Depression screening and management practices at a tertiary care cancer centre

by Geneviève Breau

Abstract
Depression in cancer patients reduces patient survival and quality of life, though clinicians may not screen for depression, as part of routine practice. The current study examined depression screening and management behaviour at a tertiary care cancer centre by interviewing 10 oncologists and 10 nurses. The Theory of Planned Behaviour was applied to better understand screening behaviour. Results indicated clinicians screened for depression and managed depression by consulting other health professionals. This study found that depression is screened for and managed appropriately in patients, and certain components of the Theory of Planned Behaviour may be useful in understanding screening behaviour.

Key words: cancer, oncology, depression, depression screening, health care provider behaviour, Theory of Planned Behaviour

Introduction
Untreated depression in cancer patients significantly reduces patient survival, functional status, and health-related quality of life (Arrieta et al., In Press; Kroenke et al., 2010; Onitilo, Nietert, & Egede, 2006). Though the association between depression and poorer survival has been established by researchers (Onitilo et al., 2006), the reasons are unclear. One reason, proposed by Litofsky and colleagues (2004) is that patients receiving less-aggressive treatment become depressed. While depressed cancer patients have poorer outcomes, if depression is recognized by oncology professionals, it can be successfully treated, both with psychotherapy (Barth, Delfino, & Kunzler, In Press; Jacobsen & Jim, 2008), and with antidepressant medication (Williams & Dale, 2006). Oncology nurses play an important role in identifying depressed patients, as part of caring for a patient’s overall well-being.

Cancer patients at risk for a depressive illness can be identified through a routine depression screening program such as administering a short depression inventory (Sellick & Edwards, 2007), or by evaluating the patient’s symptoms (Mitchell, 2008). There is limited research on how often routine depression screening occurs. While it is recommended that patients with cancer be screened by having clinicians ask about depressed mood and lack of enjoyment in formerly enjoyable activities (Hoffman & Weiner, 2007), there is little published research examining which depressive symptoms clinicians routinely discuss and, once recognized, how depression is managed and treated.

When studying a behaviour such as depression screening, a theory about behaviour, such as the Theory of Planned Behaviour (TPB), is useful to conceptualize the behaviour and understand why an individual performs a behaviour (Ajzen, 1991). Ajzen developed his theory to explain how an individual decides to voluntarily perform a behaviour. Ajzen describes three main components to the TPB: attitudes, subjective norms, and perceived control over the behaviour. Attitudes are opinions an individual has about the behaviour in question. Subjective norms are the individual’s beliefs about what he or she believes other people think he or she should do. Finally, perceived behavioural control is the belief an individual has about whether he or she has control over whether or not he or she performs the behaviour independently. All three components interact with each other and influence whether an individual intends to perform the behaviour in question. Then, whether the individual intends to perform the behaviour determines whether the individual actually performs the behaviour. The TPB has been used to study depression screening by health professionals in stroke patients (Hart & Morris, 2008), in addition to nurses’ assessment of pain (Nash, Edwards, & Nebauer, 1993), and nurses’ provision of smoking cessation advice (Puffer & Rashidian, 2004). Nash et al. (1993) and Puffer and Rashidian (2004) found that all three components of the TPB were related to intention to perform the behaviour of interest, though Hart and Morris (2008) found that only subjective norms and perceived behavioural control were related to intention to perform the behaviour of interest. In all three studies, intention to perform the behaviour of interest was related to performing the behaviour of interest.

Research questions
The present study investigated clinicians’ depression screening and management behaviours at a tertiary care cancer centre where there is no formal depression screening protocol. The research questions were: (1) How do oncologists and nurses screen and manage depression in cancer patients?; and (2) Do the three components of the Theory of Planned Behaviour (attitudes, subjective norms, and perceived behavioural control) help explain intention to screen cancer patients for depression, and is intention to screen related to actual screening behaviour?

Methods
Research design
This was a descriptive study consisting of structured interviews with a convenience sample of oncologists and nurses at a tertiary care cancer centre. This centre provides medical and radiation oncology treatment to 800,000 residents of a large geographic area within Canada. This centre treats approximately 4,000 cancer patients each year.

Participants
Oncologists and oncology nurses were recruited from a tertiary care cancer centre. In total, 10 nurses and 10 oncologists took part out of a total population of 45 nurses and 21 oncologists, indicating an overall response rate of 30%. This response rate was lower than desired, though given practical limitations it was not possible to contact clinicians a second time or include a second cancer centre. All clinicians who contacted the researcher were included in this study.

Measures
A structured interview guide was developed with both closed and open-ended questions. There were 30 questions total: four demographic questions, four closed-ended questions about depression screening, four closed-ended questions about depression management, 11 closed-ended questions based on the TPB, and seven open-ended questions about depression screening practices that are not reported here. All questions were developed for use in this study on the basis of published research, except the Theory of Planned Behaviour questions. The TPB questions were adapted from questions developed by Hart and Morris (2008) and the two questions about intention and behaviour from a study by Jones, Courneya, Fairey,
and Mackey (2005), which examined oncologists’ exercise recommendations to patients. The questions based on previous researchers’ work were adapted from publicly available sources (i.e., items were included in the published study). The depression screening and management questions were created for this study because no published questions exploring these behaviours were available.

In this study, the attitudes subscale had a Cronbach’s alpha of 0.82, the subjective norms subscale had a Cronbach’s alpha of 0.58, and the perceived behavioural control subscale had a Cronbach’s alpha of 0.34. Because of practical considerations, it was not possible to include more TPB questions or to include a larger sample size, though both steps may have increased the internal consistency of the scales. A total Cronbach’s alpha was not calculated for these questions because these questions are theoretically different constructs. For all of the TPB questions, a seven-point Likert scale was used with the anchors strongly disagree (1) to strongly agree (7). The depression screening and management behaviour frequency questions were grouped into infrequently and frequently performing the behaviour. For the categorical questions (i.e., the types of help that participants refer patients to), the participants were read the options for the question response (i.e., referring patients to psychological help, psychiatric help, self-help groups, or other type of help).

Procedure

It took approximately 15 to 20 minutes to complete the consent discussion and interview. All of the questions were read verbatim from the structured interview guide, and the options for each question were read.

Ethical considerations

Ethics approval for the study was provided by the institutional research ethics board. Informed consent was obtained from all participants. Results of the study were presented to all clinicians during regularly scheduled staff meetings.

Statistical analyses

Analyses were conducted using the Statistical Package for the Social Sciences (SPSS) version 16.0 (2007). Alpha was set at 0.05, and all tests were two-tailed. Descriptive statistics were calculated, including means and standard deviations for continuous variables (such as how frequently participants ask about each symptom), and frequency counts for categorical variables (such as type of help referred to). For the TPB questions, the three attitude items were summed to produce a total attitude score. The three subjective norms items were also summed, as were the three perceived behavioural control items. Exploratory Pearson correlations were used to explore the relationships between the TPB variables. Chi-square tests were used for categorical data. The categorical data included many of the depression management questions (i.e., the type of help participants reported referring patients to).

Results

Depression screening practices

Participants were asked how frequently they screened for three depressive symptoms including mood, enjoyment of activities, and feelings of worthlessness or guilt. These depression symptoms were included because other symptoms of depression such as fatigue and changes in appetite are not exclusively symptoms of depression and could be caused by the patient’s underlying illness. In total, 85% of participants (n=17) said they asked their patients about their mood “often”. In contrast to asking about mood, participants asked about reduced enjoyment of activities, or anhedonia less frequently (see Table 1). In total, 75% of the participants infrequently asked patients whether they still enjoyed activities (n=15). In addition, 95% of the participants (n=19), including nine nurses and all 10 oncologists reported infrequently asking about feelings of worthlessness or guilt.

Types of referral

Psychological 18 (90%)
Psychiatric 10 (50%)
Self-help group 6 (30%)
Another type of help 13 (65%)

Theory of Planned Behaviour questions

The correlation between past intention to screen and attitude was non-significant (r (20) = -0.12, p=0.62). Visual inspection of the scatter plot of attitudes and intention revealed that attitudes had an outlier. When this outlier was removed, the correlation between intention to screen and attitudes remained non-significant (r (19) = -0.23, p=0.350). The correlation between past intention to screen and subjective norms beliefs was non-significant (r (19) = -0.32, p=0.21). Visual inspection of the scatter plot of past intention to screen and subjective norms revealed an outlier. When this outlier was removed, the correlation between past intention to screen and perceived behavioural control was non-significant (r (20) = -0.11, p=0.63), and had no outliers. A further Pearson correlation was conducted to determine if past intention to screen was related to past screening behaviour. This correlation was significant (r (20) = 0.55, p<0.01), indicating past intention to screen was significantly related to past screening behaviour.

Depression management practices

In total, 85% of participants (n=13) indicated that once they identify a patient as being at risk of being depressed they ask further questions (see Table 2). Referring patients to psychological or psychiatric help was a common action, with 70% (n=14) of the participants indicating they referred the patient for psychiatric or psychological help. In addition, 65% (n=13) of the participants indicated they took another action. Participants were asked to specify their alternative actions, and included referral to the psychosocial oncology team, a social worker, chaplain, or the patient’s family physician.

| Table 1: Frequency with which participants ask patients about depressive symptoms (N=20) |
|---------------------------------|-----------------|-----------------|
| Symptom                         | Ask about symptom frequently | Ask about symptom infrequently |
| Mood                            | 17 (85%)         | 3 (15%)         |
| Anhedonia                       | 5 (25%)          | 15 (75%)        |
| Feelings of worthlessness or guilt | 1 (5%)          | 19 (95%)        |

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<th>Table 2: Depression management strategies reported by participants</th>
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<td>Depression management question</td>
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<td>Steps taken</td>
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<td>Ask further questions</td>
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<td>Referral to psychiatric or psychological help</td>
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<td>Taking another action</td>
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<td>Types of referral</td>
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<td>Psychological</td>
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In a separate question, participants were asked to specify the type of help to which they refer patients. In total, 90% of all participants reported they referred patients for psychological help; 50% of participants reported they referred patients for psychiatric help; 30% of participants reported they referred patients to any type of self-help groups; and 65% of participants reported they referred to another type of help (i.e., to the centre’s psychosocial oncology team general referral service or to the patient’s family physician). Responses from oncologists and nurses were similar, except that more oncologists than nurses reported referring patients to psychologists.

Thus, clinicians screen for depression in multiple ways, and the subjective norms component of the TPB is useful in understanding screening behaviour, as is intention to screen. In addition, once a patient is identified as being depressed, all clinicians take action, mainly referral to another professional and frequently to mental health specialists.

**Discussion**

**Depression screening practices**

The majority of participants (85%) in this study indicated that they often screen for depressed mood. Asking about mood is an accepted method of screening for depression that is frequently recommended in the published research (Skogh et al., 2010). Based on his review of 17 published studies, Mitchell (2008) also reported that asking about mood, while not as accurate as asking about mood and anhedonia, was still quite accurate at identifying depressed cancer and palliative patients. Only four participants (20%) in this study reported that they often ask about anhedonia. This is problematic because Mitchell’s (2008) review of the published research reports that asking about anhedonia increases the sensitivity of depression screening by 20%, thus, it is more effective at correctly identifying depressed patients. Even though the majority of participants reported asking about mood, only one participant reported asking about feelings of worthlessness or guilt. One reason for this may be that asking about feelings of worthlessness or guilt may be perceived as too personal and intrusive, as supported by Madden (2006), who discusses the fact that clinicians may feel uncomfortable talking to patients about emotions.

**Theory of Planned Behaviour and screening**

Ajzen’s (1991) TPB was chosen as a means of better understanding the screening behaviour of the participants in this study, because previous research investigating clinicians’ behaviours (Hart & Morris, 2008; Nash et al., 1993; Puffer & Rashidian, 2004) found that this theory was useful in conceptualizing clinician behaviours.

Overall, the results from the present study indicate that only subjective norms were significantly related to participants’ past intention to screen. It is unclear why the current study did not find all the TPB components to be related to intention to screen, while Hart and Morris (2008) found that subjective norms and perceived behavioural control were related to intention to screen cardiac patients for depression.

One factor that may have influenced the lack of a relationship between all of the TPB components and intention to screen was that, in this study the sample size (n=20) was smaller than the sample size in Hart and Morris’ (2008) (n=75) study. However, given that subjective norms did have a significant relation to past intention to screen, the small sample may not be completely responsible for the lack of significant effects of the other TPB components. It is also possible that differences in the distribution of responses were a factor. The distribution of scores for subjective norms, as measured by the standard deviation, was greater for subjective norms (SD=3.88) than for attitudes (SD=2.97), and perceived behavioural control (SD=3.39). Thus, a Pearson correlation may not have had the ability to detect a relationship between these latter components and intention to screen, because there was less variability for these two components.

The finding of the present study, that only subjective norms are significantly related to intention to screen, appear to support findings in the published research exploring depression screening in cancer patients. These beliefs, that clinicians may not screen for depression because they worry about tiring the patient (Jakobsson, Ekman, & Ahlberg, 2008), and that clinicians may rely on patients to raise concerns about depression (Madden, 2006; Ryan et al., 2005), appear to correlate with the finding that unfavourable subjective norms reduce depression screening behaviour.

One significant finding was that perceived behavioural control was not significantly related to intention to screen. This was unexpected, as the research indicated that lack of time to screen is a common impediment to screening (Madden, 2006; Jakobsson et al., 2008) though, unfortunately, it was beyond the scope of this study to determine whether length of a typical appointment influences clinician’s screening behaviour.

**Depression management practices**

While an understanding of clinicians’ screening behaviours is important, it is also essential to understand how clinicians manage depression in patients once their depression is identified. An important finding of this study was that none of the participants indicated they moved on to other issues in the appointment, once a patient was identified as being depressed. According to their self-report, no depressed patient is untreated. However, it was beyond the scope of this study to follow a cohort of cancer patients to see which patients were depressed and whether they received appropriate treatment for their depression. The majority of the participants reported asking more about a patient’s depressive symptoms once he or she had been identified as being at risk of being depressed. This corresponds to National Comprehensive Cancer Network (NCCN) (2008) guidelines that all clinicians, including nurses, should enquire further once identifying a severely distressed patient.

The majority of participants reported referring patients to psychological and psychiatric help. Once again, this corresponds to NCCN (2008) guidelines that recommend that patients with severe distress should be referred to mental health specialists. All participants were asked about the types of help to which they refer patients. Fewer participants reported referring patients to psychiatric help (50%) compared to psychological help. However, this is because of the different rates of referral by oncologists compared to nurses. This points to a difference in practice, with nurses referring to psychologists and other health professionals, while physicians refer to psychiatrists in addition to other professionals. Even though nurses cannot directly refer to psychiatrists in this setting, it is significant that physicians refer to psychologists as much or more than psychiatrists, recognizing the interdisciplinary nature of psychosocial oncology care. It is still important to interpret this finding cautiously due to the small sample size. In addition, this points to the need for Canadian best practice guidelines for how nurses and oncologists screen and manage depression in cancer patients.

**Limitations**

This study was conducted at a small, tertiary care cancer centre and, thus, the depression management practices identified in this study may not be applicable to other, larger settings, or to primary care settings. This is because larger centres may have more psychosocial resources, while smaller centres may have fewer. An additional limitation of this study was the sample size. This limitation may be responsible for the failure to find a relationship between attitudes and perceived behavioural control, with intention to screen. Previous studies reporting a relationship all had larger sample sizes. A final limitation is that this study used a convenience sample of nurses and oncologists. Because of this, the participants in the current study may have had positive opinions towards screening prior to participating in the study. This may have biased the results.
Implications for future practice
This study raises a number of implications for future practice. A need highlighted by this study is a standardized, easy-to-use screen for depression. Such a screen could be as simple as a two-question screen recommended by Hoffman and Weiner (2007). It consists of two questions: one asking about depressed mood, and one asking about anhedonia (lack of enjoyment and pleasure in formerly enjoyable activities). Greater psychometric testing of the two-item screen is also needed.

An important consideration is whether a two-item screening protocol should be implemented, or whether a standardized screening instrument should be used, as described by Sellick and Edwardson (2007). A difficulty with implementing a standardized screening instrument is the amount of time required to administer the instrument. Even if patients complete the questionnaire prior to meeting with the oncologist, a clinician still needs to take the time to score the questionnaire. Therefore, implementing an instrument-based screening protocol may not be feasible. A related finding was the relationship between subjective norms and intention to screen. This suggests that team decision to implement screening, as a standard practice, could increase subjective norm pressure for individual clinicians to screen.

As well, introducing the use of a practice guideline about screening and managing depression could be helpful (CAPO, 2010). The recommendations from this study are relevant to both oncologists and nurses, as both routinely spend time with patients and there is a growing emphasis for all of these clinicians to treat psychological concerns in cancer patients. Oncology nurses may play a key role in identifying depressed patients, as part of caring for patients’ well-being.

Conclusions
This study suggests that some form of depression screening is already occurring at the cancer centre that was studied, though this was a very small pilot study at a single cancer centre. There is, however, more that can be done to encourage clinicians to adopt depression screening as a routine practice for all cancer patients. Working to increase the subjective norms associated with screening by making both clinicians and patients aware of the importance of depression screening is required. Finally, depression, once recognized, is managed frequently by referring the patient to a mental health specialist, meaning no depressed patient goes untreated, though because of the lack of routine screening for anhedonia, it is possible some cases of depression are going undiagnosed.

References


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