results indicated a high level of psychological distress in the victim sample as measured by the IES. Mean IES scores for the current study ($M = 32.8$, $SD = 12.4$) were higher than those found in samples of serious physical injury victims ($M = 15.9$, $SD = 15.6$; Feinstein & Dolan, 1991), mass shooting victims ($M = 20.0$, $SD = 16.0$; Creamer et al., 1990); and other armed robbery victims ($M = 9.5$; Dyregrov et al., 1991); were comparable to those found

Table 2. Descriptive Statistics for Variables Included in Regression Analyses

Variable	Mean	SD	Range	Possible Range
SES	10.20	2.88	2.13–16.00	2–182
Severity	23.57	4.03	14.38–32.33	10–40
Avoidant coping	19.98	5.46	9.00–35.00	10–40
Vulnerability attributions	11.11	3.68	4.00–18.00	3–18
Social support	62.59	10.33	42.00–81.00	23–92
TCIS total	95.75	39.80	30.00–204.00	30–210
IES total	32.87	12.46	15.00–60.00	15–60

Table 3. Correlation Matrix for Variables Included in Regression Analyses

	SES	Severity	Soc. Sup.	Avoid	Vuln	TCIS	IES
SES	1.00						
Severity	-.05	1.00					
Soc. sup.	.19	-.46**	1.00				
Avoid	-.14	.24	-.39**	1.00			
Vuln	.12	-.10	-.13	.30*	1.00		
TCIS	-.16	.34*	-.50**	.57**	.50**	1.00	
IES	-.11	.11	-.29	.49**	.25	.67**	1.00

Note. Soc. Sup. = social support; Avoid = avoidant coping; Vuln = vulnerability attributions. * $p < .05$. ** $p < .01$.

in victims of the Free Enterprise ferry sinking 3 years after the event ($M = 35.1$, $SD = 18.9$; Joseph et al., 1994) ; but were markedly lower than those reported by Horowitz et al. (1979) of a sample of stress-clinic patients ($M = 43.7$, $SD = 17.2$).

Predictors of Distress

In view of conflicting evidence in the literature, preliminary analyses were conducted to examine possible relationships between gender, age, marital status, prior trauma, psychiatric history, and posttrauma distress. Results of t -tests and correlations indicated that none of these background variables shared a significant linear relationship with psychological distress as measured by the IES or TCIS (all $p > .05$).

In order to examine predictors of psychological distress, two separate hierarchical multiple regressions were performed. The five variables: SES, trauma severity, perceived social support, vulnerability attribution, and avoidant coping were regressed onto scores on the two distress measures, the TCIS and the IES. Descriptive statistics and a correlation matrix of these variables are given in Tables 2 and 3, respectively.

The combination of variables was significant in predicting distress as measured by TCIS score (see Table 4). Overall, the model accounted for

Table 4. Hierarchical Multiple Regressions to Predict Distress Scores

Variable	R^2		R_{ch}^2		β	
	TCIS	IES	TCIS	IES	TCIS	IES
Step 1 Socio-economic status	.03	.01	.03	.01	-.12	-.11
Step 2 Severity	.14*	.02	.11*	.01	.21*	.11
Step 3 Vulnerability attributions	.57**	.33**	.43**	.31**	.42**	.31*
Avoidant coping					.29*	.35*
Social support					-.21	-.09

* $p < .05$. ** $p < .01$.

57% of the variance in distress, $R^2 = .57$, $F(5, 37) = 9.88$, $p < .01$. SES alone did not significantly predict distress, but with the addition of trauma severity, a small, significant relationship emerged, $R_{ch}^2 = .11$, $p < .05$. With the addition of the posttrauma variables, R^2 again changed significantly, $R_{ch}^2 = .43$, $p < .01$.

The combination of variables was also able to significantly predict IES score (see Table 4). Overall, the predictors accounted for 33% of variance, $R^2 = .33$, $F(5, 37) = 3.70$, $p < .01$. Only the posttrauma variables offered a unique contribution in predicting posttrauma distress, $R_{ch}^2 = .31$, $p < .01$.

Discussion

The aims of this study were (1) to investigate the level of distress in a sample of armed robbery victims, and (2) to examine correlates of psychological distress using a range of pre-, mid- and posttrauma variables.

In line with expectations and consistent with reports from previous studies (Gabor & Normandeau, 1989; Tunnecliffe & Green, 1986), the overall level of distress in the present sample was high. Even after 6–12 months, victims were still experiencing significant posttraumatic stress. Scores on the IES were comparable to those reported in the literature, and TCIS scores were also elevated, although not to the same extent as IES scores. As such, results of the current study are consistent with the conclusion that victims of armed robbery suffer long-term psychological distress, and that symptoms of intrusion and avoidance are common. Perhaps more significant than the level of distress reported was the enduring nature of this distress. The correlation between distress and time since the event was both small and nonsignificant. This was in contrast to Dyregrov et al. (1989), who found that distress diminished considerably over a 6-month period.

The second aim of the study was to investigate the relationships among pre-, mid- and posttrauma variables and posttrauma distress. In this sample a combination of pre-, mid- and posttrauma variables was sig-

nificantly associated with posttrauma distress, accounting for 57% of variance in TCIS scores and 33% of variance in IES scores. Pretrauma variables were not directly related to distress as has been found in other studies. For example, Kilpatrick et al. (1987) found PTSD was unrelated to victim's age, race, education or income. Trauma severity was only a weak indicator of posttrauma distress, which is in contrast to most impact studies reported in the literature where a strong relationship between severity and distress has emerged, particularly when a composite severity variable has been used (e.g., Freedy et al., 1994). Although the current findings suggest that severity is not important to posttrauma distress in armed robbery victims, an alternative explanation may be that the sample was relatively homogeneous with respect to severity. Feinstein and Dolan (1991) also found that severity of the event did not predict distress in a sample of 48 physical injury victims.

As expected, posttrauma variables were strongly related to posttrauma distress. In particular, victims whose attributions for the event indicated high unique vulnerability and who employed a large number of avoidant coping strategies were most distressed following the event. Although the relationship between attributions and distress has been reported frequently in the literature (e.g., Janoff-Bulman, 1989), vulnerability attributions have received relatively little attention. The current study confirms the importance of studying vulnerability attributions in relation to the development of posttrauma distress.

The finding that victims who made greater use of avoidant coping strategies were suffering a higher level of posttrauma distress is consistent with earlier trauma studies (e.g., Creamer et al., 1990) and confirms the clinical practice of encouraging clients to replace maladaptive, avoidant coping strategies with more problem-focused strategies in order to reduce distress. Contrary to expectation, perceived social support did not emerge as a strong unique indicator of posttrauma distress. This finding contrasts with earlier studies (e.g., Leymann & Lindell, 1990; Kaniasty & Norris, 1992); however, the use of different measures makes comparison difficult.

Findings from this study need to be interpreted within the context of its methodological weaknesses. Limitations of the current study included a possible non-representative sample due to the method of recruitment and the use of retrospective self-report. Although comparable to other reported studies, the sample size was small, and there was no comparison group. Notwithstanding these methodological weaknesses, present findings do indicate that at least some armed robbery victims are still experiencing a great deal of psychological distress, even years after the event; and key

factors associated with this distress have been identified. Clearly more work is warranted before drawing firm conclusions.

Reference

- Bamber, M. (1992). Debriefing victims of violence. *Occupational Health, 44*(4), 115-117.
- Blanchard, E. B., Hickling, E. J., Vollmer, A. J., Loos, W. R., Buckley, T. C., & Jaccard, J. (1995). Short-term follow-up of posttraumatic stress symptoms in motor vehicle accidents. *Behavior Research and Therapy, 33*(4), 369-377.
- Bryant, R. A., & Harvey, A. G. (1995). Avoidant coping style and posttraumatic stress following motor vehicle accidents. *Behavior Research and Therapy, 33*(6), 631-635.
- Creamer, M., Burgess, P., Buckingham, W., & Pattison, P. (1989). *The psychological aftermath of the Queen Street shootings*. Unpublished manuscript, University of Melbourne, Department of Psychology, Victoria.
- Creamer, M., Burgess, P., Buckingham, W., & Pattison, P. (1990). A community based mental health response to a multiple shooting. *Australian Psychologist, 26*(2), 99-102.
- Dansky, B. S., Roth, S., & Kronenberger, W. G. (1990). The Trauma Constellation Identification Scale: A measure of the psychological impact of a stressful life event. *Journal of Traumatic Stress, 3*(4), 557-572.
- Dooley, R. T. (1991). Victims of armed hold-up: Their trauma and how to help. *Balance, March*, 17-23.
- Dyregrov, A., Kristoffersen, J. I., & Müller, O. (1991). Når livet trues. *Tidsskrift for Norsk Psykologforening, 28*, 885-894.
- Feinstein, A., & Dolan, R. (1991). Predictors of posttraumatic stress disorder following physical trauma: An examination of the stressor criterion. *Psychological Medicine, 21*, 85-91.
- Freedly, J. R., Resnick, H. S., Kilpatrick, D. G., Dansky, B. S., & Tidwell, R. P. (1994). The psychological adjustment of recent crime victims in the criminal justice system. *Journal of Interpersonal Violence, 9*(4), 450-468.
- Gabor, T., & Normandeau, A. (1989). Armed robbery: Highlights of a Canadian study. *Canadian Police College Journal, 13*(4), 273-282.
- Green, B. L., Wilson, J. P., & Lindy, J. D. (1985). Conceptualizing posttraumatic stress disorder: A psychosocial framework. In C. R. Figley (Ed.), *Trauma and its wake: The study and treatment of posttraumatic stress disorder*. New York: Brunner/Mazel.
- Herlofsen, P. H. (1992). Group treatment for posttraumatic stress disorder after armed robbery. *Psychiatria Fennica, 23* (suppl.), 71-79.
- Horowitz, M., Wilner, N., & Alvarez, W. (1979). Impact of Event Scale: A measure of subjective stress. *Psychosomatic Medicine, 41*(3), 209-218.
- Janoff-Bulman, R. (1989). The benefits of illusions, the threat of disillusionment, and the limitations of inaccuracy. *Journal of Social and Clinical Psychology, 8*(2), 158-175.
- Joseph, S., Yule, W., & Williams, R. (1993). Posttraumatic stress: Attributional aspects. *Journal of Traumatic Stress, 6*(4), 501-513.
- Kaniasty, K., & Norris, F. H. (1992). Social support and victims of crime: Matching event, support and outcome. *American Journal of Community Psychology, 20*(2), 211-241.
- Kilpatrick, D.G., Saunders, B.E., Veronen, L.J., Best, C.L., & Von, J.M. (1987). Criminal victimization: Lifetime prevalence, reporting to police, and psychological impact. *Crime and Delinquency, 33*, 479-489.
- Kilpatrick, D. G., Saunders, B. E., Amick-McMullan, A., Best, C. L., Veronen, L. J., & Resnick, H. S. (1989). Victim and crime factors associated with the development of crime-related posttraumatic stress disorder. *Behavior Therapy, 20*, 199-214.
- Kleber, R. J., & Brom, D. (1992). *Coping with trauma: Theory, prevention and treatment*. Amsterdam: Swets & Zeitlinger.

- Leymann, H. (1985). Somatic and psychological symptoms after the experience of life threatening events: A profile analysis. *Victimology: An International Journal*, 10(1-4), 512-538.
- Leymann, H., & Lindell, J. (1990). Social support after armed robbery in the workplace. In E. C. Viano (Ed.), *The victimology handbook: Research findings, treatment, and public policy*. New York: Garland.
- Moscarello, R. (1990). Psychological management of victims of sexual assault. *Canadian Journal of Psychiatry*, 35(1), 25-30.
- Pollack, L., & Harris, R. (1983). Measurement of social support. *Psychological Reports*, 53, 466.
- Ruch, L. O., & Chandler, S. M. (1983). Sexual assault trauma during the acute phase: An exploratory model and multivariate analysis. *Journal of Health and Social Behavior*, 24, 174-185.
- Tunnecliffe, M. R., & Green, S. (1986). Trauma in the workplace: Dealing with stress reactions after armed hold-ups. In D. Morrison, L. Hartley, & D. Kemp (Eds.), *Trends in the ergonomics of work*. (Proceedings of the 23rd annual conference of the ergonomics society of Australia and New Zealand). Carlton, Victoria: Ergonomics Society of Australia and New Zealand.
- Vitaliano, P. P., Russo, J., Carr, J. E., Maiuro, R. D., & Becker, J. (1985). The Ways of Coping Checklist: Revision and psychometric properties. *Multivariate Behavioral Research*, 20, 3-26.
- Wakefield, H. (1993, Dec.). Get ready for some workplace violence. *Australian Business Monthly*, 130-131.
- Winkel, F. W., Denkers, A., & Vrij, A. (1994). The effects of attributions on crime victims' psychological readjustment. *Genetic, Social and General Psychology Monographs*, 120(2), 147-168.