



# Social support buffers against anxiety and depressive symptoms in patients with cancer only if support is wanted: a large sample replication

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Social support can buffer against stressful life events like coping with a life-threatening disease such as cancer [1, 2]. However, social support is not equally desired across individuals and does not necessarily elicit salutary consequences in all recipients [3–6]. Previously, we demonstrated that lower emotional distress as a result of greater social support was limited to only those cancer patients who in fact desired more social support [4]. Hence, not all individuals low in social support also seek more support and may, therefore, not benefit from additional social support. A somewhat weaker but same effect was also demonstrated in healthy individuals [4]. These findings suppose that the desire for social support could be considered a trait-like personality style [7] that is evident in the healthy and extends to individuals who cope with a life-threatening illness or frailty [8]. To assure stability and trustworthiness of these findings [4, 9] the present paper aims at replicating previous findings in a large representative clinical sample.

## Method

### Sample

The original and above-described match-mismatch study was tested in a very large sample of cancer patients of a large urban

cancer centre. Participants were consecutively recruited at the time of cancer diagnosis at two urban cancer centres (BC Cancer Vancouver, BC Cancer Surrey) and asked to fill out the Psychosocial Screen for Cancer (PSSCAN) questionnaire [10]. Demographic and clinical variables were deduced from patients' charts. Medical record checks during data acquisition revealed that 73% of eligible patients provided usable data.

### Measures

Participants completed the 21-item PSSCAN questionnaire which has shown strong psychometric properties, meets multiple criteria for reliability, and possesses concurrent and construct validity [10, 11]. PSSCAN assesses anxiety and depressive symptoms, perceived social support, desired social support, and quality of life.

The anxiety and depression subscales contain five items each. The subscale total is the sum of the items with values ranging from 5 to 25. Cutoffs for each subscale were eight for subclinical symptoms and 11 for clinical symptoms.

Perceived social support was measured with a five-item, true/false index. Respondents were asked questions such as “Do you live alone?”, “When you need help, can you count on anyone to help with daily tasks like grocery shopping, cooking, giving you a ride?”, and “Do you have regular contact with friends or relatives?” The sum of the items represents the social support score (ranging from 0 to 5). The social support subscale of the PSSCAN has been derived from a large epidemiological study in older individuals with heart disease [12].

Desire for social support was measured with a single-item 11-point rating scale (“not at all” to “very much so”) asking “Do you feel that you need support, somebody to talk to, and

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to rely on?” This single-item scale has shown clinical usefulness and predictive validity despite its brevity [11].

## Statistical analyses

As in the original study, hierarchical regression analyses were used. Age and gender were entered as demographic covariates. In order to test the interaction effect, we created two groups (social support receipt high/low) using median splits in order to test effects of low versus high social support on anxiety and depressive symptoms, separately for patients with low or strong desire for social support. All statistical testing was two-sided with a  $p < 0.05$  considered significant.

## Results

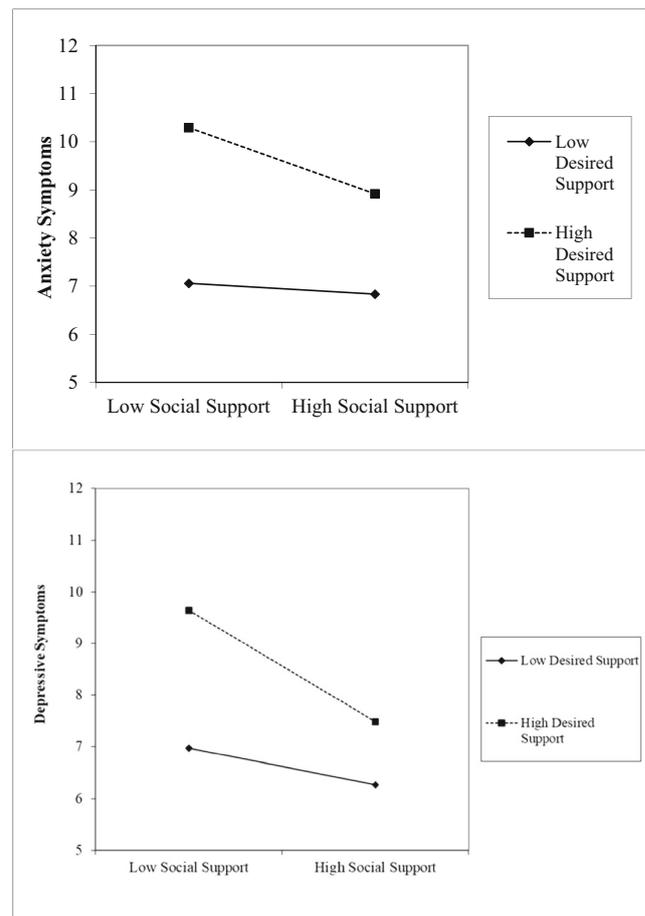
Patient mean age was 58.9 (14.6) years—44.8% of patients were male and 55.2% were female. Most prevalent cancer types were breast (23.9%), prostate (15.7%), gastrointestinal (13.1%), gynaecological (9.3%), and lung (6.6%).

On average cancer patients experienced anxiety and depressive symptoms slightly above subclinical thresholds (8.1 (3.8) for anxiety; 7.1 (3.1) for depression). High perceived social support was associated with lower anxiety ( $r = -.10$ ) and lower depression scores ( $r = -.19$ ) thus confirming the main effect. The interaction test was the key test of the match-mismatch prediction model. For anxiety and depression alike, the interaction term was also significant ( $\beta = -.07$  for anxiety;  $\beta = -.10$  for depression). Results indicated that patients low in support not seeking more support, reported lower anxiety and depression than did those patients missing and seeking support (Fig. 1).

## Discussion

This replication study used a very large, consecutively recruited sample of cancer patients and re-confirmed two core findings: (a) Across two psychological indices of well-being, high perceived social support was generally linked to lower anxiety and depressive symptoms, and (b) in patients who reported low perceived support in the absence of a need for more support, there were no detrimental effects of low support on anxiety or depressive symptoms.

Social support is comprised of different dimensions, e.g., emotional, functional, or instrumental support [13, 14]. Within the scope of a large study based on epidemiological data, more fine-grained analyses were not possible because of the brevity of the assessment instruments. However, different aspects of social support cannot always be meaningfully separated with brief measures and may have greatly varying individual implications. Another limitation is the study's cross-sectional



**Fig. 1** Interaction of social support receipt and desire for social support on anxiety and depressive symptoms

nature which precluded the assessment of eventual change in desired support which, however, has been shown to rise over time in other research [15]. It makes sense that especially in patients with less favorable prognosis the need for social support may change (e.g., more instrumental support may be desired as a consequence of progressive frailty, whereas the need for informational support may decrease after treatment is completed). Conversely, the concept of desire for social support could also represent a more stable trait [7].

What can be concluded from these findings with a clinician perspective? Social support cancer patients receive does not improve their well-being alike but acts differentially. Similarly, research on critical incident stress debriefing has shown that prophylactic treatment could be even destructive [16]. Instead interview questions such as “What type of person are you? Do you appreciate help and assistance or are you a person who values independence even in the light of adverse treatments?” may represent guidance for clinicians. Alternatively, the PSSCAN support needs question can be of use. Longer questionnaires have shown to be accepted by patients [17], though their feasibility in routine care may vary.

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## Compliance with ethical standards

**Conflict of interest** There are no conflicts of interest or financial interests associated with this work.

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