

# Hard Times and Good Friends: Negative Life Events and Social Support in Patients With Seasonal and Nonseasonal Depression

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**Objective:** Although a relatively large body of research has now accumulated concerning the relation between negative life events, social support, and major depressive disorder (MDD), little is known about the relation between seasonal affective disorder and these psychosocial variables. This study aimed to compare baseline levels of negative life events (NLEs) and perceived social support (SS) in patients with seasonal and nonseasonal depression.

**Method:** Canadian patients with winter seasonal affective disorder (SAD) ( $n = 26$ ) and nonseasonal recurrent MDD ( $n = 66$ ) completed measures of recent NLEs (the List of Threatening Experiences) and perceived SS (the Social Support Survey) prior to treatment.

**Results:** No significant between-group differences were observed in mean number of NLEs experienced or in quality of SS. Perceived SS was impaired in both groups, compared with patients with chronic medical conditions.

**Conclusions:** The results of this study complement those of previous research reporting increased incidence of NLEs and decreased SS in primary care patients with high seasonality in the UK. Future research is required to determine the causal relation between these psychosocial risk factors and SAD and to assess whether they have an effect on, or are affected by, treatment interventions for SAD.

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Information on funding and support and author affiliations appears at the end of the article.

## Clinical Implications

- Patients with seasonal depression experience numbers of negative life events (NLEs) and impairments in their social support networks that are similar to those experienced by patients with nonseasonal recurrent depression
- This research has implications for understanding the etiology of seasonal depression; in addition to biological risk factors, psychosocial risk factors may play a role.

## Limitations

- Patient groups were not matched for depression severity.
- The number of NLEs experienced was assessed, rather than their perceived severity or impact.

**Key Words:** *seasonal affective disorder, negative life events, social support*

A significant body of research has now accumulated concerning the relation between negative life events (NLEs), social support (SS), and major depressive disorder (MDD). Although the etiologic model is complex, increased incidence of NLEs and decreased SS are generally acknowl-

edged to be psychosocial risk factors for depression (1–4). However, relatively little research has examined the relation between these risk factors and winter depression, or seasonal affective disorder (SAD) (5). We recently reported an association between psychosocial risk factors (in particular,

increased NLEs, decreased SS, female sex, and being non-native to residential area) and increased seasonality (that is, seasonal changes in mood and behaviour as measured by a commonly used screening tool for SAD) in a primary care population in the UK (6). Another recent longitudinal study has also described an association between poor perceived SS and earlier onset of depressive symptoms in patients with SAD (7). This emerging body of research emphasizes the importance of studying psychosocial factors, as well as biological factors, in relation to SAD. The present study expands these findings by further examining the relation between NLEs, SS, and depression in a different population, namely, outpatients with seasonal and nonseasonal recurrent MDD.

## Aims

We had 2 aims: to assess whether increased NLEs and decreased SS are associated with diagnosed SAD in addition to reported seasonality and to compare levels of NLEs and SS between patients with seasonal and nonseasonal recurrent depression. We hypothesized that, first, the relation between NLEs, SS, and SAD would be similar to that which we observed in our previous research in patients high in seasonality, and second, no significant between-group differences would emerge in either number of NLEs experienced or in severity of SS shortfall, indicating that these psychosocial risk factors are associated with both seasonal and nonseasonal depression.

## Materials and Methods

### Participants

The study was conducted in a mood disorders centre at a university teaching hospital. Participants were 26 patients with seasonal MDD and 66 patients with nonseasonal recurrent MDD. The seasonal depression group consisted of patients recruited at one arm (in Vancouver, British Columbia) of an ongoing, multicentre trial of light therapy vs medication. Participants were recruited via regional advertising campaigns and physician referrals. The sample met criteria for MDD with a seasonal (winter) pattern as determined by structured interview (Structured Clinical Interview for DSM-IV) modified with criteria for a seasonal pattern. The nonseasonal depression group comprised outpatients with a primary diagnosis of recurrent MDD referred to the Mood Disorders Centre. The study was approved by the Human Ethics Committee of the University of British Columbia. After we completely described the study to all participants, we obtained written informed consent.

### Instruments

Participants completed 2 self-report instruments at baseline (between October and December 2002). We assessed Recent

NLEs using the List of Threatening Experiences (LTE), a brief questionnaire that examines incidence of 12 categories of NLE over the previous 6 months (8). The LTE assesses life stressors involving moderate or long-term threat, such as illness or injury, death of a close friend or relative, unemployment, financial loss, and loss of important relationships. The questionnaire shows acceptable levels of reliability (9) and has been shown to be associated with increased risk for depression (10).

We assessed perceived SS using the Medical Outcomes Study (MOS) Social Support Survey (SSS), a 19-item questionnaire that examines 4 domains of SS (that is, emotional-informational, tangible, affectionate, and positive social interaction) and provides an overall functional SS index, where higher scores (range 0 to 100) indicate better social support (11). To assess depression severity, we also administered the Beck Depression Inventory II (BDI II) (12) at baseline.

### Statistics

All data are presented as mean (SD) scores. We analyzed demographic and diagnostic data using *t* tests and chi-square tests (with Fisher's exact test in place of chi-square where expected proportions were small). We derived a single total score for the LTE by summing the number of NLEs experienced in the previous 6 months; mean scores were compared via *t* tests. Summary scores were calculated for the 4 domains of the SSS and linearly transformed to a 0-to-100 scale. We used *t* tests with Bonferroni corrections to make between-group comparisons. All calculations were undertaken with SPSS version 10 (13).

## Results

The seasonal depression group comprised 14 women and 12 men with a mean age of 40.1 years (SD 12.4). The nonseasonal depression group comprised 46 women and 20 men with a mean age of 38.1 years (SD 11.8). The 2 groups did not differ significantly in the demographic variables of sex, age, and marital or occupational status. Baseline BDI scores were significantly higher in the nonseasonal group (mean 34.0, SD 10.9 vs mean 25.2, SD 12.2;  $t_{84} = 3.1$ ,  $P = 0.003$ ).

The mean number of NLEs in the seasonal and nonseasonal groups was 1.8 (SD 2.0) and 2.3 (SD 2.1), respectively (not significant). The number of NLEs reported by men and women did not differ significantly overall (mean 2.0, SD 2.1 in men; mean 2.2, SD 2.0 in women), nor did they differ significantly in the seasonal (mean 1.4, SD 2.1 in men vs mean 2.1, SD 1.9 in women) and nonseasonal group (mean 2.3, SD 2.2 in men vs mean 2.3, SD 2.1 in women). Perceived levels of SS were impaired in both groups, compared with other patient populations, but no significant between-group differences

**Table 1 Reported levels of social support as measured by the Social Support Survey in patients with seasonal ( $n = 26$ ) and nonseasonal ( $n = 66$ ) depression**

Social Support Survey domain <sup>a</sup>	Seasonal depression sample Mean (SD)	Nonseasonal depression sample Mean (SD)
Emotional-informational	57.1 (28.1)	52.5 (26.1)
Tangible	50.2 (34.6)	54.7 (36.4)
Affectionate	52.8 (34.0)	60.6 (31.4)
Positive interaction	52.8 (26.4)	59.0 (27.0)
Overall social support index	52.9 (24.1)	56.7 (25.1)

Differences between seasonal and nonseasonal depression were not significant.

<sup>a</sup>Range 0 to 100, where higher scores indicate better social support.

were apparent in the 4 domains of the SSS or in the overall SS index score (Table 1).

## Discussion

In a previous study (6) of psychosocial factors and seasonality in a community sample, we used a multivariate model and observed that 4 variables (that is, having experienced more NLEs, having low levels of SS, being a woman, and being nonnative to residential area) were associated with increased reported seasonality (as determined by the “global seasonality” score of the Seasonal Pattern Assessment Questionnaire [SPAQ]; 14). However, only female sex was found to predict being diagnosed with SAD according to DSM-IV criteria. In the present study, we examined whether a similar association exists between NLEs, SS, and SAD in outpatients diagnosed with winter depression. We also questioned whether number of life events experienced and quality of SS were different in a comparison sample of patients with recurrent MDD.

Patients with SAD reported having experienced approximately 2 (mean 1.8, SD 2.0) major NLEs in the previous 6 months. In comparison, previous studies using the LTE questionnaire reported figures of 0.84 (SD 1.04) in college students (15) and 1.45 (SD 1.44) in a sample of 399 European patients diagnosed with MDD according to DSM-IV criteria (Odd Dalgard, personal communication of data obtained from the Outcomes of Depression International Network [ODIN] project; 16,17). Patients diagnosed with recurrent nonseasonal depression reported a similar (mean 2.3, SD 2.1) number of life events. These results replicate the results of earlier work that also showed no difference in reported NLEs

in primary care patients with seasonal or nonseasonal depression (18). However, the results should be interpreted with some caution, because the life events instrument used here does not apportion differential weights to different types of life events. Moreover, it was administered at different time points in the 2 patient populations (specifically, during the 6 months prior to an episode of depression in the seasonal group and during an episode of depression in the nonseasonal group). The results of the present study also indicated that patients with seasonal and nonseasonal depression have similarly impaired SS networks. Mean SSS index scores were 52.9 (SD 24.1) and 56.7 (SD 25.1), respectively, for the 2 groups, compared with 70.1 (SD 24.2) reported in the MOS study of patients with chronic medical conditions (that is, hypertension, diabetes, coronary heart disease, and depression) (11).

The results of the present study provide further evidence of a relation between SAD, increased NLEs, and decreased SS. Further, patients with SAD appear to experience similar numbers of NLEs and impairments in their SS networks equivalent to those experienced by patients with nonseasonal recurrent depression. It is generally accepted that a causal relation exists between NLEs and nonseasonal depression (19). However, the relation between NLEs and SAD is more challenging to explain, particularly in regard to the question of whether increased incidence of NLEs is a cause, consequence, or correlate of SAD. The current findings are particularly interesting, given that the DSM-IV definition of SAD excludes recurrent depressions attributable to predictable seasonal stressors, such as regular winter unemployment. These data suggest that, notwithstanding this exclusionary criterion, random, nonseasonal stressors may play a role in SAD, much as they do in other mood disorders. It may be that such random stressors, occurring at all times of the year, establish subclinical changes that prime light-sensitive individuals to have full blown depressions later, at their most vulnerable time. Alternatively, a lack of coping resources, both internal (for example, having low self-esteem) and external (for example, having poor SS, also observed in the present study), may predispose individuals to develop depression. Recent research conducted by McCarthy and colleagues (20) in the UK is directly relevant to the present study. In a prospective study of 45 patients diagnosed with SAD, the authors found that both low perceived levels of SS and poor self-esteem (measured in the summer) were significantly related to faster onset of depressive symptoms during the winter months. Poor SS was also related to quicker onset of anxiety symptoms. A key task remaining for future research will be to determine whether these psychosocial variables have an effect on, or indeed are affected by, treatment interventions for SAD.

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### Résumé : Temps difficiles et bons amis : les événements négatifs de la vie et le soutien social chez les patients souffrant de dépression saisonnière et non saisonnière

**Objectif :** Bien qu'une quantité relativement importante de recherche se soit accumulée concernant la relation entre les événements négatifs de la vie, le soutien social et le trouble dépressif majeur (TDM), on en sait très peu sur la relation entre les troubles affectifs saisonniers et ces variables psychosociales. Cette étude visait à comparer les niveaux de base des événements négatifs de la vie (ENV) et le soutien social (SS) perçu chez les patients souffrant de dépression saisonnière et non saisonnière.

**Méthode :** Des patients canadiens souffrant de troubles affectifs saisonniers (TAS) ( $n = 26$ ) l'hiver et de TDM récurrent non saisonnier ( $n = 66$ ) ont répondu à des mesures de récents ENV (la liste des expériences menaçantes) et du SS perçu (le questionnaire du soutien social) avant le traitement.

**Résultats :** Aucune différence significative n'a été observée entre les groupes en ce qui concerne le nombre moyen d'ENV vécus ou la qualité du SS. Le SS perçu était déficient dans les deux groupes, comparativement à des patients ayant des affections médicales chroniques.

**Conclusions :** Les résultats de cette étude complètent ceux d'études précédentes qui déclaraient une incidence accrue des ENV et un SS diminué chez les patients des soins primaires ayant un caractère saisonnier marqué au Royaume-Uni. Il faut plus de recherche pour déterminer le lien causal entre ces facteurs de risque psychosociaux et les TAS, et pour évaluer s'ils exercent une influence sur les interventions de traitement des TAS, ou s'ils en sont affectés.