

to individuals with high internal control beliefs because they feel that even though the threat cannot be anticipated, it could be dealt with, should it arise (Stroebe & Schut, 2002). On the other hand, when a stressful event is particularly strong, or has recently occurred, its effect on internally and externally controlled individuals is similar. Different stressful events might have different effects on internally controlled versus externally controlled individuals (Anderson, 1977; Cromwell, Butterfield, Brayfield, & Curry, 1977; Sandler, Reese, Spencer, & Harpin, 1983; Sandler & Lakey, 1982).

The hopelessness theory (Abramson, Metalsky, & Alloy, 1989) argues that stable and global explanatory styles have a stronger impact on motivation and depression than does the internal dimension. Three interpretations put a person at risk for depression following a negative event: (a) attribution of events to stable and global causes, (b) inference of negative or catastrophic consequences of events, and (c) inference of negative characteristics about the self. When these interpretations are made frequently, the event will arguably be regarded as uncontrollable.

Gender Differences

Numerous studies of western cultures suggest that wherever a gender difference occurs it is the women who show their grief more than the men (Rosenblatt, Walsh, & Jackson, 1976; Parkes, 2002). The repression of emotion is supposed to cause higher incidence of mental illness among bereaved men than women, but most studies indicate that women are much more prone to psychiatric symptoms and to seek psychiatric help during the first year after bereavement (Parkes, 2002). Men, on the other hand, are much more likely to die of cardiac condition during the first year after their wives' death than women after their husbands' death (Parkes, 1996) and benefit more than women from counseling that helps them to express their grief (Schut, de Keijser, van den Bout, & Stroebe, 1996; Schut, Stroebe, van den Bout, & Terheggen, 2002). By contrast, women have less difficulty in expressing grief and other emotions but may need help in rethinking, restructuring, and finding fresh meanings to their lives.

Gender studies show that girls gave more pessimistic explanations for their failures than did boys, a difference that was consistent with a

discrepancy in the attributions given by teachers for failure in male versus female students (Dweck, Davidson, Nelson, & Enna, 1978). Because hopelessness-(H) is considered as one of the cognitive characteristics of depression (Beck, Weissman, Lester, & Trexler, 1974; Beck, Rush, Shaw, & Emer, 1979; Ellis, 1962) and the vulnerability of women to depression is double that of men (e.g., Nolen-Hoeksema, 1987), H gender differences are expected. Given the relations between LC, attributions, helplessness, and H, external LC may be positively related to helplessness. Depressed women tend to ruminate when they are already depressed, whereas men tend to be occupied in activity, which distracts their attention from their depressive mood (Nolen-Hoeksema, 1987).

Hypotheses

Based on the literature's review, the following hypotheses were tested in the present study predicting that (a) the more external the LC, the lower the level of hope; (b) the LC of women will be more external than that of men; (c) the LC of bereaved parents will be more external than that of their non-bereaved counterparts; (d) the hope level of women will be lower than that of men; and finally, (e) the hope level of bereaved parents will be lower than that of their non-bereaved counterparts.

Method

Participants

Twenty-five bereaved and 25 non-bereaved pairs of parents, at the mean age of 53.46 ($SD = 4.91$), participated in the study. A 2-way ANOVA of participants' age by group (bereaved vs. non-bereaved) and gender revealed that the mean age of the men ($M = 55.58$) was significantly higher, $F(1, 96) = 23.02$, $p < .001$, than that of the women ($M = 51.34$) in the sample as a whole, and that the mean age of the bereaved parents ($M = 54.51$) was significantly higher, $F(1, 96) = 5.10$, than that of their non-bereaved counterparts ($M = 52.45$). Fifty-seven participants had graduated secondary school, 42 had graduated college, and 1 had graduated only elementary school, without any significant education difference between the bereaved and non-bereaved parents $\chi^2(2, N = 100) = 0.37$, $p = ns$. Eighty-two participants were of Ashkenazic

origin, and 18 were of Sepharadic origin, the difference in distribution of ethnic origin within the bereaved versus the non-bereaved parents being non-significant, $\chi^2(1, N=100) = 0.14, p = ns$. Sixty-two participants defined themselves as secular, 26 as traditional, and 12 as orthodox, without a significant difference between bereaved versus non-bereaved parents, $\chi^2(2, N=100) = 0.37, p = ns$. Fifty-nine had and 49 had not experienced a loss of their relatives in the Holocaust of the European Jewry, without a significant difference between the bereaved and the non-bereaved parents, $\chi^2(1, N=100) = 0.24, p = ns$. The mean number of children of the bereaved parents (deceased sons not included) ($M = 2.84$) was not significantly different, $F(1, 98) = 0.14, p = ns$, from that of their non-bereaved counterparts ($M = 2.76$). but the mean number of grandchildren of the former ($M = 1.31$) was significantly greater, $F(1, 98) = 4.58, p < .05$ than that of the latter ($M = 0.61$). These data indicate that the bereaved parents are quite similar to their non-bereaved counterparts with respect to all the demographic variables that are relevant for this study, thus making the two groups comparable. All these variables have nonetheless been controlled for in the analysis of covariance (ANCOVA) carried out to test the hypotheses to avoid any possible artifacts (see Results).

Measures

Demographic Questionnaire

This measure included the items referring to the following sociodemographic variables: gender, age, country of birth, country of immigration, year of immigration, father's country of birth, mother's country of birth, ethnic origin, level of education, family status, level of religiosity (secular, traditional, or orthodox), number of years elapsed since the loss of a child, number of children (the deceased not included in the case of the bereaved parents), number of grandchildren, and an item inquiring about the loss of relative during the Holocaust of the European Jewry.

Locus of Control Scale

The Locus of Control Scale is a valid and reliable Hebrew version of Rotter's (1966) I-E locus of control scale, which is the final version used in most locus of control studies. The measure includes 29 items, six of which are camouflage items, not included in the calculation of the final

score. Each item includes a pair of statements, one expressing external locus of control, whereas the other expresses internal locus of control. Participants are being asked to choose one statement of each pair, applying the forced choice technique to avoid social desirability. In some items the first statement expresses an internal locus of control, whereas in others the reverse is true, to avoid a response set bias. An external control statement is scored as 1, whereas an internal one is scored as 0, hence the higher the score, the more external the locus of control is, and responses range from 0 to 1. Alpha coefficient of this measure in the present study is .74.

Hopelessness Scale

Beck et al.'s (1974) Hopelessness Scale was designed to measure the level of one's expectancy of oneself and of the future. The measure includes 20 items, on which participants are asked to point out whether they describe them or not, using the forced choice technique. Agreement with items expressing hope are valued as 1, and agreement with items expressing hopelessness as 0, hence the higher the score, the higher the level of hope. Thus, the mean score ranges from 0 to 1. Some of the statements express hope while others express hopelessness to avoid response set bias. A valid and reliable Hebrew version of the scale (Keinan, 1979) was used in the present study, its alpha coefficient being .93.

Procedure

The bereaved parents were recruited for this study by contacting the head of social services in the ministry of defense, who is responsible for the welfare of bereaved families who lost their sons during their military service. The research forms were administered by the group facilitators during weekly group meetings of four self-help groups for bereaved families all over the country. Response rate was 87%. The introduction to the questionnaire included a promise of anonymity as well as a brief explanation about the importance of the study. The research forms of each group were collected by one of the parents, put in sealed envelopes, and handed to the group facilitators, who mailed them to the investigator. To achieve optimal similarity between the bereaved and non-bereaved parents, I asked each bereaved pair of parents to hand two empty forms to a pair of non-bereaved parents, who they considered to be close friends. The forms of the non-bereaved pairs were sent by them

in stamped envelopes addressed directly to the investigator (two forms per envelope) to avoid disclosure of the responses of the non-bereaved parents to their bereaved friends. Response rate among the non-bereaved pairs reached 72%.

Results

To examine the relation between LC and H, I computed Pearson correlation coefficients between the two variables. These were computed for the sample as a whole, for the bereaved and non-bereaved parents separately, for males and females separately, and for men and women within the bereaved and the non-bereaved parents. All the correlations were weak and non-significant, hence hypothesis A was not supported.

Two-way ANCOVA of LC by bereavement and gender was carried out to test Hypotheses B and C, the results of which are presented in Tables 1 and 2. Participants' age, education, religiosity, time elapsed since bereavement, and number of children was controlled for.

TABLE 1 Mean Scores of Locus of Control^a of Bereaved and Non-Bereaved Parents

Group	<i>n</i>	Locus of control		<i>F</i>
		<i>M</i>	<i>SD</i>	
Bereaved parents	50	0.52	0.24	9.45**
Fathers	25	0.32 _a	0.22	
Mothers	25	0.58 _b	0.21	
Non-bereaved parents	50	0.41	0.17	14.27**
Fathers	25	0.39 _a	0.17	
Mothers	25	0.43 _a	0.18	
Fathers (total)	50	0.43	0.23	4.89*
Mothers (total)	50	0.55	0.17	
Total	100	0.49	0.22	

Note. Mean scores ranging between 0 and 1. Means with different subscripts differ significantly at $p < .005$ according to Scheffe test for the Bereavement \times Gender interaction.

^aThe higher the score, the more external the locus of control is.

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

The results, which can be seen in Table 1, show two main effects, indicating that bereaved parents, as a group, feel significantly more externally controlled than the non-bereaved parents, and so do women, as a group, compared with men. The Bereavement \times Gender interaction is also significant, a post-hoc Scheffé test indicating that the bereaved mothers felt significantly more externally controlled than the bereaved fathers, and the non-bereaved fathers and mothers. The only significant covariant was the level of religiosity, $F(1, 89) = 5.53, p < .05$, indicating that higher the level the religiosity, the more external the locus of control. Two-way ANCOVA of level of Hope \times Bereavement and Gender was carried out to test Hypotheses D and E, participants' age, education, religiosity, and time elapsed since bereavement are being controlled for.

The results, as can be seen in Table 2, show two main effects, indicating that bereaved parents, as a group, feel significantly more hopeless than the non-bereaved parents, and so do women, as a group, compared with men. The Bereavement \times Gender interaction is also significant, a post-hoc Scheffé test indicating that the bereaved mothers feel significantly more hopeless than the bereaved fathers and the non-bereaved fathers and mothers. The only significant covariant was the time elapsed

TABLE 2 Mean Scores of Hopelessness^a of Bereaved and Non-Bereaved Parents

Group	<i>n</i>	Hopelessness		<i>F</i>
		<i>M</i>	<i>SD</i>	
Bereaved parents	50	0.53	0.28	61.74**
Fathers	25	0.74 _a	0.21	
Mothers	25	0.33 _b	0.19	
Non-bereaved parents	50	0.87	0.10	42.77**
Fathers	25	0.88 _a	0.11	
Mothers	25	0.87 _a	0.12	
Fathers (Total)	50	0.80	0.18	37.79**
Mothers (Total)	50	0.61	0.31	
Total	100	0.70	0.29	

Note. Mean scores ranging between 0 and 1. Means with different subscripts differ significantly at $p < .01$ according to Scheffé test for the Bereavement \times Gender interaction.

^aThe higher the score, the higher the level of hope is and the more external the locus of control is.

** $p < .01$.

since the loss, $F(1, 89) = 7.62, p < .01$, indicating that the longer the time elapsed since the loss, the lower the level of hopelessness, $r = -.58, p < .001$.

Discussion

Locus of Control and Bereavement

Four of the five hypotheses were supported by results. LC was significantly more external and H was significantly lower among bereaved parents than among the control group. In both groups, mothers demonstrated significantly more external LC and lower H than did fathers. The bereaved mothers were significantly more externally controlled and hopeless than any other subgroup. No significant correlation was found between LC and H, either in the sample as a whole or in its subgroups, contrary to the hypothesized relation.

Many LC studies failed to unequivocally explain the linkage between stressful events, sense of control and emotional adjustment (Anderson, 1977; Cromwell et al., 1977; Sandler & Lakey, 1982). LC, as a unidimensional measure, was criticized by several researchers, who had factor analyzed Rotter's (1966) E-I scale. H on the other hand, is a variable that is supposed to meet several criteria (i.e., attributing the stressful event to stable and global causes, expecting negative and catastrophic consequences, as well as making negative inferences about the self; Abramson, Seligman, & Teasdale, 1978). Both helplessness and H theories have been suggested as additional explanations to LC as a sole variable, which determines one's coping style with stressful events. Situational variables challenge the exclusivity of LC as a personality trait.

Although LC was considered a stable personality trait (Rotter, 1966), there is no indication that internally controlled individuals are better able to cope with the loss than their externally controlled counterparts (Stroebe et al., 1988). Loss, being an edict of fate, might result, however, in externalized control. A longitudinal design could be a better strategy to investigate this hypothesis, but it is, of course, difficult in the case of unexpected losses. However, the LC difference between the two groups of parents in this study implies that the bereaved parents could have been more internally controlled prior to their loss, given their

similarity to the non-bereaved counterparts. This finding is in agreement with theoretical explanations and previous studies. Abramson et al.'s (1978) H theory, for example, examines the relation between stressful events, sense of control, and emotional adjustment refers to the location dimension and emphasizes objective states as a possible cause of helplessness. The Functioning track in Rubin's (1999) Two-Track Model of Bereavement includes depressive cognitions. Cognitive therapy for depression (Beck et al., 1974; Beck et al., 1979; Ellis, 1962) may further support the claim that LC might become more external, following an external traumatic event rather than merely being a risk factor for depression as a result of a loss.

H and Bereavement

When a child dies, the complex interplay of elements that are shaken precipitate a crisis of emotion and experience that is devastating as well as pervasive for parents (Breznitz, 2000). The bereaved parents in the present study has lost adult sons, who had already partially self-defined themselves but have not had an opportunity to fulfill themselves. This turns their loss onto mourning a lost relationship that existed, as well as a lost potential relationship that could have been. No wonder, then, that bereaved parents are significantly more hopeless than their non-bereaved counterparts. This finding is in accord with depression as one of the reactions to loss in the functioning track of Rubin's (1999) model. This effect of bereavement is expressed also in the significant effect of the time elapsed since the loss, which adds a longitudinal dimension to the study.

Gender Differences

The fact that women are more externally controlled than men is in agreement with findings carried out within the framework of the psychology of gender. According to the attribution theory, the explanation given as to why a certain event has occurred influences the mode of action (Deaux, White, & Farris, 1975). One can distinguish between external or internal, stable or changing causation, and factors controlled by the individual or beyond his or her control. Men attribute their successes to themselves and to internal and stable factors and their failures to external and unstable factors, whereas women attribute their

successes to external and changing factors and their failures to internal and stable factors (Deuaux et al., 1975; Nicholls, 1975). When participants were asked to evaluate equal performances of others and to point out the reasons for success, both men and women attributed the success of men to their talent and the success (Deaux & Emswiller, 1974). Although no actual achievement difference has been found between men and women (Wallace & Richardson, 1984), men tend to predict success for themselves more than women do (Vollmer, 1986). The fact that the bereaved mothers feel significantly more externally controlled than any other subgroup reflects the Gender \times Bereavement effects on both LC and H. The high H level of the women in the study might be explained by reasons suggested in the literature for the higher rate of depression among women (Nolen-Hoeksema, 1987). Both helplessness and H theories are frequently used to explain the causes of depression. One of the dominant aspects in learned helplessness is a sense of losing control over past traumatic events, which cause individuals to believe that their actions are useless. Given their social roles, women are prone to experience a decreased control over negative life events. This helplessness may stem from discrimination in workplaces, inequality in marriage, high rates of sexual and physical abuse, and the duality of being a working woman and a mother. Evidence supports the relation between each of the above-mentioned situations and high depression rates (Nolen-Hoeksema, 1987). The helplessness theory inspired a huge number of studies, supporting the idea that depressed individuals are characterized by a pessimistic attribution style, that is, H. Abramson et al. (1989) argued that the combination of a pessimistic attribution style and one or more negative life events are not sufficient for depression, unless the individual had experienced H before. Elements of the traditional social gender-role have been recognized as contributing to depression, in which H plays a major role. The socialization to the feminine traditional social gender-role includes both learned helplessness and H, which may explain the low level of hope among women in this study. Moreover, the combination of being a woman and experiencing a loss of a child makes the bereaved mothers especially prone to depression. The fact that women show their grief more than men is borne out in numerous studies of western cultures and may also reflect the "macho", warrior identity of western men in the wake of two world wars (Rosenblatt et al., 1976). More often than not, despair is in the predominant emotional state through much of the first year of bereavement

and continues as a kind of background state for at least another two of three years thereafter (Parkes & Weiss, 1983). The attachment between mothers and children is a part of their traditional social gender-role.

Limitations and Recommendations

The small sample does not allow generalization to larger populations, and the hypotheses tested are suggested for future additional studies. The relatively low internal consistency of the LC scale present study, along with the lack of its hypothesized link to H, might raise doubts as to its validity. Identifying factors such as beliefs in a tough world versus an easy one, a just world versus an unjust one, and a predictable world versus an unpredictable one might be of special importance in the context of bereavement studies, where reactions to traumatic events, such as a loss of a beloved individual, are investigated. LC studies have not supplied clear answers as for the linkage between stressful life events, sense of control, and emotional adjustment. There is evidence that internal LC is more helpful to adjustment after a stressful event, but different stressful events may have different effects on individuals with internal and external LC. The H, helplessness, and attribution theories, which refer to stability, globality, and universal versus personal helplessness, may be more relevant to the study of bereavement.

Given the negative effects of rumination, which is typical of women (Nolen-Hoeksema, 1987, 2002), a comparison of career versus non-career bereaved women might also contribute to the state of knowledge in the field.

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