OVERVIEW

Pain is a commonly reported symptom of cancer, especially during the advanced stages of the disease. The main aim of this thesis is to gain a greater understanding of factors that influence adjustment to cancer pain. Most cancer pain research focuses on the classification of pain or the efficacy of various pharmacological treatments. However, patients with advanced cancer often report different levels of adjustment to pain even when the characteristics of their pain (frequency, duration and intensity), cancer site, type, and the stage of disease are similar. Despite this, comparatively little palliative care research focuses on factors other than characteristics of the pain that may influence adjustment. This thesis examines a range of psychological factors (e.g., emotions, meaning ascribed to pain, perceived effectiveness of pain management strategies) that may influence patients' adjustment to cancer pain, above and beyond the frequency, duration and intensity of their pain. Insight from such research may assist in the identification of patients who are most at risk of poor adjustment and may help to inform the development of new interventions.

This thesis is presented in seven chapters. The first chapter provides an overview of the key literature concerning cancer pain and predictors of adjustment for patients with advanced cancer. The concept of adjustment is discussed and defined. The chapter also describes types of cancer pain, treatment of pain, the other symptoms of advanced cancer that often co-occur with pain, and psychological factors, including emotions, meaning of pain and satisfaction with pain management strategies, all of which may influence adjustment.

Chapter 2 reports the first empirical study. Study 1 drew upon archival longitudinal data for a very large sample of patients receiving palliative care in the United States of America. The size of the sample allowed relationships between pain characteristics, other symptoms (nausea, constipation, dizziness, fever, shortness of breath, dry mouth) and patient adjustment (coping and quality of life) and the potential moderation effect of these relationships by psychological factors (negative and positive emotions) to be explored. Because data included measures of these variables at different points in time, the stability of predictors and patient outcomes could also be examined. Both positive and negative emotions were found to have a direct relationship with pain characteristics and adjustment. Negative emotion also moderated the relationship between pain and adjustment. Relationships between predictors and level of coping were relatively stable over time, but changed over time for quality of life.

Chapter 3 describes the second empirical study. The focus was narrowed to one type of cancer pain, breakthrough pain. Breakthrough pain presents a special challenge to adjustment due to its unpredictability and the difficulty in managing it. Study 2 examined the relationship between one aspect of adjustment (level of coping), breakthrough pain characteristics (frequency, duration and intensity) and two psychological factors (meaning the patient ascribes to the breakthrough pain and the perceived effectiveness of the patients' pain management strategies) in a smaller sample of Australian cancer patients receiving palliative care. Relationships between breakthrough pain, psychological factors and adjustment were found, however the particular meanings of pain that were associated with breakthrough pain

and adjustment were not those expected on the basis of previous research. In addition, most patients reported more than one meaning of pain.

Chapter 4 describes a third empirical study which extended Study 2 in a new Australian site. It examined whether more sensitive measures of breakthrough pain intensity, meaning of breakthrough pain and adjustment would detect relationships that were not found in Study 2. Thus, Study 3 examined whether relationships between breakthrough pain (frequency, duration and intensity), meaning of pain and the patients' perception of pain management effectiveness were related to coping. It also included another measure of adjustment (symptoms of depression). Consistent with Study 2, relationships were found between breakthrough pain, psychological factors and adjustment. However again, most patients reported more than one meaning of pain, and the meanings that were associated with breakthrough pain and adjustment differed to those reported in previous research.

Studies 1, 2 and 3 involved variable-focused analyses. Study 4 is a person-focused, qualitative study of meaning of pain among cancer patients. It was recognised from the outset that there was no clearly defensible quantitative measurement of meaning of pain and therefore, a qualitative study was needed to provide insight into the range and complexity of this construct. In Study 4, I attempted to construct a grounded theory of meaning of pain among patients with breakthrough pain. This was achieved through an in depth examination of the range of meanings that patients attributed to their pain. This approach provided greater insight into the range and complexity of meanings of pain than previous research. Many patients reported multiple meanings of pain, which were inextricably connected to meaning of cancer.

An additional and unexpected finding only was that only half of the meanings patients ascribed to pain were aversive. The meanings revealed in Study 4 were then used to explore relationships between breakthrough pain characteristics and adjustment in Study 5.

Chapter 6 reports on Study 5, which retained the person-focused approach to analysis. It examined relationships between the main variables in Studies 2 and 3, that is, breakthrough pain characteristics (frequency, duration and intensity), one psychological factor (meaning of pain) and adjustment, in a diary study conducted over seven days. This study confirmed the variability and unpredictability of breakthrough pain and demonstrated that adjustment was also highly variable over time. It was concluded that summative reports of breakthrough pain and coping often fail to adequately describe the breakthrough pain characteristics, adjustment or the relationship between these, in patients with advanced cancer. The diary data suggested that the relationship between breakthrough pain, meaning of pain and adjustment is diverse and complex. It appears that the meaning ascribed to pain may moderate the relationship between breakthrough pain characteristics and adjustment when breakthrough pain is intense, frequent or long-lasting.

Chapter 7 provides the overall conclusion to the thesis. It summarises the findings, acknowledges the limitations of the studies, draws conclusions about the contributions the thesis makes to the fields of cancer pain and palliative care, outlines some implications for clinical practice, and makes recommendations for future research. Previous studies have examined relationships between cancer pain, other symptoms, or psychological factors and adjustment. This thesis extended

previous research by examining these variables in the same set of studies. It combined quantitative and qualitative methods and variable-focused and person-focused approaches to analysis. Results consistently showed that although the characteristics of cancer pain were important predictors of adjustment, several psychological factors were also important. The meaning patients ascribed to their pain was a particularly important predictor of adjustment. Therefore, a holistic multidisciplinary approach to assessment and treatment of pain and other symptoms experienced by patients with advanced cancer is likely to improve adjustment to pain.