An evaluation of a psychology service for cancer patients

Submitted in partial fulfillment of the requirements of the Degree of Doctor of Clinical Psychology

Katherine Neilson
BBSc(hons)

Division of Psychology
School of Health Sciences
RMIT University
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Abstract

Specialist psychology services for cancer patients aim to assist patients to manage the emotional, social, and existential concerns that can occur with cancer. This project aimed to evaluate the clinical utility of a specialist psychology service for cancer patients via three concurrent studies. The first study profiled the outcomes of referrals for cancer patients, and results demonstrated that most patients referred to the service did attend for an assessment with a psychologist. Attending the service was generally associated with improvement in clients' functioning, as rated by psychologists. Sex, baseline severity of symptoms, number of sessions attended, diagnostic, and treatment details predicted improvement in psychological symptoms. The second study involved the administration of questionnaires to 26 clients at baseline, and again three months later. Comparison of these questionnaire results showed little change over the three months, however clients were satisfied with the service they received and perceived that they had made progress with presenting concerns. The third study aimed to clarify the findings of the second study, by collecting qualitative data via interviews with participants. Feedback from these interviews supported the role of the psychology service in recent improvements in participants' coping, and highlighted the importance of participants' expectations of the psychology service in their subsequent experience of the service. Together, results support the clinical utility of the service and provide a better understanding of cancer patients’ needs. This can assist in the planning and development of the psychology service.
Candidate’s declaration

Thesis title: An evaluation of a psychology service for cancer patients

Candidate’s name: Katherine Neilson

I declare that this thesis:
   i. is the result of my own research
   ii. does not contain any materials written or produced by another person except where due reference is made in the text
   iii. does not contain work submitted previously, in whole or in part, to qualify for any other academic award
   iv. is the result of work conducted since the official commencement date of the approved research program
   v. was conducted in accordance with the principles of the ethical treatment of human subjects as approved by the RMIT Human Research Ethics Subcommittee (Non-Biomedical) and the Peter MacCallum Cancer Centre Ethics Committee (Expedited Review Committee)

Signed:

Date: 3rd July 2008
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Psychosocial factors are now recognized as playing an important role in the identification and treatment of cancer and the longer-term outcomes achieved. Cancer and treatment can lead to emotional, social, or existential distress, difficult physical symptoms, and can impede quality of life. Psycho-oncology services aim to facilitate adjustment, reduce psychological distress, improve quality of life, treat psychiatric disorders, and help to manage the physical symptoms associated with cancer and treatment using a range of psychosocial interventions. These interventions have demonstrated treatment efficacy, but there is little published evidence of clinical utility. Evaluation of psycho-oncology services, such as specialist psychology services for cancer patients, would contribute to demonstrating clinical utility. As psycho-oncology services are being utilised more by oncology patients, it is important to ensure that treatments provided are based on efficacy research, and are demonstrated to be effective when delivered in clinical settings.

This project aimed to evaluate the clinical utility of a specialist psychology service for cancer patients by completing three concurrent studies, each using different methods of evaluation. The evaluation was conducted over a 16-month period, and focused on clients referred to the service who currently had a diagnosis of cancer at the time of referral, or a history of cancer.

This dissertation consists of a literature review, three studies evaluating the psychology service, and a general discussion of the implications of results. Firstly, the literature review discusses the need for specialist mental health services for
cancer patients, and the importance of evaluating such services. Methodological
issues to consider when evaluating the effectiveness of psycho-oncology services
are discussed, including accessing multiple sources of information (particularly
client- and psychologist-rated measures), using clinically and theoretically relevant
measures that are valid and reliable, incorporating a repeated measures design,
and collecting both qualitative and quantitative data. The recommendations from
this review informed the methodology of the three studies reported in this
dissertation.

The first study aimed to: identify the characteristics of clients referred to the
service; assess outcomes for clients referred, including changes in psychological
symptoms; measure functioning as rated by the Global Assessment of Functioning
scale; and investigate the relationship between these characteristics and
outcomes. The results of this study demonstrated that patients referred to the
service tended to be younger and female, compared with hospital and Australian
statistics. Referral to the psychology service occurred throughout the diagnostic,
treatment, and post-treatment process for cancer. Most people referred attended
for an assessment with a psychologist, with common DSM-IV-TR diagnoses of
anxiety, depression, and adjustment disorders. Overall, attending the service was
associated with improvement in clients’ functioning. Factors predicting
improvement in functioning were sex (females demonstrated greater improvement
than males), baseline severity of symptoms (poorer baseline GAF associated with
greater improvement), number of sessions attended (more sessions attended
associated with more improvement), as well as diagnostic and treatment details
(clients diagnosed with depression, or who received relaxation training showed
more improvement than did other clients).
The second study further investigated the outcomes clients experienced from attending the psychology service, via repeated administration of a client self-report questionnaire battery over three months, to identify expectations of psychotherapy, changes in distress symptoms, and to measure client satisfaction. Overall, clients had realistic expectations of the service. Results demonstrated that clients were satisfied with the service they had received, despite no evidence of improvement in client-rated outcome measures and a decline in social well-being. It was therefore concluded that the selected client-rated outcome measures were not sufficiently relevant to clients’ perception of the usefulness of the service. Suggestions for improvements to the service were provided by clients and included the provision of after hours appointments and more comfortable settings for sessions.

The third study aimed to gain more insight into clients’ experiences of the psychology service, through qualitative analysis of interview data. Specifically, this study aimed to clarify the findings of the second study, including whether or not client expectations of the service were met, and any positive changes the service facilitated that were not detected by questionnaires. The results of this third study identified that participants perceived improvements in their coping, and that participants attributed improvement in coping to attending the psychology service. Results also identified influences on client expectations of psychotherapy (e.g., the media and past experience of psychotherapy), as well as further suggestions for improvements to the service (e.g., specific needs for more information about reactions to cancer and planning for death).

Overall, the results of this project provide a better understanding of cancer patients’ experiences which can help services to better meet the needs of patients.
Specifically, the results of this evaluation are useful in terms of providing a better understanding of the psychology service’s utilisation, process, and outcomes for clients. Based on feedback from clients, recommendations are made for the further development of the service to meet the needs and expectations of its clients. Methodological recommendations for future evaluations of psychology services are also discussed.

Overall, the findings of this project support the clinical utility of this specialist psychology service for cancer patients.

1.1 Overview of the Psychology Service at the Peter MacCallum Cancer Centre

This dissertation aims to evaluate a psychology service based at the Peter MacCallum Cancer Centre. The Peter MacCallum Cancer Centre is a stand alone specialist hospital and centre for the treatment and support of cancer patients and their families. As part of the centre’s multidisciplinary approach to cancer care, the psychology service at the Peter MacCallum Cancer Centre is available free of charge to support cancer patients and their families. Patients can be referred and seen as inpatients or outpatients. The psychology service is for predominately adult clients, as a separate service is offered for 15-24 year old clients.

During the study period of this project, staff at the service consisted of psychologists, and interns completing their final year of post-graduate training in psychology. All psychologists employed at the service were registered with the state registration board for psychologists and all were members of the Australian Psychological Society. All staff had completed at least a Masters degree in
psychology. Hours of operation were 8:30am to 5:30pm Monday to Friday. At the beginning of the study in July 2005, there were 1.8 equivalent full-time (EFT) psychologists working in the department (corresponding to .9 EFT clinical time for client appointments), and in October 2006 there were 3.8 EFT psychologists employed (corresponding to about two days EFT clinical time).

The typical process for clients following receipt of referral, involved contacting patients by telephone to assess the suitability of the service for each patient. If the service was suitable, an assessment was conducted face-to face with clients. Based on assessment information, a tailored intervention was then offered when indicated. Clients attended appointments at the hospital, either in the outpatient clinic or inpatient wards.
2.0 Evaluating Psycho-Oncology Services

Psycho-oncology is an important sub-speciality of oncology. It addresses the “suffering of the mind that occurs with cancer” (Holland, 2002, p. 215), including the psychological reactions of patients, families, and carers, and applying psychosocial interventions to treat distress. It includes a number of disciplines, predominantly psychology and psychiatry. This review will discuss the need for specialist mental health services for cancer patients, the importance of evaluating such services, and methodological issues to consider when evaluating the effectiveness of psycho-oncology services.

2.1 Cancer Diagnosis, Survival, and Psychological Well-Being

Each year, more than 88,000 Australians are diagnosed with cancer (Cancer Council Australia, 2003). Currently, there are approximately 51,000 Victorians undergoing treatment for cancer, and approximately 136,000 Victorians are alive today who have been diagnosed with cancer (Cancer Council Victoria Epidemiology Centre, 2003).

Traditionally, medical interventions have been the focus of cancer treatment, including pharmacological, radiological, and surgical interventions. However, as medical treatments have had more success treating cancer, it has become clear that treating the medical symptoms is not sufficient to ensure good health outcomes for cancer patients and their families (Gruman & Convissor, 1998). The importance of psychosocial well-being is now also reflected in the World Health
Organisation’s (WHO) definition of health, as not only the absence of infirmity and disease, but also the state of physical, mental, and social well-being. This emphasises the need to consider the impact of cancer illness and treatment on the psychological well-being of patients.

2.2 Cancer, Psychological Distress, and Psychiatric Diagnosis

Diagnosis and treatment of cancer can be one of the most emotionally distressing events in medical care that a patient will experience, so it is typical for the diagnosis and treatment of cancer to result in varying degrees of distress for a patient and his/her family (Derogatis et al., 1983; Roth et al., 1998). Feelings of fear and anger are typical responses to a stressful event, such as a diagnosis of cancer (Ell, Nishimoto, Mediansky, Mantell, & Hamovitch, 1992). However, some patients may have more severe symptomatology and/or a prolonged period of adjustment. Psychological distress is a term coined to be more acceptable to patients and includes both subclinical and clinically significant levels of distress (Holland & Chertkov, 2001; Vachan, 2006). This psychological distress can be of an emotional, psychological, social, or existential/spiritual nature that interferes with a person’s ability to cope with cancer and cancer treatment (Holland & Chertkov, 2001). Symptoms of psychological distress may include fatigue, clinical and sub-clinical levels of anxiety and depression, and maladaptive coping strategies. Psychological distress impacts on quality of life. Specifically it affects coping, relationships, routines, vocational functioning, attitude toward treatment (e.g., belief in treatment effectiveness), and consequently impacts on health-related behaviours such as help seeking, treatment adherence, and
communication with health professionals. Distressed patients may seek more services, be less compliant with medical treatments, and be less satisfied with medical care (Holland, 1999). A study of newly diagnosed cancer patients found 33% reported significant distress (Whelan et al., 1997). Interestingly it has been found that levels of distress and symptoms may vary between different cancer sites. For example, 43.4% of lung cancer patients reported distress, compared with 29.6% for gynaecological cancers (Zabora, Brintzenhofeszoc, Curbow, Hooker, & Piantadosi, 2001).

More severe symptoms of psychological distress may meet the criteria for a psychiatric diagnosis. Psychiatric co-morbidity involves a diagnosis of a mental disorder such as mood disorders or anxiety disorders. These psychiatric conditions may have been pre-existing or developed subsequent to a diagnosis of cancer. Studies have found the prevalence of psychiatric co-morbidity in cancer samples to be between 20-40% (Sollner, Maislinger, Konig, Devries, & Lukas, 2004; Walden-Galuszko, 1996; Zabora et al., 2001). A recent Australian study comparing early (post-surgery) and advanced stage breast cancer patients, found an overall prevalence of DSM-IV psychiatric diagnosis of 45% in early stage patients, and 42% in late stage patients (Kissane, Grabsch, Love et al., 2004). Several reviews suggest that the prevalence of psychiatric diagnoses is higher in cancer samples than in the general population (Clark, Bostwick, & Rummans, 2003; Gustafson, 2002; Harter et al., 2001). It has also been demonstrated that sex plays a significant role in association between cancer diagnosis and mental disorder, with women at greater risk for mental disorders than men (Harter et al., 2001; Honda & Goodwin, 2004). The prevalence of psychiatric diagnoses in cancer samples may actually be underestimated because many psychiatric
prevalence studies with oncology patients exclude patients with previous psychiatric histories (Turner, Wooding, & Neil, 1998), and it has also been noted that male cancer patients are reluctant to discuss their distress about symptoms (Roth et al., 1998).

It is important to identify patients who are experiencing high levels of psychological distress and provide access to services that treat and reduce distress. Distressed patients who do not meet the diagnostic criteria for a psychiatric disorder may still benefit from identification and treatment (Clark et al., 2003). Such support is often not available from health care professionals, which has highlighted the need for specialist psycho-oncology services for cancer patients (Geiger, Mullen, Sloman, Edgerton, & Petitti, 2000). This has lead to the development of specialist psycho-oncology services to deliver psychosocial interventions that aim to reduce psychological distress for cancer patients and their families (Coward & Kahn, 2005).

2.3 Targets of Psychosocial Interventions in Psycho-oncology

The following section discusses the major targets of psychosocial interventions in psycho-oncology. Each section will outline the psychological problem and its prevalence in oncology populations.
2.3.1 Emotional Adjustment

Anxiety.

Anxiety is a common emotional reaction to cancer and its treatment (Holland & Gooen-Piels, 1993). While some anxiety is normal, too much anxiety can interfere with relationships, vocational functioning, and health related behaviours. Anxiety may be related to anticipating situations (e.g., cancer diagnosis, a new treatment/hospital admission, or awaiting test results), the cancer disease (e.g., poor pain control or physiological effects of the cancer), the treatment (e.g., side-effects or painful procedures), or exacerbation of a pre-existing anxiety disorder (Holland & Gooen-Piels, 1993). A meta-analysis of 59 studies with cancer patients found the prevalence rates for elevated levels of anxiety ranged from 0.9-49% (van't Spijker, Trijsburg, & Duivenvoorden, 1997). An Australian study of cancer patients showed an 11.5% prevalence of clinically significant anxiety (Pascoe, Edelman, & Kidman, 2000). Patients with high levels of anxiety may exaggerate or not disclose their symptoms, making diagnosis and medical care difficult (Barraclough, 1999).

It has also been found that survivors of cancer have ongoing symptoms of anxiety including side-effects of treatments that can lead to Post-Traumatic Stress Disorder (PTSD) and conditioned responses (Andrykowski & Cordova, 1998).
Depression.

Diagnosing depression as a disorder can be difficult in cancer patients as it requires distinguishing psychological symptoms of depression from somatic symptoms of cancer and treatment side-effects (e.g., fatigue, weight change, and insomnia), as well as from other psychological conditions such as grief, hopelessness, and demoralisation (Clark & Kissane, 2002; Newport & Nemeroff, 1998; Sellick & Crooks, 1999). Depression can effect how a patient copes with a diagnosis of cancer and physical symptoms, and is also associated with decreased compliance with medical care (Colleoni et al., 2000; DiMatteo, Lepper, & Croghan, 2000).

The prevalence of depression in cancer patients varies between studies from 0-46% (Newport & Nemeroff, 1998; Passik et al., 1998; van't Spijker et al., 1997). It has been suggested that the prevalence of depression in cancer patients is higher than the 6-9% prevalence in the general population (12-month prevalence) (Sellick & Crooks, 1999). However other studies have indicated that, although oncology patients are more distressed, the prevalence of depression in oncology patients is the same as the general population (Newport & Nemeroff, 1998; Sellick & Crooks, 1999; van't Spijker et al., 1997).

Increased risk of developing depression in cancer patients is related to advanced disease, the presence of another chronic illness or disability, external locus of control, conforming personality style, social isolation, first degree relatives with a history of cancer and depression, personal history of depression, and socioeconomic stress (Holland & Gooen-Piels, 1993; Newport & Nemeroff, 1998).
Depression may also result from medications for the treatment of cancer (Newport & Nemeroff, 1998).

Existential concerns.

Several studies have demonstrated a strong relationship between having a sense of meaning or purpose in life and psychological well-being in the general population (Zika & Chamberlain, 1992). Cancer can be experienced in a variety of ways (e.g., as a threat or as a positive experience) and may lead a patient and their family to analyse and question the meaning they attach to their life and death (Holland & Chertkov, 2001). This typical search for meaning can become an existential crisis for some patients, which refers to a conflict “from an individual’s confrontation with the givens of existence” (Yalom, 1998, p. 192). This may lead to anxiety and depression/hopelessness, loss of motivation to cope differently, and social isolation (Holland & Chertkov, 2001). One study demonstrated that a majority of cancer patients reported existential concerns, with 40% finding new meaning in their life, and 28% wanting someone to talk to about the meaning in their life (Moadel et al., 1999).

2.3.2 Social and Functional Adjustment

Interpersonal problems/social support.

Cancer disease and its treatment can strain relationships (Grassi, Gritti, Rigatelli, & Gala, 2000; Turner et al., 1998). Marital problems, family problems, and lack of
satisfaction with social support have been identified as risk factors for the 
development of psychological problems such as depression and anxiety which will 
further affect adjustment to illness (Friedman et al., 2006; Hodges, Humphris, & 

**Vocational functioning.**

Cancer and its treatment can disrupt working life, as well as the ability to return and 
adjust to work after treatment. A majority of cancer survivors are able to return to 
their previous level of occupational functioning (Buckwalter, Karnell, Smith, 
Christensen, & Funk, 2007; Kornblith, 1998; Taskila-Abrandt, Pukkala, Martikainen, 
Karjalainen, & Hietanen, 2005). However, at least one quarter are not able to 
resume their previous level of functioning due to disability from cancer and/or 
treatment (Buckwalter et al., 2007; Kornblith, 1998).

### 2.3.3 Physical Symptoms (Treatment and/or Disease Related)

**Nausea and vomiting.**

Nausea and vomiting can be side-effects of chemotherapy (Holland & Chertkov, 
2001). Some patients also develop conditioned nausea and vomiting to stimuli 
associated with the treatment, where symptoms occur before active treatment is 
administered. It has been suggested that 24% of patients who receive 
chemotherapy, develop a degree of conditioned nausea and vomiting (Boakes, 
Tarrier, Barnes, & Tattersall, 1993).
Pain.

Pain may be the result of the cancer and/or its treatment. Pain may vary according to the site and stage of cancer. For example, approximately 25-40% of newly diagnosed patients will report pain, 30-50% when undergoing active therapies, and 70-90% of patients report pain with advanced cancer (Portenoy & Lesage, 1999; Whelan et al., 1997). Pain impacts well-being and can exacerbate distress. Pain is also a risk factor for suicide in cancer patients (Barraclough, 1999).

Fatigue.

Fatigue is a feeling of weariness or tiredness that diminishes the ability to perform daily tasks (Reber, 1995). Fatigue generally occurs during the acute treatment period, but is not limited to this period (Holland & Chertkov, 2001). Causes of fatigue may be related to medical treatment, emotional adjustment, and demographic factors such as age (Greenberg, 1998; Reuter et al., 2006). A study of newly diagnosed cancer patients found 66% reported fatigue (Whelan et al., 1997).

2.3.4 Quality of Life

Quality of life is a global indicator of well-being, encompassing the aspects of emotional, social, and physical functioning discussed above. Quality of life has various definitions. Carr and Higginson (2001) identified four key dimensions of
quality of life: the extent to which hopes and ambitions match experience; individuals’ perceptions of their position in life (in the context of culture, values, personal goals, and expectations); the appraisal of the current situation against an ideal; and the things people regard as important to their lives (Carr & Higginson, 2001). Quality of life is not the same as health status which refers only to physical, psychological, and social well-being. Quality of life also includes finances, work-related, environmental, and educational factors (Holland & Gooen-Piels, 1993). Between 20-30% of women, 1-2 years post-diagnosis of breast cancer, experience disruption in their quality of life through loss of roles, functional abilities, and problems with social relationships (Marchioro et al., 1996; Turner et al., 1998).

2.4 Psychosocial Interventions and Cancer

A range of psychotherapeutic techniques have been applied and evaluated for their ability to facilitate adjustment, reduce psychological distress, treat psychiatric disorders, and to help manage the physical symptoms associated with cancer and treatment. Psychosocial interventions for cancer patients aim to improve emotional adjustment, mood, knowledge about disease, physical symptoms, coping skills, social support, and functioning (Burke & Kissane, 1998). Psychological interventions differ in goals and treatment techniques depending on the problems confronting patients, which may be associated with the cancer site, stage of cancer, and whether or not medical treatments are given (Trijsburg, van Knippenberg, & Rijpma, 1992). Common psychosocial interventions offered to help cancer patients with symptoms of distress include cognitive-behavioural, educational, and psychotherapy/counselling interventions.
Cognitive, behavioural, and cognitive-behavioural interventions focus on changing specific thoughts or behaviours and learning coping skills (Barraclough, 1999). Behavioural interventions reduce psychological stress and physical symptoms from cancer treatment by discouraging unwanted behaviours and substituting more desirable ones. Examples of distressing behaviours in psycho-oncology are conditioned nausea, fear of medical equipment (e.g., phobia of needles), and excessive body checking for signs of cancer. Treatments include desensitization, response prevention, thought stopping, modelling, and distraction (Barraclough, 1999). Cognitive therapy recognizes that emotional problems may arise from maladaptive beliefs and thinking patterns. Cognitive therapy encourages patients to identify their negative thoughts, look at the logic behind them, and try alternative thoughts and behaviours which are more adaptive (Barraclough, 1999). Cognitive therapy focuses on current problems identified by the patient which may be emotional, interpersonal, or directly related to the cancer illness. Cognitive-behaviour interventions combine both cognitive and behavioural techniques.

Informational and educational treatments aim to reduce a sense of helplessness due to uncertainty and lack of knowledge, by providing information to encourage a sense of control (Fawzy, Fawzy, Arndt, & Pasnau, 1995). The information provided may cover disease and treatment facts, as well as information about coping and emotion.

Psychotherapies and counselling interventions, including existential, supportive or general counselling (Meyer & Mark, 1995), may be used to help the patient discover and clarify ways of living more resourcefully, and work towards greater well-being (British Association for Counselling, 1984). These interventions
aim to help clients adjust to their existential concerns, express and manage
disease-related emotions, increase social support, and enhance relationships with
family and physicians (Classen et al., 2001).

Other treatments are family therapies, couples therapies, psychodynamic
therapies, art, and music therapies (Barraclough, 1999; National Breast Cancer
Centre & The National Cancer Control Initiative, 2003). More severe psychiatric
cases may also require medications as part of treatment (Barraclough, 1999).

2.5 Evaluating Psycho-Oncology Services

Outpatient clinical psychology services play an important role in the care of cancer
patients (Miller et al., 1998). It is therefore important to determine how these
services deliver interventions and their outcomes.

The concept of evidence-based practice (EBP) in psychology reflects the
need to provide evidence to support the application of psychosocial interventions.
Evidence-based practice is the “integration of the best available research with
clinical expertise in the context of patient characteristics, culture, and preferences”
(Levant, 2005, p.5). Many research designs contribute to EBP, including clinical
observation, qualitative research, case studies, service utilization studies, process-
outcome studies, naturalistic studies, randomised controlled trials (RCT’s), and
meta-analyses (Levant, 2005). The importance of establishing evidence-based
practice is emphasised in Australian guidelines for evaluating mental health
services. This may be extended to specialist psychology services for cancer
patients (National Mental Health Working Group, 1996). The following sections
discuss the importance of evaluation and methodological considerations for
evaluating psycho-oncology services, specifically psychology services for cancer patients.

2.5.1 Treatment Efficacy and Clinical Utility

Treatment efficacy and clinical utility are two dimensions proposed by the American Psychological Association (APA) to evaluate psychosocial interventions and develop EBP (American Psychological Association, 2002). Treatment efficacy establishes how well an intervention works when conducted under controlled conditions (e.g., random assignment of subjects, control groups, manualized treatments, clear inclusion/exclusion criteria, homogenous treatment groups, fixed duration of treatment, and well operationalized outcomes) (Ellwood, Carlson, & Bultz, 2001; Seligman, 1995; Wadel, Treat, & Stuart, 1998). Alternatively, clinical utility evaluates psychosocial interventions in real world settings, and emphasises an intervention’s generalizability across settings and feasibility with various client groups and services (American Psychological Association, 2002; Ellwood et al., 2001; Wadel et al., 1998). The assessment of clinical utility focuses on several key elements, including the accessibility of services, client characteristics, type and duration of interventions delivered, and the acceptability of these interventions by clients. Clinical utility focuses on the external validity of interventions, by demonstrating treatment value without sacrificing generalizability to clinical settings (Wadel et al., 1998). However evidence of clinical utility also has limitations, where compromises to internal validity limit the conclusions about causal factors of therapeutic change. For example, in many studies of clinical utility, standardised treatments and control groups are not possible (Bower & King, 2000). Both
treatment efficacy and clinical utility are necessary to determine the validity of psychosocial interventions offered to cancer patients and establish EBP.

*Treatment efficacy in psycho-oncology.*

There have been hundreds of studies investigating the treatment efficacy of psychosocial interventions for cancer patient outcomes. This section discusses meta-analyses and reviews of these treatment efficacy studies. Table 1 summarises meta-analytic and review results for the treatment efficacy of psychosocial interventions for specific psychological problems for cancer patients. Together these reviews include studies between 1970 and 2004. The general findings are discussed below.

Several meta-analyses of efficacy studies have concluded that psychosocial interventions for cancer patients are beneficial (Burke & Kissane, 1998; Meyer & Mark, 1995; Newell, Sanson-Fisher, & Savolainen, 2002). However it is less clear which, if any, interventions are more efficacious. One example is a meta-analysis by Meyer and Mark (1995), which compared 45 randomised studies. Treatments were categorised as CBT, informational/educational, non-behavioural counselling/psychotherapy, social support (by non-professionals), or unusual treatments (such as music therapy). All dependent measures (except for medical measures) showed significant beneficial effects and results clearly indicated that psychosocial interventions had positive effects on emotional adjustment, functional adjustment, and treatment/disease related symptoms in adult cancer patients. No significant differences in treatment efficacy were found between any of the treatment types (Meyer & Mark, 1995). These results were supported by another
meta-analysis of intervention studies with breast cancer patients, where group and individual therapies were equally effective (Burke & Kissane, 1998). Findings such as these may be explained by common non-specific features of therapy such as empathy, listening, affirmation, reassurance, and support. If these are the effective elements of therapy, then differences between treatment types would not be evident. However, another large meta-analysis by Newell of group therapy, education, structured and unstructured counselling, and CBT, suggested that CBT had the most promise for medium- (one to six months) to long-term (more than six months) improvements (Newell et al., 2002). It was noted that this finding may have been an artefact of the small number of trials looking at long-term effects of all types of therapy. Therefore, whilst there is evidence of the treatment efficacy of psychosocial interventions, there is mixed evidence for differentiating efficacy between types of interventions.

Although the convergent evidence from the studies reported above indicate that psychosocial interventions produce positive outcomes for cancer patients, treatment efficacy results do not rule out the possibility of interventions causing harm (Edwards et al., 2004). For example, short term ‘disbenefits’ of counselling have been demonstrated, where an intervention group were worse than a control group post-intervention on a measure of depression (Marchioro et al., 1996). However this reversed at a later follow-up, and the authors suggest that this may have been related to the effects of confronting clients with their problems. Therefore, whilst clients may decline in the short-term, in the long-term they show improvement following intervention.
### Table 1
Summary of Meta-Analytic and Review Findings for the Treatment Efficacy of Psychosocial Interventions for Specific Problems for Cancer Patients

<table>
<thead>
<tr>
<th>Problem</th>
<th>Treatments recommended</th>
<th>Treatment needing further investigation (either mixed or insufficient evidence of efficacy)</th>
<th>Treatments showing no effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxiety</td>
<td>• Music therapy (Newell et al., 2002)</td>
<td>• Guided imagery (Newell et al., 2002)</td>
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<td></td>
<td>• Educational interventions (Burke &amp; Kissane, 1998; National Breast Cancer Centre &amp; The National Cancer Control Initiative, 2003)</td>
<td>• CBT (Burke &amp; Kissane, 1998; Newell et al., 2002)</td>
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<tr>
<td></td>
<td>• Counselling (National Breast Cancer Centre &amp; The National Cancer Control Initiative, 2003; Wessex Institute for Health Research Development, 1998)</td>
<td>• Psychotherapy (Greer, 1991; Newell et al., 2002).</td>
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<tr>
<td></td>
<td>• Behavioural interventions (Trijsburg et al., 1992)</td>
<td>• Relaxation (Luebbert, Dahme, &amp; Hasenbring, 2001)</td>
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<tr>
<td></td>
<td>• Relaxation training (National Breast Cancer Centre &amp; The National Cancer Control Initiative, 2003)</td>
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<tr>
<td>Depression</td>
<td>• Psychotherapy (Fawzy et al., 1995; Greer, 1991; National Breast Cancer Centre &amp; The National Cancer Control Initiative, 2003; Wessex Institute for Health Research Development, 1998)</td>
<td>• Group therapy (Newell et al., 2002)</td>
<td></td>
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<td></td>
<td>• CBT (Burke &amp; Kissane, 1998)</td>
<td>• Education (Newell et al., 2002)</td>
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<td></td>
<td>• Psycho-education (Barsevick, Sweeney, Haney, &amp; Chung, 2002; National Breast Cancer Centre &amp; The National Cancer Control Initiative, 2003)</td>
<td>• Structured counselling (Newell et al., 2002)</td>
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<td></td>
<td>• Behavioural interventions (Barsevick et al., 2002)</td>
<td>• CBT (Newell et al., 2002)</td>
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<td></td>
<td>• Peer lead support group (Clark et al., 2003)</td>
<td>• Relaxation (Newell et al., 2002).</td>
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<td></td>
<td>• Relaxation training (Luebbert et al., 2001; National Breast Cancer Centre &amp; The National Cancer Control Initiative, 2003)</td>
<td>• Communication skills training (Newell et al., 2002)</td>
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<tr>
<td></td>
<td>• Counselling (Barsevick et al., 2002; Trijsburg et al., 1992; Wessex Institute for Health Research Development, 1998)</td>
<td>• Self-esteem building (Newell et al., 2002)</td>
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<td></td>
<td>• Group interventions (Edwards, Hailey, &amp; Maxwell, 2004)</td>
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<tr>
<td>Problem</td>
<td>Treatments recommended</td>
<td>Treatment needing further investigation (either mixed or insufficient evidence of efficacy)</td>
<td>Treatments showing no effect</td>
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<tr>
<td>General emotional distress</td>
<td>• Unstructured counselling (Newell et al., 2002)</td>
<td>• CBT (Newell et al., 2002)</td>
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<td></td>
<td>• Structured counselling (Trijsburg et al., 1992)</td>
<td>• Education (Newell et al., 2002)</td>
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<td>• Music therapy (Newell et al., 2002)</td>
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<td>• Behavioural training (Fawzy et al., 1995)</td>
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<td>• Psycho-education (National Breast Cancer Centre &amp; The National Cancer Control Initiative, 2003)</td>
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<td>• Relaxation training (National Breast Cancer Centre &amp; The National Cancer Control Initiative, 2003)</td>
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<td></td>
<td>• Exercise (National Breast Cancer Centre &amp; The National Cancer Control Initiative, 2003)</td>
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<tr>
<td>Interpersonal/social</td>
<td>• Structured or unstructured counselling (Newell et al., 2002)</td>
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<td>relationships</td>
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<td>Sexual dysfunction</td>
<td>• Counselling (Trijsburg et al., 1992)</td>
<td>• Educational interventions (Newell et al., 2002)</td>
<td>• Counselling (Wessex Institute for Health Research Development, 1998)</td>
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<td></td>
<td>• Counselling (Newell et al., 2002)</td>
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<tr>
<td>Vocational adjustment</td>
<td>-</td>
<td></td>
<td>• No interventions could be recommended (Newell et al., 2002)</td>
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<tr>
<td>Conditioned nausea and</td>
<td>• Hypnosis (Newell et al., 2002)</td>
<td>• Individual therapy Newell (2002)</td>
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<tr>
<td>vomiting</td>
<td>• Behavioural training (Fawzy et al., 1995; Trijsburg et al., 1992)</td>
<td>• Guided imagery. Newell (2002)</td>
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<tr>
<td></td>
<td>• Relaxation training (Luebbert et al., 2001)</td>
<td>• Unstructured counselling (Newell et al., 2002)</td>
<td></td>
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<tr>
<td>Pain</td>
<td>• Group supportive expressive therapy (Edwards et al., 2004; Fawzy et al., 1995)</td>
<td>• Relaxation training (Newell et al., 2002)</td>
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<td>• Relaxation training (Luebbert et al., 2001)</td>
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<td>Fatigue*</td>
<td>• Counselling (Trijsburg et al., 1992)</td>
<td>• CBT (Newell et al., 2002)</td>
<td>• Relaxation training (Luebbert et al., 2001).</td>
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<td></td>
<td>• CBT (Newell et al., 2002)</td>
<td>• Exercise (Ahlberg, Ekman, Gaston-Johansson, &amp; Mock, 2004)</td>
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<td>• Group therapy (Newell et al., 2002)</td>
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<td>• Relaxation training (Luebbert et al., 2001).</td>
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<td>• Guided imagery (Newell et al., 2002)</td>
<td>• Guided imagery (Newell et al., 2002)</td>
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<tr>
<td>Survival</td>
<td>-</td>
<td>• CBT (Newell et al., 2002)</td>
<td>• Group therapy (Edwards et al., 2004)</td>
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<tr>
<td>Quality of life</td>
<td>• Supportive expressive therapy (Newell et al., 2002)</td>
<td>• CBT (Newell et al., 2002).</td>
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<td></td>
<td>• CBT (Compas, Haaga, Keefe, Leitenberg, &amp; Williams, 1998)</td>
<td>• Educational intervention (Newell et al., 2002)</td>
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<td>• Counselling (Newell et al., 2002; Wessex Institute for Health Research Development, 1998)</td>
<td>• Relaxation training (Newell et al., 2002)</td>
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<td></td>
<td>• Educational interventions (Clark et al., 2003).</td>
<td>• Educational interventions (Newell et al., 2002)</td>
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</table>

* Note. Recommended treatment for fatigue often includes treatment of mood and anxiety symptoms (Ahlberg et al., 2004; Greenberg, 1998; Servaes, Verhagen, & Bleijenberg, 2002).
Criticisms of treatment efficacy studies in psycho-oncology.

While these reviews give an indication of each treatment’s efficacy, several limitations of these efficacy studies must be recognized. Low-compliance and missing data are pervasive problems in psychosocial evaluation studies in cancer patients (Clark et al., 2003). For example, in one study of testicular cancer, 60% of eligible patients declined the survey (Moynihan, Bliss, Davidson, Burchell, & Horwich, 1998). Many studies also have low questionnaire return rates (Kopp, Lorenz, Rothmund, & Koller, 2003; Sabers et al., 1999). Non-participants and poor compliers tend to be older, more likely to receive palliative care, and have worse scores for physical status (Kopp et al., 2003). These influences result in biased samples which limit the generalizability of findings.

Many meta-analyses have also noted large variability in results across studies. This may be due to the use of different criteria for inclusion and analysis. For example, as noted previously, some studies exclude patients with a previous psychiatric history. Studies also use different criteria for patient recruitment, and various cut off scores for non-diagnostic self-report questionnaires. Therefore studies vary as to how they measure distress, making it difficult to compare results, even if they are investigating the same outcomes. The above criticisms may explain the ambiguous evidence for treatment efficacy. As can be seen in Table 1, one review may recommend a treatment, while another concludes there is insufficient evidence to warrant its recommendation (e.g., CBT for depression). Also, meta-analyses and review papers differ in selection and treatment methods for papers to be reviewed.
Many evaluation studies do not control for other concurrent treatments (other than the experimental intervention) that may either directly or indirectly impact on psychological distress. For example, many studies do not monitor medication use, such as antidepressants which would be expected to elevate mood. Also, many studies do not account for changes in concurrent medical treatments such as surgery or completed chemotherapy, which may also impact levels of distress. Therefore, any changes noted in distress may be the result of other non-experimental treatments. Effect sizes in meta-analyses also tend to be small. A small effect size is 0.2 (Cohen, 1988). For example effect sizes of studies in Meyer and Mark’s (1995) meta-analysis ranged from 0.19-0.28. Efficacy studies also tend to use small samples and short follow-up periods (Newell et al., 2002).

Despite these limitations, there is still strong evidence from meta-analytic studies for the treatment efficacy of psychosocial interventions for cancer patients.

*Clinical utility and service evaluation in psycho-oncology.*

While there is evidence for the treatment efficacy of many psychosocial interventions for cancer patients, there are few published studies evaluating clinical utility. Similar to general mental health services that have been shown to be effective in controlled studies, it is often assumed that psychosocial interventions for cancer patients with evidence supporting treatment efficacy, will be clinically practical and effective in naturalistic settings (Barlow, 1996; Ellwood et al., 2001). However, many factors may influence the clinical utility of an intervention in real world settings, including client variables (e.g., personality, co-morbidities, therapy/therapist preferences), therapist variables (e.g., experience), and treatment
characteristics (e.g., variable length of treatment, eclectic treatment modalities) (Seligman, 1995). It is also often assumed that tailoring manualized treatments to needs of individual clients is ‘best-practice’, but this assumption is often not evaluated (Barlow, 1996).

To develop EBP it is recommended that research also focus on clinical utility. This includes investigating the generalizability of interventions shown to be efficacious in controlled research settings, patient-by-treatment interactions (i.e., what works for whom), mechanisms of change, characteristics of the therapeutic relationship that contribute to positive outcome, and the accessibility and utilization of psychological services by cancer patients (Levant, 2005). This information can also be used for treatment and service planning.

Evaluation of the clinical utility of mental health services for political, ethical, and professional reasons increases the possibility that the service offered meets the client’s needs, is delivered in the most effective and appropriate manner, and that the client derives benefit from the service (Sperlinger, 2002).

A service evaluation is one method to investigate the clinical utility of psychosocial interventions in naturalistic settings, such as hospital outpatient services for cancer patients. A service evaluation is a systematic investigation of the performance of the mental health service, using relevant and accepted methods (National Mental Health Working Group, 1996). For example, such an evaluation could involve a description of service’s activities (e.g., number of clients referred, number of appointments), client satisfaction with the service, and/or monitoring of client outcomes to determine the effectiveness of the intervention/s offered by the service.
Evaluating psycho-oncology services contributes to EBP, specifically clinical utility. Such evaluations would answer questions about these services that are not amenable to treatment efficacy study methods. For example, evaluation can assist clinical decision making, allow comparison between similar services and user groups, identify any unintended negative results as well as planned positive ones (Bleber, Wroblewski, & Barber, 1999; Bor & du Plessis, 1997; Holloway, 2002; Miller, Siggins, Kavanagh, & Donald, 2003; Page, Hooke, & Rutherford, 2001; Scriven, 1999; Sperlinger, 2002). Evaluating services can identify whether the methods used in the service are appropriate by current professional and ethical standards (Scriven, 1999). An evaluation can also identify how the service is being used, such as who uses the service, presenting problems, and frequency of sessions (Bor & du Plessis, 1997). The effectiveness of a service can also be assessed by audit measures, such as patient satisfaction and specific outcomes relevant for the client group (Bor & du Plessis, 1997; Fitzpatrick, 1997; Redman, Turner, & Davis, 2003). This information can then be used to enhance the service in terms of its outcomes, efficiency, and quality (e.g., minimising risk, and optimising accessibility and effectiveness) (Barkham & Mellor-Clark, 2000; Fink, 1995; Miller et al., 2003; Sperlinger, 2002).

Many theories have been suggested as frameworks for conducting program evaluations in a variety of settings (e.g., Brethower, 1972; Pophan, 1975; Rummler & Brache, 1995). However, there is little consensus as to an accepted theory or model of evaluation (Alkin, 2004). Further, no holistic models of evaluation are specific to psycho-oncology. Therefore the following section focuses on the pragmatic elements of conducting a program evaluation of a psycho-oncology service to develop an understanding of the clinical utility of such services.
2.5.2 Methodological Considerations for Evaluating Psycho-Oncology Services

Clearly service evaluation is important. Thus, the dilemma is not whether to evaluate, but how to design a service evaluation that is meaningful, cost-effective, and can be implemented efficiently. The following section discusses methodological considerations when evaluating psycho-oncology services (specifically psychology services), including sources of information, what to measure, when to administer measures, and how to measure outcomes (Ogles, Lambert, & Masters, 1996). Selection of how, what, when, and who to measure will depend on the goals of the evaluation and the resources available (Bleber et al., 1999; Kiss, 1995). Although these four areas are relevant when evaluating all mental health services, they are discussed below with specific application to hospital-based psychology services for cancer patients.

Sources of information.

Evaluation of a service requires initial decisions as to whose perspective to include. These may be clients/consumers, therapists, carers, trained observers, referrers, the community, other health professionals involved in the client's care, and service funding bodies (Bor & du Plessis, 1997; Newman, Ciarlo, & Carpenter, 1999; Ogles et al., 1996; Salvadore-Carulla, 1999). Selecting who will provide information and feedback will depend on the goals of the service evaluation. Many guidelines recommend using multiple sources of data to overcome the limitations of evaluating from only one perspective (Bleber et al., 1999; Goldman, 1999; National
Mental Health Working Group, 1996; Newman et al., 1999; Ogles et al., 1996).

However, evaluating from different perspectives can be difficult due to the cost and logistical problems associated with collecting information from multiple sources (Newman et al., 1999).

Guidelines for evaluating psychology services for cancer patients recommend that both clients and treating clinicians provide information (Kiss, 1995). Clients and clinicians have different perspectives and priorities for health outcomes (Graham et al., 2001). For example, clinicians can provide information about diagnosis, symptoms, and severity. Clients can provide information about symptoms, functioning, and satisfaction with a service (Bleber et al., 1999). Client outcomes are particularly important because psychology services should be responsive to clients’ needs and emphasise positive outcomes. However, the views of cancer patients and what they experience as beneficial are absent from many evaluations of psycho-oncology services (MacCormack et al., 2001). Therefore, collecting information from clients and clinicians is important, but many evaluations of psycho-oncology services fail to include both sources of information.

Selection of outcome measures.

An essential consideration in designing an evaluation is appropriate selection of outcome measures that are clinically and theoretically relevant for psycho-oncology services and patients.

Existing guidelines for general mental health services suggest a number of possible indicators to monitor. Bleber (1999) suggests three dimensions to be measured when evaluating services: structures, processes, and outcomes. Firstly,
service structures are the characteristics of the service, including settings, locations, convenience, and availability and choice of services. Secondly, process refers to the activities that contribute to patient care, such as the types of interventions delivered, experience and skills of staff, accessibility of the service to patients (including waitlist and referral procedures), the efficiency of service procedures, cost-effectiveness, duration of care, resource utilization (e.g., length of stay, number of sessions), and processes by which treatments may produce positive effects. Thirdly, outcomes are the results of a service’s efforts to prevent, diagnose, and treat distress, such as symptom change in the emotional, social and physical domains discussed earlier (Andrews, Peters, & Teessoon, 1995; Barkham & Mellor-Clark, 2000; Bleber et al., 1999; Kiss, 1995; National Mental Health Working Group, 1996; Page et al., 2001; Sellick & Crooks, 1999; Victorian Department of Human Services, 2002).

There are several guidelines for selecting outcome measures to evaluate psycho-oncology services. However, no single set of guidelines adequately describe the range of outcomes and relationships between outcomes. The following will describe each set of guidelines, including strengths and limitations, and then proposes a synthesis of guidelines to adequately cover the range of outcomes and their relationships when evaluating psycho-oncology services.

Holland (2002) proposed outcomes and their relationships in a model of research in psycho-oncology (refer to Figure 1). This model conceptualised cancer and cancer-related treatment as the independent variables and quality of life (including physical, psychological, vocational, and survival aspects) as the dependent variables. The mediating variables include personal variables (e.g., SES, personality, coping style), medical variables (e.g., stage of illness, treatment
environment), availability of social supports, and stresses both related and unrelated to cancer illness (Holland, 2002). This information is important to describe the population and subgroups to identify predictors for outcomes (Bleber et al., 1999). However, this model is also simplistic in its representation of the relationships between cancer, mediating variables, and outcomes. For example, there may be a reciprocal relationship between a patients' perceived quality of life and their compliance with treatment. Also this model does not detail the mechanism by which an intervention produces changes (physical and/or psychological).

Another model of outcomes for psychosocial interventions for cancer was proposed by Owen et al. (2001), and was designed to overcome the shortcomings of previous evaluation models (including Holland’s), which do not include organisational measures, such as service usage (Owen, Klapow, Hicken, & Tucker, 2001). This model is intended to allow for more precise identification of effective components in psychosocial interventions and services. The three distinct areas described are: (i) global health outcomes; (ii) health-related quality of life (HR-QOL); and (iii) mechanisms of action. Figure 2 presents the three tiers of this model, and the elements of each tier. In this model, global health outcomes are factors relevant to treatment decisions made by physicians and health-care organisations (e.g., service utilisation). HR-QOL includes physical symptoms (e.g., pain, nausea, and other treatment related side-effects), psychological distress, functional well-being (ability to maintain daily routines of normal vocational and personal activities), and social well-being (social support, relationships, and satisfaction with support). Mechanisms of action describe the physiological process variables and psychological process variables. Owen et al (2001)
reviewed 65 studies of psycho-social interventions, and analysed the extent to which studies evaluated each domain of the model. A majority of interventions measured HR-QOL, specifically psychological distress and physical symptoms. In contrast, few studies identified functional or social outcomes, mechanisms of action, or resource utilisation of interventions for cancer patients. It was concluded that these issues must be addressed in future evaluations in order to more fully evaluate the clinical utility of psycho-oncology services. Although Owen’s model is regarded as an improvement on Holland’s model, it does adequately explain how outcome measures relate to mechanisms of action.

Cancer-specific guidelines for the delivery of psychosocial treatments have been published by two prominent Australian cancer organizations (National Breast Cancer Centre & The National Cancer Control Initiative, 2003). These guidelines recommend measuring specific outcomes related to the targets of psycho-oncology services discussed earlier (emotional, social, functional, and physical), and also highlight the importance of including client satisfaction. Client satisfaction is not included in either Holland or Owen’s guidelines. Client satisfaction is an important part of clinical utility as it demonstrates the acceptability of a service (Kiss, 1995; Ogles et al., 1996). Satisfaction is different from the therapeutic effects of a psychosocial intervention, as satisfaction may not reflect behavioural change. However, there is evidence that highly satisfied individuals are more likely to comply with treatments, and are more likely to return to the same service (Bleber et al., 1999; Loblaw et al., 2004). Factors to be considered when evaluating patient satisfaction are informativeness, overall quality of care, staff competence, access to services, cost, facilities, outcome, met/unmet expectations, and continuity of care (Bleber et al., 1999; Fitzpatrick, 1997).
Each of the above guidelines has strengths and weaknesses. Holland’s model provides a theoretical framework for patient health related variables and recognizes the role of mediators in psycho-oncology intervention evaluation. However it does not consider the role of organisational factors. Owen et al’s model recognizes the importance of evaluating both the impact of an intervention and the process of mechanisms of action, as well as service usage (Owen et al., 2001). However, this model only included factors which were directly affected by psychosocial interventions, ignoring the impact of mediating factors recognized in Holland’s model. Guidelines by the NBCC & NCCI (2003) recommend patient satisfaction should also be included as an outcome.

A synthesis of all guidelines would provide the most comprehensive theoretical framework of outcome measures to evaluate the clinical utility of psycho-oncology services (refer to Figure 3 for the combined model). This model recognizes that an intervention’s effect may have a combination of physiological and psychological mechanisms, that intervention’s efficacy on health is influenced by numerous mediator variables (including treatment acceptability) and that cancer disease and treatment can have a reciprocal relationship with mediator variables and global health outcomes.

While this model is more comprehensive, attempting to measure all of these variables may not be practical. Therefore, selection of relevant variables will depend on the type and purpose of the service evaluation.
Variables:

**INDEPENDENT**  
- Cancer Disease and treatment effects

**MEDIATING**
- Personal
  - Sociodemographic
  - Personality
  - Coping style
  - Prior adjustment
  - Spiritual/religious beliefs
- Medical
  - Illness related behaviours (compliance, surveillance)
  - Doctor-patient relationship
  - Treatment environment
  - Rehabilitation options

**OUTCOME**
- Quality of Life (functional domains)
  - Physical
  - Psychological
  - Social
  - Vocational
  - Sexual
- Survival

**INTERVENTIONS**

*Figure 1.* Holland’s model of research for psycho-oncology interventions/service evaluation.
Figure 2. Owen et al’s Three Tier Measurement Model for classification of outcomes.
Figure 3. Combined model of outcome measures and their relationships.
When to measure.

Deciding when to collect information will depend on the outcomes being measured, the service being examined, and the characteristics of clients (Bleber et al., 1999). Some outcomes, such as the number of referrals and service utilization information can be collected throughout a period of time. When administering outcome measures to clients, existing guidelines recommend that measures are repeated over time (i.e., a baseline measure administered as early as possible to determine pre-treatment status, as well as a prolonged follow-up period to determine maintenance effects), to overcome the lack of internal validity with service evaluations (Andrews et al., 1995; Bleber et al., 1999). A survey of clinicians also found that they recommend measures of client symptoms be administered at significant points during intervention, and at three monthly reviews to monitor progress throughout intervention (Miller et al., 2003). Although multiple time points are essential to demonstrate change and effectiveness, this can increase the burden on clients and jeopardise compliance rates (Bleber et al., 1999). Another consideration when evaluating services for cancer patients is life expectancy, where clients with advanced cancer may not be capable of long-term follow-up.

How to measure outcomes.

It is also important to consider how to measure outcomes. How outcomes are measured may be divided into two methods. One method is the collection of quantitative data such as questionnaires and rating scales. The second method is
to collect qualitative data such as feedback via interviews. Each method has relative advantages and disadvantages. Evaluation guidelines in psycho-oncology recommend using both, to take advantage of each method’s strengths (Kiss, 1995).

*Quantitative data.*

Quantitative data uses rating scales, questionnaires, and demographic information to quantify client characteristics (e.g., demographic characteristics, service usage), how much change has occurred, staff activities, and relate particular characteristics of clinical and theoretical relevance to degree of change and service improvements. Questionnaires and rating scales are methods often used for clinical purposes such as screening and treatment planning, as well as for service evaluation. These can take the form of questionnaire batteries which consist of a number of questionnaires administered together, or a single general screening instrument. Whilst screening instruments are relatively brief and easy to administer, they do not provide a range of information, or level of detail which is often necessary for evaluation purposes (Sellick & Crooks, 1999). Research findings indicate that one outcome measure is not sufficient to measure the full spectrum of change that can occur across treatment (Wagner, 2002). It has also been noted that no single questionnaire covers all domains that clients’ value as important (Graham et al., 2001). Using a combination of outcome measures can also assist in overcoming errors in self-reporting, cognitive distortions, and social desirability effects (Miller et al., 2003). Test batteries are used to obtain more detail, such as differentiating level of satisfaction from the therapeutic effects of
psychosocial interventions (Ogles et al., 1996). Therefore test batteries are more appropriate when evaluating mental health services including psycho-oncology services.

Many guidelines outline how to select appropriate quantitative outcome measures. These guidelines recommend that measures are practical, theoretically relevant, and have adequate psychometric properties (Andrews et al., 1995; Griffiths, Jayasuriya, & Maitland, 2000; Moinpour, Georgiadou, Chapman, & Donaldson, 1993; Newman et al., 1999; Page et al., 2001; Parker, O'Donnell, Hadzi-Pavlovic, & Proberts, 2002; Thornicroft & Slade, 2000).

There are several limitations to quantitative measures in service evaluations. It has been noted that few, if any, quantitative measures meet all the above criteria (Folkman & Moskowitz, 2004). Indeed, in a recent survey of clinicians by Gilbody, House, and Sheldon (2002), questionnaires alone were regarded as inadequate - being too simplistic, not sensitive to change, not useful in practice, and detracted from the therapeutic relationship (Gilbody, House, & Sheldon, 2002). Moreover, questionnaires usually consist of a set of questions to which the person selects a pre-determined answer. As such, this methodology has been criticised for imposing an external value system that fails to account for the importance assigned by individual respondents to each area of inquiry (O'Boyle, McGee, Hickey, O'Malley, & Joyce, 1992). For example, a respondent may be functioning well in one area, such as being able to go to work, but assigns little importance to that area. This limits the accuracy and usefulness of quantitative measures such as questionnaires and rating scales in evaluation (Carr & Higginson, 2001).
Qualitative data.

Several guidelines for service evaluation recommend including qualitative data and research strategies to overcome some of the limitations of quantitative methods (Fitzpatrick, 1997; Kiss, 1995; Wagner, 2002). Qualitative data is descriptive data based on spoken or written words. This may include data from interviews, transcripts of therapy sessions, focus groups, diaries, or case notes (Fossey, Harvey, McDermott, & Davidson, 2002; McLeod, 2000). Qualitative data can assist in developing a broader understanding of the client’s experience of a service.

Qualitative methods differ from quantitative methods in terms of purpose and strategies. Qualitative studies are exploratory, using interviews or focus groups to build theories by examining patterns in the data (Barbour, 2000; Fossey et al., 2002). These studies usually involve collecting large amounts of information from small samples (Fossey et al., 2002). Quantitative methods, such as surveys and questionnaires, emphasize the generalizability of results from the experimental group to the wider community, and to establish cause and effect relationships by relying on measurement, statistics, and controls for reliability and validity. However, qualitative methods place less emphasis on generalizability, instead aiming for depth of information from small samples to learn about how and why people think, behave, and make meaning from their experiences (Ambert, Adler, Adler, & Detiner, 1995; Barbour, 2000; National Health and Medical Research Council, 2005).

It is argued that qualitative data offers insights through observation and interviews that would not have emerged from quantified data (Goldman, 1999).
Thus the data collected is more personalized information about the impact of the program or service, such as diaries and interviews with clients (Fink, 1995). From these sources, qualitative evaluation can illuminate expected and unexpected perceptions of a service being examined and understand clients’ experiences (Anastas, 2004; Fossey et al., 2002). In psycho-oncology service evaluation, qualitative research can help to answer how outcomes are achieved, the mechanisms involved, and how difficulties are managed (Barbour, 2000).

Qualitative methods are not limited by the linguistic constraints of a questionnaire that may impede the respondent’s ability to report experiences. The study by Wagner (2002) illustrates this point, by comparing a standardised questionnaire to an interview to measure change in psychotherapy. It was found that the interview measured a wider range of functioning than the questionnaire, and it was concluded that the single questionnaire was not sufficient to measure the full spectrum of change that occurs across treatment in psychotherapy (Wagner, 2002).

Several guidelines for designing and assessing qualitative research have been proposed. Unfortunately there is little consensus, due to the diverse applications and methods of qualitative research. Many recommendations for qualitative studies aim to account for factors affecting validity and reliability, by focussing on the thorough description and documentation of a study’s theoretical rational, research questions, methodologies, analyses, results and their relevance to clinical practice (Cesario, Morin, & Santa-Donato, 2002).

Although qualitative data can be used to describe the subjective experience of clients, very few outcome studies and systematic reviews of psychosocial interventions and psycho-oncology services include qualitative data (Dixon-Woods,
Fitzpatrick, & Roberts, 2001; McLeod, 2000). This may be because qualitative data does not easily help to develop an evidence base and can be time-consuming (Anastas, 2004).

**Combining qualitative and quantitative data.**

As described above, qualitative and quantitative methods each have their relative strengths and weaknesses. Many authors and research guidelines now recommend that evaluation use both methods, to establish greater understanding of clinical effectiveness from a number of perspectives (Cesario et al., 2002; Dennis, Fetterman, & Sechrest, 1994; Dixon-Woods et al., 2001; McLeod, 2000; National Health and Medical Research Council, 2005). Measuring a construct from a number of perspectives and methods is called triangulation, and its use is known to increase the validity of the results of an evaluation (Mays & Pope, 2000).

### 2.6 Summary

Psychosocial well-being is now recognized as an important part of cancer and its treatment. Cancer and treatment can lead to emotional, social, or existential distress, difficult physical symptoms, and impede quality of life. Psycho-oncology services aim to facilitate adjustment, reduce psychological distress, improve quality of life, treat psychiatric disorders, and help to manage the physical symptoms associated with cancer and treatment using a range of psychosocial interventions. These interventions have demonstrated treatment efficacy, but there is little published evidence of clinical utility. Both treatment efficacy and clinical
utility are necessary to establish EBP. Evaluation of psycho-oncology services, such as specialist psychology services for cancer patients, would contribute to demonstrating clinical utility. Evaluations should include multiple sources of information (particularly client and therapist measures), and include clinically and theoretically relevant measures that are reliable and valid. Measures should be administered at multiple time points, and collect a variety of data (both qualitative and quantitative). As psycho-oncology services are being utilised more by oncology patients, it is important to ensure that treatments provided are based on efficacy research and are demonstrated to be effective when delivered in clinical settings.
3.0 Study 1: The Profile and Outcomes of Cancer Patients Referred to a Specialist Psychology Service

The purpose of Study 1 was to evaluate the profile and outcomes for cancer patients referred to the psychology service. Investigating the profile and outcomes of referrals to a service are important parts of evaluating a service's clinical utility. From a patient's perspective, it is necessary to evaluate these characteristics to ensure that patients referred to such services are able to access services easily and derive some benefit from attending. For example, rates of service uptake following referral to a service may indicate clients' perception of the usefulness of the service. Assessing referrals can also discover information about client characteristics (e.g., reasons for referral, psychiatric diagnoses) and demystify a service's activities (e.g., number of sessions per client, interventions administered). This information can be used for planning service development and the provision of resources to meet clients' needs (Bor & du Plessis, 1997).

Whilst it is recognized as important to assess referrals, few studies have identified the epidemiological profile and outcomes of patients referred to specialist psychology services for cancer patients (Newport & Nemeroff, 1998; Turner et al., 1998; Zabora et al., 2001). However, several studies of psychiatric services for cancer inpatients have profiled referrals and outcomes. The results of these studies are compared in Tables 2, 3, and 4, which demonstrate the proportions of tumour sites, reasons for referral, and psychiatric diagnoses described in each study. Clear trends can be identified from the psychiatric diagnostic information (Table 4), where common psychiatric diagnoses in the referred samples of cancer patients are affective disorders (including major depression) and adjustment...
disorders. There are some notable differences between studies. For example, Kissane & Smith (1996) noted a high incidence of family relationship problems in their sample, however other studies did not include family relationships in their diagnostic data. Comparisons between studies for tumour sites and reasons for referral are difficult due to different classification systems. Examination of consistently used categories between studies reveals considerable variability in the sample characteristics of each service for tumour sites (e.g., leukaemia) and reasons for referral (e.g., depression).

Different results and profiles between these studies may be due to cultural factors. Studies summarised in Tables 2, 3, and 4 are from Italy, Japan, Brazil, Australia, and the USA. Epidemiology studies of the prevalence of types of cancer have demonstrated differences between countries due to lifestyle and hereditary factors (Althuis, Dozier, Anderson, Devesa, & Brinton, 2005). Such factors may explain some of the variability in tumour sites between studies.

However, despite differences between these studies of psychiatric services, results can be used for service development. Information about service usage, diagnoses, and interventions can assist in planning resources for a service. For example, an Australian study investigated psychiatric referrals for cancer inpatients over three years, and found that approximately 70% attended more than one visit, and three quarters of referred patients received supportive psychotherapy (Kissane & Smith, 1996). In another study, Citero et al. (2003) found that of the patients assessed, 60% were diagnosed with a psychiatric disorder, 18% received brief psychotherapy, and 22% received family intervention. This data could be used to determine resources needed to meet these needs, including staff intervention skills and availability.
Few studies have analysed referrals of cancer patients to non-psychiatric services (e.g., psychology services). One study of a counselling service for cancer patients found that 82% of the clients referred attended only one or two sessions, and most were offered an appointment within six weeks (42% within two weeks, and 12% waited longer than six weeks) (Boudioni et al., 2000). It was noted that less than half of the clients completed at least six sessions and 5% felt their emotional health was worse after counselling. This information could be used for service planning (i.e. number of sessions attended could determine resources provided). This study also highlights important service characteristics to measure as outcomes, such as length of waitlist or adverse outcomes.
Table 2
Comparison of the Proportion of Tumour Sites Represented in Previous Studies of Referrals to Psychiatric Services

<table>
<thead>
<tr>
<th>Tumour location</th>
<th>Previous study of psychiatric referrals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breast</td>
<td>12%</td>
</tr>
<tr>
<td>Stomach</td>
<td>26%</td>
</tr>
<tr>
<td>Lung</td>
<td>12%</td>
</tr>
<tr>
<td>Leukaemia</td>
<td>25%</td>
</tr>
<tr>
<td>Genitor-urinary</td>
<td>13%</td>
</tr>
<tr>
<td>Colon</td>
<td>-</td>
</tr>
<tr>
<td>Esophageus</td>
<td>-</td>
</tr>
<tr>
<td>Head and neck</td>
<td>-</td>
</tr>
<tr>
<td>Pancreas</td>
<td>-</td>
</tr>
<tr>
<td>Lymphoma</td>
<td>-</td>
</tr>
<tr>
<td>Liver</td>
<td>-</td>
</tr>
<tr>
<td>Skin</td>
<td>-</td>
</tr>
<tr>
<td>Bone</td>
<td>-</td>
</tr>
<tr>
<td>Bowel</td>
<td>-</td>
</tr>
</tbody>
</table>

*Note.* Dashes indicate data not reported by authors.
Table 3
Comparison of Reasons for Referral of Cancer Between Previous Studies of Psychiatric Services for Cancer Patients

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Current psychiatric symptoms</td>
<td>69%</td>
<td>35%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>6%</td>
</tr>
<tr>
<td>Coping problems</td>
<td>12%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>41%</td>
<td>24%</td>
</tr>
<tr>
<td>Suicide risk/attempt</td>
<td>5%</td>
<td>3%</td>
<td>-</td>
<td>-</td>
<td>1%</td>
<td>-</td>
</tr>
<tr>
<td>Previous psychiatric history</td>
<td>32%</td>
<td>8%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>5%</td>
</tr>
<tr>
<td>Unexplained physical symptoms</td>
<td>2%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Non-compliance</td>
<td>2%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>13%</td>
</tr>
<tr>
<td>Substance abuse</td>
<td>1%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1.4%</td>
<td>1%</td>
</tr>
<tr>
<td>Anxiety/fear</td>
<td>-</td>
<td>18%</td>
<td>-</td>
<td>-</td>
<td>17%</td>
<td>26%</td>
</tr>
<tr>
<td>Depression</td>
<td>-</td>
<td>18%</td>
<td>-</td>
<td>73%</td>
<td>37%</td>
<td>13%</td>
</tr>
<tr>
<td>Sleep disorders</td>
<td>-</td>
<td>19%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Pain</td>
<td>-</td>
<td>2%</td>
<td>-</td>
<td>-</td>
<td>8%</td>
<td>-</td>
</tr>
<tr>
<td>Delirium</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>6%</td>
</tr>
</tbody>
</table>

Note. Dashes indicate data not reported by authors.
Table 4
Comparison of Psychiatric Diagnoses and Co-Morbidities of Cancer Patients
Between Previous Studies of Psychiatric Services

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mood disorder</td>
<td>23%</td>
<td>-</td>
<td>30.5%</td>
<td>-</td>
<td>23%</td>
<td>-</td>
</tr>
<tr>
<td>Major depression</td>
<td>18%</td>
<td>14%</td>
<td>-</td>
<td>56%</td>
<td>-</td>
<td>5%</td>
</tr>
<tr>
<td>Adjustment disorder</td>
<td>27%</td>
<td>34%</td>
<td>14%</td>
<td>-</td>
<td>16%</td>
<td>28%</td>
</tr>
<tr>
<td>Anxiety disorder</td>
<td>8%</td>
<td>2%</td>
<td>-</td>
<td>-</td>
<td>2%</td>
<td>14%</td>
</tr>
<tr>
<td>Substance abuse</td>
<td>1%</td>
<td>1%</td>
<td>-</td>
<td>-</td>
<td>4%</td>
<td>-</td>
</tr>
<tr>
<td>Personality disorder</td>
<td>2%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>5%</td>
<td>10%</td>
</tr>
<tr>
<td>Delirium</td>
<td>11%</td>
<td>17%</td>
<td>-</td>
<td>-</td>
<td>10%</td>
<td>14%</td>
</tr>
<tr>
<td>V-code - family problem</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>24%</td>
<td>-</td>
</tr>
</tbody>
</table>

Note. Dashes indicate data not reported by authors.

Studying the process and outcome of referrals can also identify patient- and service-related factors which influence and predict outcomes such as referral to a service (and re-referral), service utilisation, and symptom improvement (Levant, 2005). These predictive factors may include a client’s cancer tumour site, stage, and current treatment, as well as demographic characteristics, personality characteristics, past psychiatric history, and baseline level of distress (Andersen, 1992; Clark et al., 2003; Turner et al., 1998). Identifying the effects of such predictors can also help clinicians to provide clients with realistic expectations of outcomes from attending a service (Clark, Drain, & Malone, 2003). This
information may also be used for service and treatment planning. For example, Citero et.al. (2003) compared demographic details between all hospital inpatients and those referred to the psychiatric service, to identify client characteristics that predicted referral to the psychiatric service. Compared with all hospital inpatients, significantly more males were referred to psychiatric services. Younger age groups (19-30 years) also represented a larger proportion of the referred sample than the hospital sample. Results also demonstrated that females referred to the psychiatric services were older, compared to referred males. It was noted that 23% were re-referrals of previous patients, and these clients were typically male, younger, unmarried, and had more aggressive cancers. Based on the results of this study, Citero et.al. (2003) concluded that younger patients demanded more care because of greater concern about the disease. This finding is supported by another study of psychiatric referrals for cancer patients, where more than half of patients referred had recurrent or metastatic cancer, and it was concluded that these patients needed more emotional support (Akechi et al., 2001). Therefore, the results of these studies could be used to anticipate the needs and characteristics of clients that may influence service usage.

In another example, Boudioni et al. (2000) identified factors associated with the number of sessions attended at a counselling service. Clients aged 30-59 attended more sessions. However no differences were found between groups attending less than three or three or more sessions for gender, employment, cancer type, or wait-time for an appointment. Based on these results, when planning resource utilization, it may be expected that clients referred to this service who are aged 30-59, would attend more sessions.
Few other studies of psycho-social interventions for cancer patients have identified predictors of outcomes such as level of functioning, drop-out from a service, or number of sessions attended. However studies of general mental health services have explored the relationship between client demographic characteristics, level of functioning, and treatment outcomes. For example, drop out from attending a community mental health service was associated with unemployment, previous psychiatric history, and low client satisfaction (Berghofer, Schmidl, Rudas, Steiner, & Schmitz, 2002). Pre-treatment severity of symptoms and functioning has also predicted treatment outcomes, where lower functioning clients were rated as improving less during psychotherapy (Hirsch, Jolley, & Williams, 2000). One explanation for this finding is that clients with more severe functional impairments may find it more difficult to utilise psychotherapy effectively.

Studies have produced inconsistent results for the effects of other predictors such as psychiatric diagnoses, therapist experience, client socio-economic characteristics, or outcomes such as the number of sessions attended (Dubrin & Zastowny, 1988; Persons, Burns, & Perloff, 1988; Renk, Dinger, & Bjugstad, 2000). Such inconsistent outcomes indicate that results do not generalize across studies and services (Hirsch et al., 2000). It has also been noted that study design and methodologies vary considerably between studies, which may also account for inconsistent findings (Steketee & Chambless, 1992).

Although studies of psycho-social interventions for cancer patients have not directly identified predictors of outcome, some studies have identified risk factors associated with higher levels of distress. For example, patients who are single, female, younger, have a past psychiatric history, lower levels of education, are currently hospitalised, diagnosed with recurrent cancer, and have a poor cancer
prognosis are at a higher risk of distress (Andersen, 1992; Harter et al., 2001; Turner et al., 1998; Vachan, 2006; Zabora et al., 2001). It may therefore be expected that patients referred to a service with these characteristics will have higher levels of distress.

Most of the above studies of referrals for cancer patients focus on psychiatric services. It would be expected that a psychology service would have a different profile of referrals and outcomes. For example, a psychology service may receive more referrals and provide treatment for clients who are experiencing psychological distress rather than a serious mental illness. Also, many of the above studies focus only on hospitalised cancer patients. This restriction may bias the results, and explain why many of the above studies have noted a high proportion of referrals for patients with recurrent/aggressive/late stage cancer, and therefore are more likely to be hospitalised. Many guidelines for mental health services emphasise the importance of the accessibility of a service for both inpatients and outpatients. Therefore a service that provides psychosocial support for both client groups will provide valuable information regarding referral patterns and prediction of outcomes (Bleber et al., 1999; Bor & du Plessis, 1997; Levant, 2005; National Mental Health Working Group, 1996). Several previous studies rely only on descriptive statistics of client characteristics (e.g., Akechi, et al., 2001; Citero, et al., 2003) rather than statistically analysing data or including a routine measure of outcome (e.g., a rating scale such as the Global Assessment of Functioning: GAF). Including a routine outcome measure would provide information about client changes whilst attending a service, providing another indicator of the clinical utility of a service.
Therefore, the purpose of the current study is to identify outcomes for cancer patients referred to the psychology service at the Peter MacCallum Cancer Centre, to compare to previous studies of psychology and psychiatric services, as well as to measure the clinical utility of the psychology service. The first aim of this study is to identify the epidemiological profile of patients referred to the specialist psychology service for cancer patients. This involves comparing similarities and differences between previous studies, Australian cancer statistics, hospital data, and the sub-sample of hospital patients referred to the psychology service. It is expected that the profile of clients referred will differ from previous studies that have focused on psychiatric services for inpatients. Instead, this study focuses on a psychology service and includes both inpatient and outpatient referrals.

The second aim of this study is to determine the effectiveness of the service in terms of global improvement in clients’ functioning and symptom severity. It is expected that improvement in GAF will be found between the first and last sessions for clients attending more than one appointment, based on previous studies of general mental health services (Hirsch et al., 2000; Page et al., 2001; Parker et al., 2002).

The third aim of this study is to identify predictors of outcome, to determine if information obtained prior to contact and assessment predicts outcome of referral, severity of psychological symptoms at the initial session, the number of sessions attended, and improvement in symptoms. Identifying such predictors will assist the service to plan and provide resources (including psychologists’ workloads), as well as for therapists to provide clients with realistic expectations for therapy outcomes. Potential predictors are identified from past studies of general psychology services (e.g., employment status, past psychiatric history, and baseline severity of
symptoms), as well as from studies of risk factors associated with levels of distress in cancer patients (e.g., age, sex, stage of cancer, and marital status).
3.1 Method

3.1.1 Sample

Patients with a current or past history of cancer, who were referred to the psychology service at the Peter MacCallum Cancer Centre over a 16-month period from the 1st July 2005 to the 31st October 2006 were recorded. Clients could be referred and seen whilst an inpatient or outpatient at the hospital. During the 16-month study period, a total of 485 referrals were made to the psychology service for 460 patients. Of these, 10 referrals were for spouses only and 5 referrals were for other family members. Ten patients with no current or past history of cancer were assessed for prophylactic non-cancer/risk reduction mastectomies. These 25 referrals were not included in subsequent analyses, which focus only on patients referred with either current or a past history of cancer. All new patients registered at Peter MacCallum Cancer Centre between October 2005 and October 2006 were also included as a comparison to patients referred to the psychology service.

A total of 460 referrals were made for 435 cancer patients. Of these, 16% were inpatients, and 84% were outpatients at the time of referral. The average age of clients was 52 years, and approximately 40% of clients were male and 60% were female. More detailed descriptions of client characteristics are provided in the results section of this study.
3.1.2 Procedures and Measures

The study design was prospective and non-experimental. Descriptive information of new referrals was collected via a database created for psychologists employed at the service to routinely enter information about all referrals received. This information included the source of referral, reason for referral (defined by the referrer), demographic information (e.g., age, sex, marital status, education level, and current work situation), cancer information (e.g., date of initial diagnosis, recurrence, type of cancer, and current cancer treatment), and the outcome of the referral (e.g., if the client was reviewed, referred elsewhere, or declined the service). For clients who attended sessions, psychologists also entered assessment results onto the database (e.g., DSM-IV-TR diagnosis, and co-morbidities), number of sessions attended, and details of each session (e.g., type of treatment/activities utilised in each session, and any onward referrals).

Psychologists also provided a Global Assessment of Functioning (GAF) scale rating for each session. GAF ratings provide an indication of the client’s overall level of functioning (including psychological, social, and occupational functioning) and psychological symptom severity. The GAF is a single rating scale ranging from 1-100, with 100 representing best functioning and 1 indicating worst level of functioning (American Psychiatric Association, 2000). The scale is divided into 10 equal intervals with anchors provided at each interval. The GAF has demonstrated acceptable concurrent validity (Startup, Jackson, & Bendix, 2002), construct validity (Tungstrom, Soderberg, & Armelius, 2005), inter-rater reliability
for group data (Soderberg, Tungstrom, & Armelius, 2005), and sensitivity to treatment effects (Parker et al., 2002).

For this study, hospital statistics were also obtained from hospital records, for the characteristics of new registrations during 12-months of the study period. This data enabled the comparison of the profile of hospital patients to patients referred to the psychology service in order to identify similarities and differences for age, sex, and primary cancer site.

3.1.3 Analyses

Results consist of descriptive statistics to determine the profile of clients referred to the service and outcomes of referrals. Also, a pre-post comparison was completed for GAF ratings, as an indication of change during attendance at the service. Relationships between client characteristics, referral details, referral outcomes, service usage, and change in GAF ratings were examined using correlational analyses, t-tests, and repeated measures ANOVA. The assumption of normality was violated for some variables, and therefore non-parametric tests such as Spearman’s rho were used where appropriate. Bonferroni adjustment was used to control for Type 1 error when conducting multiple analyses. The Bonferroni correction is a safeguard against multiple tests of statistical significance on the same data, and states that if comparing \( n \) variables, then the statistical significance level that should be used for each correlation is \( .05/n \) (Green & Salkind, 2003). To identify predictors related to outcomes, stepwise regression analyses were conducted. A stepwise regression determines the best prediction of a dependent variable from several independent variables by statistically ordering
the entry of independent variables into the analysis (Coakes & Steed, 2001). This allows for later removal of variables that were previously included.
3.2 Results

3.2.1 Sample Characteristics

During the 16-month study period, a total of 460 referrals (including re-referrals) were made for 435 cancer patients. Of these, 16% were inpatients, and 84% were outpatients at the time of referral. Figure 4 demonstrates the number of referrals for cancer patients received by the service each month. Over the 16-month study period, the rate of monthly referrals showed a general increasing trend.

![Number of referrals per month](image)

*Figure 4.* The number of referrals received by the psychology service each month for the duration of the study.
Table 5 summarises the demographic characteristics of cancer patients referred to the service. Most patients referred were married, and had children. Nearly half of referrals did not have information regarding education and work situation. However, based on the data provided, most patients had completed at least a high school education, and most were working either full-time or part-time. The age of patients referred to the psychology service ranged from 17.78 to 88.12 years ($M = 52.43, SD = 13.08$).

Tables 6 and 7, and Figure 5 compare the characteristics of referrals to the psychology service, to the hospital registrations during 12 months of the study period. More females were referred to the psychology service than males. The proportion of females referred was slightly higher than the proportion of females registered at the hospital (refer to Table 7). More patients from the age categories between 30-59 were referred to the psychology service, and less were referred from the 70+ age categories, compared to hospital registrations (refer to Figure 5). Patients with breast cancer represented the largest proportion of clients referred to the psychology service, followed by head/neck, urology, and haematology cancers. When compared to hospital statistics, breast, gynaecology, haematology, head/neck, and lung cancers represented a higher proportion in the referral to psychology statistics (refer to Table 6). Patients with skin cancer represented a smaller proportion in the psychology sample compared to hospital statistics.
Table 5  
Marital Status, Number of Children, Education, and Work Situation of Cancer Patients Referred to the Service

<table>
<thead>
<tr>
<th>Demographic detail</th>
<th>n</th>
<th>% of all referrals</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Marital status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never married</td>
<td>52</td>
<td>12.0</td>
</tr>
<tr>
<td>De facto</td>
<td>24</td>
<td>5.5</td>
</tr>
<tr>
<td>Married</td>
<td>246</td>
<td>56.6</td>
</tr>
<tr>
<td>Separated</td>
<td>23</td>
<td>5.3</td>
</tr>
<tr>
<td>Divorced</td>
<td>29</td>
<td>6.7</td>
</tr>
<tr>
<td>Widowed</td>
<td>16</td>
<td>3.7</td>
</tr>
<tr>
<td>Not stated</td>
<td>45</td>
<td>10.3</td>
</tr>
<tr>
<td><strong>Number of children</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>73</td>
<td>16.8</td>
</tr>
<tr>
<td>1+</td>
<td>244</td>
<td>56</td>
</tr>
<tr>
<td>Not stated</td>
<td>118</td>
<td>27.1</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did not finish school</td>
<td>31</td>
<td>7.1</td>
</tr>
<tr>
<td>High school (year 7-12)</td>
<td>56</td>
<td>12.7</td>
</tr>
<tr>
<td>Certificate level</td>
<td>16</td>
<td>3.7</td>
</tr>
<tr>
<td>Advanced diploma</td>
<td>11</td>
<td>2.5</td>
</tr>
<tr>
<td>Bachelor degree</td>
<td>35</td>
<td>8.0</td>
</tr>
<tr>
<td>Graduate diploma/certificate</td>
<td>11</td>
<td>2.5</td>
</tr>
<tr>
<td>Postgraduate degree</td>
<td>22</td>
<td>5.1</td>
</tr>
<tr>
<td>Apprenticeship</td>
<td>2</td>
<td>.5</td>
</tr>
<tr>
<td>Not stated</td>
<td>251</td>
<td>57.7</td>
</tr>
<tr>
<td><strong>Work situation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full time</td>
<td>72</td>
<td>16.6</td>
</tr>
<tr>
<td>Part time</td>
<td>56</td>
<td>12.9</td>
</tr>
<tr>
<td>Home duties</td>
<td>23</td>
<td>5.3</td>
</tr>
<tr>
<td>Retired</td>
<td>48</td>
<td>11</td>
</tr>
<tr>
<td>Sickness benefit/disabled</td>
<td>46</td>
<td>10.6</td>
</tr>
<tr>
<td>Unemployed</td>
<td>6</td>
<td>1.4</td>
</tr>
<tr>
<td>Student</td>
<td>1</td>
<td>.2</td>
</tr>
<tr>
<td>Not stated</td>
<td>183</td>
<td>42.1</td>
</tr>
</tbody>
</table>
Table 6
Comparison of Cancer Sites Between Hospital Registrations and Psychology Referral Statistics

<table>
<thead>
<tr>
<th>Cancer type</th>
<th>Hospital registrations</th>
<th>% of hospital registrations</th>
<th>Referrals to the psychology department</th>
<th>% of all referrals to psychology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breast</td>
<td>440</td>
<td>7.9</td>
<td>116</td>
<td>26.7</td>
</tr>
<tr>
<td>Head and Neck</td>
<td>35</td>
<td>6.3</td>
<td>59</td>
<td>13.6</td>
</tr>
<tr>
<td>Lung</td>
<td>294</td>
<td>5.3</td>
<td>51</td>
<td>11.7</td>
</tr>
<tr>
<td>Melanoma/skin</td>
<td>773</td>
<td>13.9</td>
<td>26</td>
<td>6.0</td>
</tr>
<tr>
<td>Gastro-intestinal</td>
<td>417</td>
<td>7.5</td>
<td>24</td>
<td>5.5</td>
</tr>
<tr>
<td>Gynaecology</td>
<td>211</td>
<td>3.8</td>
<td>27</td>
<td>6.3</td>
</tr>
<tr>
<td>Bone/soft tissue</td>
<td>149</td>
<td>2.7</td>
<td>13</td>
<td>3.0</td>
</tr>
<tr>
<td>Haematology</td>
<td>483</td>
<td>8.7</td>
<td>55</td>
<td>12.7</td>
</tr>
<tr>
<td>Urology</td>
<td>569</td>
<td>10.2</td>
<td>57</td>
<td>13.1</td>
</tr>
<tr>
<td>Data not provided</td>
<td>1870</td>
<td>33.7</td>
<td>5</td>
<td>1.1</td>
</tr>
</tbody>
</table>

Table 7
Comparison Between Hospital Registrations and Psychology Referral Statistics for Sex

<table>
<thead>
<tr>
<th>Sex</th>
<th>Hospital registrations</th>
<th>% of all hospital registrations</th>
<th>Referrals to the psychology department</th>
<th>% of all referrals to psychology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>2573</td>
<td>46.3</td>
<td>172</td>
<td>39.5</td>
</tr>
<tr>
<td>Female</td>
<td>2984</td>
<td>53.7</td>
<td>263</td>
<td>60.5</td>
</tr>
</tbody>
</table>
Figure 5. Comparison of age groups between hospital registrations and referrals to the psychology service.

The average time between the initial diagnosis of cancer and referral to the psychology service was $M = 2.69$ years, $SD = 5.05$ (range -.25-36.69 years). Six patients were referred to the service shortly before their diagnosis of cancer was confirmed. Of the patients referred to the service, 17% had been diagnosed with recurrent cancer.

The average age when first diagnosed with cancer for female patients referred was $M = 47.7$ years, $SD = 13.24$ (range 2.87-85.92 years), and for male patients $M = 52.85$ years, $SD = 14.25$ (range 2.84-85.22 years). This difference was significant, with referred females diagnosed with cancer at a significantly younger age than referred males, $t(389) = 3.61, p = .000, d = .38, 95\% CI (.17,.58)$. 

Table 8 details patients’ current cancer treatments. Most patients referred were undergoing some form of current treatment for cancer (81.7%). The purpose of current treatment was not stated by many referrals.

<table>
<thead>
<tr>
<th>Cancer detail</th>
<th>n</th>
<th>% of all referrals</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current cancer treatment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Systemic agent therapy</td>
<td>82</td>
<td>18.9</td>
</tr>
<tr>
<td>No treatment</td>
<td>58</td>
<td>13.3</td>
</tr>
<tr>
<td>Radiotherapy</td>
<td>57</td>
<td>13.1</td>
</tr>
<tr>
<td>All three treatment types (surgical, systemic agent, and radiotherapy)</td>
<td>57</td>
<td>13.1</td>
</tr>
<tr>
<td>Surgical treatment</td>
<td>49</td>
<td>11.3</td>
</tr>
<tr>
<td>Radiation and systemic agent treatment</td>
<td>46</td>
<td>10.6</td>
</tr>
<tr>
<td>Surgical treatment and systemic agent treatment</td>
<td>38</td>
<td>8.7</td>
</tr>
<tr>
<td>Surgical and radiation treatment</td>
<td>26</td>
<td>6.0</td>
</tr>
<tr>
<td>Not stated</td>
<td>22</td>
<td>5.1</td>
</tr>
<tr>
<td><strong>Purpose of current treatment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not stated</td>
<td>234</td>
<td>53.8</td>
</tr>
<tr>
<td>Curative</td>
<td>109</td>
<td>25.1</td>
</tr>
<tr>
<td>Non-curative or palliative</td>
<td>70</td>
<td>16.1</td>
</tr>
<tr>
<td>Did not have treatment</td>
<td>17</td>
<td>3.9</td>
</tr>
<tr>
<td>Prophylactic</td>
<td>5</td>
<td>1.1</td>
</tr>
</tbody>
</table>
3.2.2 Details of Referrals

The sources and reasons for referral to the psychology service are summarised in Tables 9 and 10. As is evident from inspection of Table 9, most referrals were made by nursing or medical staff. The departments making the highest number of referrals were breast, haematology, lung, and head/neck (refer to Table 10). These correspond with the primary cancer sites of patients referred (breast, head/neck, lung, and haematology cancers). The most common primary reasons for referral, as indicated by referring staff/departments, were for coping/adjustment/distress, depression, and anxiety (refer to Table 10).
### Table 9
*Departments and Staff Referring to the Psychology Department*

<table>
<thead>
<tr>
<th>Source of referral</th>
<th>n</th>
<th>% of all referrals</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Referring department</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breast</td>
<td>121</td>
<td>26.4</td>
</tr>
<tr>
<td>Haematology</td>
<td>67</td>
<td>14.6</td>
</tr>
<tr>
<td>Lung</td>
<td>58</td>
<td>12.7</td>
</tr>
<tr>
<td>Head &amp; neck</td>
<td>50</td>
<td>10.9</td>
</tr>
<tr>
<td>Gastrointestinal</td>
<td>43</td>
<td>9.4</td>
</tr>
<tr>
<td>Gynaecology</td>
<td>29</td>
<td>6.3</td>
</tr>
<tr>
<td>Urology</td>
<td>28</td>
<td>6.1</td>
</tr>
<tr>
<td>Melanoma/skin</td>
<td>24</td>
<td>5.2</td>
</tr>
<tr>
<td>Other</td>
<td>21</td>
<td>4.6</td>
</tr>
<tr>
<td>Bone &amp; soft tissue</td>
<td>8</td>
<td>1.7</td>
</tr>
<tr>
<td>Neuro-oncology</td>
<td>5</td>
<td>1.1</td>
</tr>
<tr>
<td>Paediatric/late effects</td>
<td>4</td>
<td>.9</td>
</tr>
<tr>
<td><strong>Referring staff member</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nursing staff</td>
<td>182</td>
<td>39.7</td>
</tr>
<tr>
<td>Medical staff</td>
<td>153</td>
<td>33.4</td>
</tr>
<tr>
<td>Social work</td>
<td>33</td>
<td>7.2</td>
</tr>
<tr>
<td>Psychiatry</td>
<td>9</td>
<td>2.0</td>
</tr>
<tr>
<td>Self-referred</td>
<td>7</td>
<td>1.5</td>
</tr>
<tr>
<td>Allied health</td>
<td>3</td>
<td>.7</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>.4</td>
</tr>
<tr>
<td>Not stated</td>
<td>69</td>
<td>15.1</td>
</tr>
</tbody>
</table>
Table 10

Primary Reasons Patients were Referred to the Service

<table>
<thead>
<tr>
<th>Reason for referral</th>
<th>n</th>
<th>% of all referrals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coping/adjustment/distress</td>
<td>231</td>
<td>47.3</td>
</tr>
<tr>
<td>Depression</td>
<td>114</td>
<td>23.4</td>
</tr>
<tr>
<td>Anxiety</td>
<td>112</td>
<td>23.0</td>
</tr>
<tr>
<td>Relationship difficulties</td>
<td>6</td>
<td>1.2</td>
</tr>
<tr>
<td>Prophylactic mastectomy</td>
<td>4</td>
<td>.8</td>
</tr>
<tr>
<td>Anger</td>
<td>3</td>
<td>.6</td>
</tr>
<tr>
<td>Past psychiatric history</td>
<td>3</td>
<td>.6</td>
</tr>
<tr>
<td>Physical symptoms management</td>
<td>3</td>
<td>.6</td>
</tr>
<tr>
<td>Not stated</td>
<td>3</td>
<td>.6</td>
</tr>
<tr>
<td>Suicide assessment</td>
<td>2</td>
<td>.4</td>
</tr>
<tr>
<td>Behavioural issues</td>
<td>1</td>
<td>.2</td>
</tr>
<tr>
<td>Body image concern</td>
<td>1</td>
<td>.2</td>
</tr>
<tr>
<td>Fatigue</td>
<td>1</td>
<td>.2</td>
</tr>
<tr>
<td>Grief</td>
<td>1</td>
<td>.2</td>
</tr>
<tr>
<td>Guilt</td>
<td>1</td>
<td>.2</td>
</tr>
<tr>
<td>Nightmares</td>
<td>1</td>
<td>.2</td>
</tr>
<tr>
<td>To quit smoking</td>
<td>1</td>
<td>.2</td>
</tr>
</tbody>
</table>

Note. Some patients were referred more than once and for more than one reason

3.2.3 Outcome of Referrals

A summary of the outcomes of referrals for cancer patients are presented in Table 11. Most referrals resulted in patients being reviewed by the psychology service. Over 20% of patients referred declined attending the service. The main reasons that patients identified for declining the referral were: receiving support from another service; or feeling better. However, in many cases a reason for declining the service was not provided. Chi square and correlational analyses did not
identify any factors that were significantly associated with patients declining the service (including age, time since diagnosis of cancer, cancer site and current treatment type, diagnosis of cancer recurrence, reason for referral, sex, marital status, work situation, and education).

Of the 435 patients referred, 284 clients attended for an assessment (62.2%). During the study period, 23 patients were re-referred. Twenty-two patients were referred twice, and one patient was referred three times during the study period. Chi-square and correlational analyses revealed no factors were associated with the likelihood of being re-referred (including age, sex, outcome of first referral, cancer type, and treatment information).

The average time between referral and assessment was 16 days, $SD = 16.84$ (range 0-114 days). The median wait-time between referral and assessment was 11 days, with cumulative percentages indicating that 7.6% of clients seen for an assessment the same day of the referral, 13.2% within a day of referral, 37.8% within one week of referral, and 60.1% within two weeks. There was a significant difference between inpatients and outpatients for average wait-time ($z = -6.94, p = .000$), where inpatients had an average rank of 65.78 compared to outpatients with an average rank of 151.59. Figure 6 shows the distribution of scores for the two groups.
Table 11  
*Outcomes of Referrals to the Psychology Service*

<table>
<thead>
<tr>
<th>Outcome of referrals</th>
<th>n</th>
<th>% of referrals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review patient</td>
<td>285</td>
<td>62.2</td>
</tr>
<tr>
<td>No further action after initial contact with patient</td>
<td>24</td>
<td>5.2</td>
</tr>
<tr>
<td><em>(Telephone consultation only)</em></td>
<td>3</td>
<td>.7</td>
</tr>
<tr>
<td><em>(Brief review on ward)</em></td>
<td>13</td>
<td>(2.8)</td>
</tr>
<tr>
<td><em>(No further action - other)</em></td>
<td>8</td>
<td>(1.7)</td>
</tr>
<tr>
<td>Referred to another service</td>
<td>48</td>
<td>10.5</td>
</tr>
<tr>
<td>Patient declined appointment</td>
<td>96</td>
<td>21</td>
</tr>
<tr>
<td><em>(Receiving support from another service)</em></td>
<td>20</td>
<td>(4.4)</td>
</tr>
<tr>
<td><em>(Feeling better)</em></td>
<td>11</td>
<td>(2.4)</td>
</tr>
<tr>
<td><em>(Unable to contact patient)</em></td>
<td>5</td>
<td>(1.1)</td>
</tr>
<tr>
<td><em>(Not have enough time to attend appointments)</em></td>
<td>3</td>
<td>(.7)</td>
</tr>
<tr>
<td><em>(Feeling too unwell)</em></td>
<td>2</td>
<td>(.4)</td>
</tr>
<tr>
<td><em>(Patient concern about confidentiality (ongoing legal issues))</em></td>
<td>1</td>
<td>(.2)</td>
</tr>
<tr>
<td><em>(Unaware of referral)</em></td>
<td>1</td>
<td>(.2)</td>
</tr>
<tr>
<td><em>(Patient preference to focus on medical treatment)</em></td>
<td>1</td>
<td>(.2)</td>
</tr>
<tr>
<td><em>(No reason recorded)</em></td>
<td>52</td>
<td>(11.4)</td>
</tr>
<tr>
<td>Patient died before contact made</td>
<td>7</td>
<td>.9</td>
</tr>
<tr>
<td>Currently trying to contact patient</td>
<td>1</td>
<td>.2</td>
</tr>
</tbody>
</table>
Of the clients assessed, 35% met DSM-IV-TR criteria for a psychiatric disorder, and 60% were described with one or more co-morbidities. The specific diagnoses and co-morbidities reported by psychologists are presented in Tables 12 and 13. It is noteworthy that 21.8% of clients were diagnosed with two or more DSM-IV-TR disorders. As is evident from Table 12, the principal psychiatric diagnoses were adjustment disorders, mood disorders, and anxiety disorders. The most common co-morbidities were coping/adjustment/distress, relational problems, and physical symptom management. A contingency table analysis indicated a significant relationship between anxiety as a reason for referral and diagnosis of anxiety, $\chi^2(1, N = 181) = 20.49, p = .000$, and between depression as a reason for
referral and subsequent diagnosis of depression, \( \chi^2(1, N = 181) = 13.34, p = .000 \).

Examination of standardised residuals indicated that the high proportion of clients referred for reasons other than depression or anxiety, and subsequently not diagnosed with these conditions, contributed to the significant result. Therefore, anxiety and depression as reasons for referral were significantly related to the subsequent diagnosis of anxiety and depression.

The average GAF for clients at assessment was \( M = 69, SD = 11 \) (range 28-95). There were significant group differences between males and females for initial session GAF, \( t(164.54) = 2.71, p = .009, d = .4, 95\% CI (.10, .68) \), with females scoring significantly lower GAF ratings than males. Reason for referral was also significantly related to initial GAF rating, \( F(5, 189) = 3.93, p = .002, \text{partial } \eta^2 = .09, 95\% CI (.01, .16) \). A post-hoc Tukey test showed that clients who were referred for suicide risk assessment were rated significantly lower on the GAF than all other reasons for referral. Other correlational and factorial ANOVA analyses demonstrated that factors not related to GAF scores at assessment were current cancer treatment, age when referred, age at time of diagnosis of cancer, cancer recurrence, psychiatric diagnoses, and co-morbidities. Sex and reason for referral were entered into a stepwise linear regression to predict baseline GAF. Sex was the only significant predictor \( F(1, 192) = 8.3, p = .004 \), accounting for 4.1% of the variance in GAF at first session.
### Table 12
**DSM-IV-TR Diagnoses Recorded by Psychologists for Clients Assessed by the Service**

<table>
<thead>
<tr>
<th>DSM-IV-TR diagnosis</th>
<th>n</th>
<th>% of all clients assessed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjustment disorder</td>
<td>74</td>
<td>25.96</td>
</tr>
<tr>
<td>(Adjustment disorder - anxiety and depression)</td>
<td>(5)</td>
<td>(1.75)</td>
</tr>
<tr>
<td>(Adjustment disorder with anxiety)</td>
<td>(1)</td>
<td>(.004)</td>
</tr>
<tr>
<td>Mood disorder</td>
<td>63</td>
<td>22.11</td>
</tr>
<tr>
<td>(Major depression)</td>
<td>(52)</td>
<td>(18.25)</td>
</tr>
<tr>
<td>(Postnatal depression)</td>
<td>(1)</td>
<td>(.004)</td>
</tr>
<tr>
<td>(Dysthymic disorder)</td>
<td>(1)</td>
<td>(.004)</td>
</tr>
<tr>
<td>Anxiety disorder</td>
<td>49</td>
<td>17.19</td>
</tr>
<tr>
<td>(Anxiety disorder - GAD)</td>
<td>(4)</td>
<td>(1.40)</td>
</tr>
<tr>
<td>(Anxiety disorder - panic disorder)</td>
<td>(3)</td>
<td>(1.05)</td>
</tr>
<tr>
<td>(Anxiety disorder - PTSD)</td>
<td>(1)</td>
<td>(.004)</td>
</tr>
<tr>
<td>(Anxiety disorder - specific phobia)</td>
<td>(4)</td>
<td>(1.4)</td>
</tr>
<tr>
<td>(Anxiety disorder - NOS)</td>
<td>(1)</td>
<td>(.004)</td>
</tr>
<tr>
<td>Personality disorder/traits</td>
<td>26</td>
<td>9.12</td>
</tr>
<tr>
<td>Substance use/abuse</td>
<td>16</td>
<td>5.61</td>
</tr>
<tr>
<td>Sexual disorder</td>
<td>2</td>
<td>.007</td>
</tr>
<tr>
<td>Insomnia</td>
<td>1</td>
<td>.004</td>
</tr>
<tr>
<td>Delirium</td>
<td>1</td>
<td>.004</td>
</tr>
<tr>
<td>Gambling</td>
<td>1</td>
<td>.004</td>
</tr>
<tr>
<td>Other</td>
<td>10</td>
<td>3.51</td>
</tr>
</tbody>
</table>

*Note. Some patients were diagnosed with more than one disorder*
Table 13

<table>
<thead>
<tr>
<th>Co-morbidities</th>
<th>n</th>
<th>% of all clients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coping style/adjustment/distress</td>
<td>68</td>
<td>23.86</td>
</tr>
<tr>
<td>Relational problem</td>
<td>64</td>
<td>22.46</td>
</tr>
<tr>
<td><em>(Relational problem - parent child)</em></td>
<td>(17)</td>
<td>(5.96)</td>
</tr>
<tr>
<td><em>(Relational problem - partner)</em></td>
<td>(42)</td>
<td>(14.74)</td>
</tr>
<tr>
<td><em>(Relational problem - sibling)</em></td>
<td>(2 )</td>
<td>(.01)</td>
</tr>
<tr>
<td>Physical symptom management</td>
<td>37</td>
<td>12.98</td>
</tr>
<tr>
<td>Existential concern</td>
<td>28</td>
<td>9.82</td>
</tr>
<tr>
<td>Body image problem</td>
<td>18</td>
<td>6.3</td>
</tr>
<tr>
<td>Self esteem</td>
<td>18</td>
<td>6.36</td>
</tr>
<tr>
<td>Bereavement</td>
<td>12</td>
<td>4.21</td>
</tr>
<tr>
<td>Past psychiatric history</td>
<td>10</td>
<td>3.51</td>
</tr>
<tr>
<td>Occupational problem</td>
<td>9</td>
<td>3.16</td>
</tr>
<tr>
<td>Abuse/neglect</td>
<td>7</td>
<td>2.46</td>
</tr>
<tr>
<td>Economic problems</td>
<td>5</td>
<td>1.75</td>
</tr>
<tr>
<td>Social isolation</td>
<td>4</td>
<td>1.40</td>
</tr>
<tr>
<td>Non-compliance with treatment</td>
<td>2</td>
<td>.01</td>
</tr>
<tr>
<td>Low body weight</td>
<td>1</td>
<td>.004</td>
</tr>
<tr>
<td>Problems with accommodation</td>
<td>1</td>
<td>.004</td>
</tr>
</tbody>
</table>

*Note.* Some patients had more than one co-morbidity

Clients attended an average of three sessions with the psychology service  
(*SD* = 3, range 1-22 sessions). Of the clients who attended, 37.9% attended one appointment only, 15.6% attended two appointments, 13.8% attended three appointments, 8.9% attended four appointments, and 23.9% attended five or more appointments. Table 14 summarises the outcomes of assessments for clients.
Most clients accepted the treatment plan. Approximately one quarter of clients assessed did not proceed with further sessions.

Table 14
Outcome of Assessments by the Psychology Service

<table>
<thead>
<tr>
<th>Outcome of assessment</th>
<th>n</th>
<th>% of clients assessed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Client accepted treatment plan</td>
<td>195</td>
<td>67.9</td>
</tr>
<tr>
<td>(Joint treatment with another service)</td>
<td>(5)</td>
<td>(1.7)</td>
</tr>
<tr>
<td>No further appointments after assessment</td>
<td>74</td>
<td>25.8</td>
</tr>
<tr>
<td>Referred elsewhere</td>
<td>13</td>
<td>4.5</td>
</tr>
</tbody>
</table>

Factors that were related to the number of sessions attended with the service were assessment GAF rating, indicating those with higher functioning received less sessions, $r(N = 181) = -0.21, p = .006, r^2 = .04$. Sex was also related to number of sessions, indicating that females attended more sessions than males, Mann-Whitney $U$ test $z = -2.38, p = .02$. Factors that were not related to the number of sessions attended were age, DSM-IV-TR diagnoses, co-morbidities, cancer type and current cancer treatment, employment, and education.

A linear stepwise regression analysis was conducted to evaluate how well assessment GAF rating and sex predicted the number of sessions attended at the psychology service. The results of this analysis indicated both predictors accounted for a significant proportion (7.6%) in the variance in number of sessions attended, $F(1, 178) = 7.37, p = .001$, with GAF predicting 3% of the variance and sex predicting 4.7% of the variance.
A description of each session was recorded to determine the purpose and nature of each session, as well as the psychological interventions used by the psychologist. Table 15 details the session content for all clients attending the service. Most clients received an initial interview/assessment. Other common psychological interventions utilised in sessions were supportive-expressive psychotherapy and cognitive behavioural therapy.

<table>
<thead>
<tr>
<th>Session content</th>
<th>n</th>
<th>% of all clients attending the service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment via clinical interview</td>
<td>248</td>
<td>87.3</td>
</tr>
<tr>
<td>Supportive-expressive psychotherapy</td>
<td>139</td>
<td>48.9</td>
</tr>
<tr>
<td>Cognitive behavioural therapy</td>
<td>93</td>
<td>32.7</td>
</tr>
<tr>
<td>Further assessment</td>
<td>62</td>
<td>21.8</td>
</tr>
<tr>
<td>Psycho-education</td>
<td>30</td>
<td>10.6</td>
</tr>
<tr>
<td>Couple therapy</td>
<td>30</td>
<td>10.6</td>
</tr>
<tr>
<td>Relaxation training</td>
<td>18</td>
<td>6.3</td>
</tr>
<tr>
<td>Psychological skills training</td>
<td>16</td>
<td>5.6</td>
</tr>
<tr>
<td>Medical consultation</td>
<td>13</td>
<td>4.5</td>
</tr>
<tr>
<td>Meditation</td>
<td>6</td>
<td>2.1</td>
</tr>
<tr>
<td>Liaison with referrer</td>
<td>8</td>
<td>.02</td>
</tr>
<tr>
<td>Family therapy</td>
<td>3</td>
<td>.01</td>
</tr>
<tr>
<td>Psychometric testing</td>
<td>2</td>
<td>.007</td>
</tr>
<tr>
<td>Hypnosis</td>
<td>1</td>
<td>.003</td>
</tr>
</tbody>
</table>
A significant relationship was found between the number of sessions attended and the number of session content descriptives, indicating that the more sessions attended the more variety of psychological interventions received by clients, $r(248) = .76, p = .000$.

GAF scores were compared between the first and last session GAF ratings, for clients attending more than one session. Figure 7 shows the average GAF rating at initial assessment and the last session. Of the clients who attended more than one session, 27% showed no change in GAF rating, 74% showed improvement in GAF rating, and 9% showed a decrease in GAF indicating a worsening of symptoms.

![Figure 7](image-url) 

*Figure 7.* Mean of first and last GAF ratings for clients attending more than one session.
A significant difference was found between the first and last session GAF ratings, \( t(104) = -7.08, p = .000, d = .70, \text{CI95\%} (.48, .90) \), indicating that overall, clients significantly improved during attendance at the service. Results indicate a medium to large effect size. Unfortunately, there were considerable missing data for GAF scores, with 43% of clients attending more than one session missing either the assessment or last session GAF ratings. The extent of this missing data limits the conclusions that can be drawn from results. However, analyses of between group differences for clients with and without missing data using chi-square and correlational analyses did not reveal any significant between group differences.

Factors associated with the percentage change in GAF between assessment and final session were investigated. Percentage change in GAF was not normally distributed, therefore non-parametric analyses were completed. The percentage change in GAF was significantly associated with GAF rating at assessment, \( r(107) = -.21, p = .03 \), with greater change in GAF associated with a lower rating at assessment. Greater change in GAF was also associated with more sessions attended, \( r(269) = .45, p = .000 \), and if the client was diagnosed with depression, \( z = -3.13, p = .002 \), where those who were not depressed had an average rank of 28.48, while those who were depressed had an average rank of 43.65 (refer to Figure 8).
Figure 8. Percentage change in GAF for depressed and non-depressed clients.

Greater change in GAF was also associated with whether the client received relaxation training, $z = -3.45$, $p = .001$, where those who received relaxation had an average rank of 52.81 while those who did not receive relaxation had an average rank of 67.40 (refer to Figure 9).
No relaxation Relaxation

Relaxation as part of treatment

-20.00  0.00  20.00  40.00

% change in GAF

Figure 9. Percentage change in GAF for clients that received or did not receive relaxation as part of treatment.

GAF change was also associated with whether a client received CBT, $z = -3.48$, $p = .000$, where those who received CBT had an average rank of 63.43 while those who did not receive CBT had an average rank of 42.79 (refer to Figure 10). Therefore, clients who received CBT showed greater improvement in GAF rating. Factors that were not related to percentage change in GAF were diagnoses other than depression, time since diagnoses of cancer, age, co-morbidities, sex, or current cancer treatment. A stepwise linear regression to predict percentage change in GAF by the number of sessions attended, diagnosis of depression, and whether relaxation training was administered during treatment, accounted for 37% of the variance in percentage GAF change. All these factors contributed
significantly to the prediction of the percentage change between first and last GAF ratings. Factors that did not contribute to predicting GAF change were receiving CBT during sessions, and GAF rating at assessment.

Figure 10. Percentage change in GAF for clients that received or did not receive CBT as part of treatment.
3.3 Discussion

The first aim of this study was to describe the profile of patients referred to the psychology service, and compare these results with those of previous studies, Australian cancer statistics, and hospital statistics. Of the patients referred to the psychology service, most were married, had children, and were working. The majority (84%) of referrals to the psychology service were for outpatients. Outpatients have largely been ignored by previous studies. Indeed, only Akechi et al., (2001) have compared both inpatients and outpatients (Akechi et al., 2001). However, of Akechi et al.’s sample, nearly half had recurrent cancer and most were inpatients, findings which are considerably larger than the proportions in the current study. Clearly, the present sample differs from Akechi et al.’s in terms of prognosis and physical health, since inpatients with recurrent cancer have a poorer prognosis and more health problems than patients receiving outpatient care with no diagnosis of recurrence.

More females were referred to the psychology service than males. This contrasts with Australian statistics, where the incidence of cancer is higher in males than females (Cancer Council Australia, 2006). Furthermore, slightly more females were referred than expected, based on the proportion of females in hospital registrations. This contrasts with Citero et al.’s (2003) results, where more men were referred to a psychiatric service, compared to hospital statistics. The present study also found a significant difference between the average age when diagnosed with cancer for referred male patients (52.85 years) compared with female patients (47.7 years). Interesting, these ages are both younger than the
Australian median age of diagnosis, which is 69 years for males, and 65 years for females (Australian Institute of Health and Welfare & Australasian Association of Cancer Registries, 2004). When compared to hospital statistics, patients referred to the psychology service tended to be younger (more patients from the 30-59 age groups). This finding is similar to the results of Citero et al. (2003) who found that more patients aged 19-30 were referred than other age groups. It is likely that the present findings reflect risk factors for distress with cancer, where younger age at time of diagnosis of cancer and sex are both risk factors for distress (Andersen, 1992; Harter et al., 2001; Honda & Goodwin, 2004). There is also evidence that male cancer patients do not utilise social support (Greimel, Padilla, & Grant, 1998; Harrison, Maguire, & Pitceathly, 1995), and may be less likely to take up the offer of professional support. Therefore younger female patients diagnosed with cancer may be more likely to be referred for professional support for distress.

Comparison of hospital statistics with referral rates to the psychology service, indicate that fewer patients were referred to the service than might be expected. Previous studies of distress in cancer patients, have indicated that between 30-44% of patients experience significant distress warranting psychosocial intervention (Whelan et al., 1997; Zabora et al., 2001). The results of the current study indicate that only 2.9-13.9% of all patients (depending on cancer site) were referred to the service. This lower rate of referral may be explained by several reasons. For example, it may be that patients are seeking support outside the hospital (e.g., external psychologists). There is some evidence for this explanation, as several patients declined the service as they were already receiving professional support elsewhere. Alternatively, it may be that distressed patients are not identified by health care professionals and consequently not
referred onwards to the psychology service for assistance. Previous research indicates that health care professionals frequently fail to recognise psychosocial distress (Fallowfield, Saul, & Gilligan, 2001; Fallowfield, Ratcliffe, Jenkins, & Saul, 2001). Therefore, the low referral rate may indicate that distressed patients are not identified and referred by their treating health care professionals.

Breast, gynaecological, head/neck, and lung cancers were nearly twice as high in the psychology service sub-sample compared with hospital statistics, indicating that patients with these cancers may suffer from more distress. Previous studies have also noted a high proportion of lung cancer patients are referred to psychiatric services (Akechi et al., 2001; Levine, Silberfarb, & Lipowski, 1978). It has been suggested that lung and brain cancers are associated with distress more than other cancers, because of the life-threatening nature of these cancers (Akechi et al., 2001; Honda & Goodwin, 2004). Interestingly, patients with skin cancers were referred at a much lower rate than hospital statistics would predict, which may indicate these patients are less distressed. Furthermore, previous research has demonstrated significant differences in distress between tumour sites (Zabora et al., 2001). Therefore, together these findings indicate that there particular tumour sites are associated with more psychological distress than others.

The average time between diagnosis of cancer and referral to the psychology service was three years after the initial diagnosis of cancer. However, a large range was noted, including a small proportion of patients referred shortly before a diagnosis of cancer was confirmed and a small proportion of patients referred over 30 years after the initial diagnosis of cancer. Most patients referred to the psychology service were receiving current cancer treatment. The purpose of treatments was curative for a quarter of referrals, with a smaller proportion of
referrals receiving non-curative/palliative or prophylactic treatments. These cancer diagnoses and treatment results demonstrate that referral to a psychology service occurs at various stages throughout the diagnostic and treatment process.

Most cancer patient referrals resulted in a review by a psychologist. Service uptake is an important indicator of effectiveness because it is an indicator of the consumer’s perception of the usefulness of the program. Twenty-one percent of referred patients declined the service, many because they were receiving support from another service, but for many no reason was recorded. It is unclear why this data was not recorded by psychologists. For those seen by a psychologist at the service, most clients were seen within two weeks (60%). This wait-time is shorter than a previous study of a counselling service, where only 42% of clients were seen within two weeks (Boudioni et al., 2000). However, the time between referral and assessment was longer compared to past studies of psychiatric services for inpatients (Citero, Nogueira-Martins, Lourenco, & Andreoli, 2003; Grassi et al., 2000). These differences in wait-time between referral and assessment may reflect the difference in accessibility, where inpatients can easily be visited on wards, whereas outpatients may need to attend the hospital especially for an appointment. This speculation is supported by the results of the present study, where inpatients were seen significantly sooner than outpatients.

Coping/adjustment/distress, depression and anxiety were the most common reasons for referral to the psychology service. These reasons for referral are similar to previous studies of psychiatric services, particularly Kissane and Smith (1996) who reported that coping, depression, and anxiety were the most common reasons for referral. Therefore reasons for referral may be similar between psychiatric services for cancer patients. However, for clients who were assessed
by the psychology service, only 35% were diagnosed with a mental disorder, compared to results from psychiatric studies where 60 to 85% of clients assessed received diagnoses of mental disorders (Citero et al., 2003; Grassi et al., 2000). Such findings suggest that patients referred to a psychology service are more likely to have symptoms of distress, and not meet the criteria for a mental disorder.

For clients diagnosed with a mental disorder, adjustment (26%), mood (22%), and/or anxiety disorder (17%) were the most commonly diagnosed disorders. This pattern of diagnoses is similar to those of previous studies of referrals of cancer patients to psychiatric services in oncology, where diagnosis of adjustment disorder ranged from 23 to 30%, and mood disorder from 14 to 34%. However, anxiety disorders were diagnosed in a larger proportion of clients in the present study (17%), compared to previous studies (which range from 1.7 to 14%).

There was a relationship between clients’ reason for referral and the subsequent diagnosis of anxiety and depression. Patients who were not referred with either depression or anxiety, were less likely to receive these diagnoses at assessment. This finding indicates that referrers to the psychology service are able to identify accurately when a patient does not have symptoms of anxiety and depression. This may reflect the skills of referrers in accurately detecting the nature of patients’ distress as either anxiety or depression.

Sixty percent of clients assessed were described with at least one co-morbidity. Coping/adjustment/distress, relational problems, and physical symptom management were the most common co-morbidities. The finding, that adjustment and relationship issues constitute a high proportion of difficulties experienced by cancer patients, is consistent with previous research. Indeed, Kissane and Smith (1996) noted that relational problems occurred in 24% of patients assessed by a
psychiatric service. Otherwise, co-morbidities have been largely ignored in many previous studies. This failure to explore co-morbid conditions may be due to differences between the services offered by psychologists and psychiatrists. As noted above, many clients referred to the psychology service did not meet criteria for a DSM-IV-TR diagnosis, and may therefore have sub-clinical levels of distress and relational problems which are better described as co-morbidities. The high rate of co-morbidities described in this sample indicates that co-morbidities should be assessed in future studies. This would provide important additional information for describing the profile of clients attending a service.

Clients attended an average of three sessions with the psychology service, with the largest proportion of clients attending a single appointment. Approximately one quarter of clients assessed did not proceed with further sessions after assessment. For clients who did continue to attend the service after assessment, most clients accepted the treatment plan offered by the psychologist. This information can be used for service planning, such as the likely number of sessions for clients to attend, and resources (including staffing) to match these needs.

As for session content, common psychological interventions included supportive-expressive psychotherapy and cognitive behavioural therapy. Supportive-expressive psychotherapy was also received by a large proportion of Kissane and Smith’s (1996) sample (74%), however this occurred for many more patients than the present study (48.9%). This difference may be due to the ambiguity between the description of different interventions. For example, cognitive behavioural therapy involves a number of strategies that were listed as separate interventions in the present study (e.g., psycho-education, relaxation, supportive-expressive psychotherapy, and psychological skills training). Another
difficulty is that the difference between what constitutes assessment and intervention may be subjective for each psychologist and consequently recorded differently. Therefore interpretation of session content results should be cautious.

There was a significant relationship between the number of sessions attended, and the number of session content descriptives endorsed, indicating that the more sessions attended the more variety of content and activities were recorded by psychologists. This relationship would be expected, as more appointments with a client would allow for time to incorporate more strategies.

The second aim of this study was to determine the effectiveness of the service in terms of improvement in GAF ratings between the first and last sessions for clients attending more than one appointment. Overall, improvement in functioning was significant between first and last sessions, with most clients who attended more than one session with the service showing improvement in their general level of functioning. Overall, this finding suggests that the service is effective for a majority of clients. Nevertheless, a small percentage of clients demonstrated a worsening of symptoms while attending the psychology service. A similar finding was noted by Boudioni et al., (2000) who also found that a small percentage of clients reported a worsening of symptoms.

Whilst the majority of clients demonstrated improvement in functioning, no causal explanations between change in symptoms and the service can be made by this study. As this study was naturalistic (where psychosocial interventions were delivered in uncontrolled settings), changes in clients’ symptoms and functioning cannot directly be attributed to attendance at the psychology service. Other uncontrolled factors may contribute to changes in symptoms, such as other psychosocial treatments sought by clients. Also, it may be that clients who were
motivated for change and perceived the service as useful, returned to the service for more than one appointment. Therefore the sample of clients attending more than one appointment may be influenced by a self-selecting bias. However, while these factors may limit or bias conclusions, this study does reflect the typical delivery of psychosocial services in uncontrolled settings.

Another limitation of this study was the considerable missing data for GAF ratings by psychologists. However comparison of clients with and without missing data did not reveal any significant between group differences. Therefore, in the absence of any obvious between group differences, GAF results may be generalized for all clients.

The third aim of this study was to identify predictors of various outcomes for clients. No demographic or cancer factors were associated with patients declining the service, being reviewed, or being re-referred. This contrasts with a past finding where re-referral was associated with younger age, sex, marital status, and cancer type (Citero et al., 2003). Therefore, based on the results of the current study, no client factors can predict outcomes based on referral information.

In contrast, clients’ functional rating at assessment was predicted by sex, where females had lower functioning than males. However, sex only accounted for a small amount of variability in functioning, indicating the influence of other unidentified factors. The relationship between sex and severity of symptoms at first session may reflect the findings of previous studies that females are at greater risk for distress with cancer (Andersen, 1992; Harter et al., 2001; Honda & Goodwin, 2004). Age at the time of diagnosis of cancer or cancer recurrence were not related to functional ratings, which contradicts past findings that these factors may be related to distress (Mahon, Cella, & Donovan, 1990; Trijsburg et al., 1992;
van't Spijker et al., 1997). One previous study supports the present finding that there is no relationship between client distress, and client age or cancer diagnosis/treatment (McCaul et al., 1999). As might be expected, patients referred for suicide risk assessment were rated as having more severe symptoms/lower functioning on the GAF, when compared to other reasons for referral. However, this was not a significant predictor of functioning.

Factors predicting the number of sessions attended with the service were first GAF rating with clients (higher functioning clients received less sessions), and sex (females attended more sessions than males). This model only explains a small proportion of the total variance, indicating the influence of other unidentified factors on change in GAF ratings. The relationship between the first GAF and number of sessions would be expected, where clients who have more severe symptoms/impairment attend more sessions for treatment. The sex difference may again reflect the difference between males and females’ use of supports as discussed above. This finding contradicts Boudioni’s et al. (2000) results where there were no sex differences in the number of sessions attended at a counselling service for cancer patients. In the current study, factors that were not related to number of sessions were age, DSM-IV-TR diagnoses, co-morbidities, cancer type and current cancer treatment, employment, and education. Again, such findings contradict Boudioni’s results which indicate that clients aged 30 to 59 attended more sessions. However, Boudioni also found no relationship between number of sessions and employment and cancer type.

The percentage change in GAF was predicted by the number of sessions attended, diagnosis of depression, and whether relaxation training was administered during treatment.
The results of these three explanatory models are combined and illustrated in Figure 11. As presented in this model, sex predicted level of functioning at assessment and number of sessions. However ratings of functioning at assessment were also independently associated with more sessions. Clients diagnosed with depression, receiving relaxation treatment, and attending more sessions went on to have greater improvement in functioning. This contradicts a finding by a previous study of a general psychotherapy service, where lower GAF at assessment was associated with poorer improvement during psychotherapy (Hirsch et al., 2000).

![Figure 11](image)

**Figure 11.** Relationships between predictors for the percentage change in GAF between first and last sessions.

The results of this study may be used to assist the planning and development of the service to meet the needs of clients. For example, the psychology department expanded during the 16-month study period. This is demonstrated by the increasing trend in the number of referrals received each month, and the increase in the number of psychologists working at the service.
Clearly, if this trend continues, there is likely to be a need for further resources/staff to accommodate this increasing demand. It may be expected that most patients referred will attend at least one initial appointment, with approximately half attending one appointment only. The findings of this study can also be used to present realistic expectations of therapy, for example using the model presented in Figure 11 to predict outcomes (e.g., lower functioning at assessment combined with more sessions would result in greater improvement in functioning). Also, the common diagnoses and co-morbidities diagnosed in this sample may be indicators for appropriate training for staff (both psychology staff and referring staff) and resources for treatment. For example, treatment for depression, anxiety, coping, and relationship difficulties would be appropriate focus of resources (including staff expertise).

Several limitations of this study need to be considered when interpreting results. Firstly, this is a naturalistic study, with no standardized protocol for assigning diagnoses and GAF scores. Although this limits the standardization of diagnostic assessment procedures, it does reflect the naturalistic processes in many outpatient services and maintains ecological validity. Moreover, since an untreated control group is not included in the study design, the clinical improvements reported cannot be unambiguously attributed to the treatment received from the psychology service. It cannot be determined, for example, whether the improvements in clients’ general levels of functioning are merely associated with the number of sessions attended at the service rather than facilitated directly by their participation in therapy. A control group is not feasible in this type of naturalistic design, therefore this limitation could be overcome by collecting qualitative data by interviewing clients to identify factors contributing to
changes in their level of functioning. This data would also assist in identifying extraneous factors, other than attendance at the psychology service, that influence changes in functioning.

Another limitation is the use of only a single scale outcome measure. The GAF is a single-item global measure of function and symptom severity. The rating also relies solely on the perspective of the psychologist. More comprehensive measure/s would provide diverse and in-depth information regarding the complex, and more subtle changes that may occur during psychotherapy. The inclusion of a measure of the client’s perspective would also strengthen the evidence for the effectiveness of the service. There were also considerable missing data, including marital status, education, work situation, and GAF ratings. Therefore results of these data should be interpreted cautiously. The purpose of current cancer treatment was also not stated by many referrals. This may reflect the difficulty of allied health professionals (e.g., psychologists) ascertaining the purpose of treatment, but also the difficulty in attempting to organise the purpose/s of treatments for cancer patients into distinct categories. For example, there may not be a clear purpose of cancer treatment for each patient, and more useful indicators may be the probability of treatment outcome or life-expectancy.

The comparison to hospital statistics was also limited with data only available for new registrations during 12-months of the 16-month study. This was due to limited availability of statistics from the hospital. This limits the comparability, but still allows for comparison of the proportions to give an indication of how the sub-sample referred to psychology compared to all hospital patients. Access to data for the entire study period would have provided a more accurate comparison.
Future studies could investigate health professionals’ ability to identify distressed patients. Appropriate referral to the psychology service relies on effective identification of distressed clients. However results indicated that fewer patients were referred to the service than would be expected from previous studies of the incidence of distress of cancer patients. Therefore, further study could focus on health care professionals’ ability to identify distressed patients (e.g., using a routine distress screening tool) and to link patients with appropriate support services. Future studies could also investigate the reasons for not attending the service in more detail. In this study, 8.6% declined an appointment and no reason for this was recorded. Similarly, more information about why 26% of clients did not continue with the service after their first appointment would be useful. For example, understanding whether this outcome was the decision of the psychologist or the client could provide important information about the appropriateness of referrals and client satisfaction with the service. Future studies could also investigate factors influencing baseline GAF (e.g., social support), change in GAF, and number of sessions attended. The prediction model presenting in Figure 11 indicates the influence of other factors which were not accounted for in this study, such as therapeutic alliance which has been associated with positive outcomes in psychotherapy (Horvath & Greenberg, 1989). The present study only looked at the profile and outcomes for cancer patients. Future studies could also look at profiles and outcomes for family members, who were excluded from the present study.

In summary, this study has profiled the characteristics of clients referred to a psychology service for cancer patients in a large cancer hospital. Compared to hospital statistics and Australian statistics, patients referred to the service tended to be younger and female. People with lung and head/neck cancer were also
referred at a higher rate, possibly due to the distressing nature and poor prognosis for these cancers. Referral to the psychology service occurred throughout the diagnostic, treatment, and post-treatment process for cancer. Most people referred attended for an assessment with a psychologist, with common DSM-IV-TR diagnoses of anxiety, depression, and adjustment disorders consistent with previous studies of psychiatric services. However, generally, mental disorders were diagnosed less frequently compared to previously reported studies of psychiatric services. Overall, attending the service was associated with improvement in clients' symptoms. Relationships between predictors were identified, such as age, baseline severity of symptoms, number of sessions attended, diagnostic, and treatment details to predict improvement in symptoms. Together, these results detail the activities of the psychology service, and better understand patients' needs (including service uptake and potential benefit of the service) which can assist in the planning and development of the psychology service.
4.0 Study 2: Self-reported Outcomes of Cancer Patients Attending a Psychology Service

This study aims to extend the findings of the first study, by exploring client self-reported outcome measures over the first three months attendance at the psychology service. This would utilize another source of data (i.e., clients), using validated questionnaires to evaluate the service. Together with the data from the psychologists about client functioning in Study 1, this will further explore the clinical utility of the psychology service.

Psychology services should be perceived by clients as both resulting in positive outcomes and responsive to client’s needs, and it is acknowledged that information about needs and outcomes from clients should be incorporated into evaluations of psychology services (Kiss, 1995). Client-rated outcome measures would provide this information, such as questionnaires that are completed by clients about their own well-being, and their opinion of the service. Client-rated measures may differ from clinician-rated measures, as clients and clinicians have different perspectives and may emphasize different outcomes. This is supported by several studies demonstrating mixed or poor concordance between client- and clinician-rated outcome measures in psychiatric services (Piersma & Boes, 1995; Trauer & Callaly, 2002). Therefore, to adequately assess a service, client-rated outcome measures need to be included when evaluating psychology services, together with clinician-rated outcome measures. However, whilst clients’ are recognized as an important source of information in service evaluation, the views of cancer patients and what they experience as beneficial are absent from many evaluations of psycho-oncology services (MacCormack et al., 2001).
As discussed in the literature review of this dissertation, together with sources of data (i.e., clients or clinicians), selection of what outcomes to measure are an important consideration (refer to Figure 3). Client-rated outcome measures are particularly relevant when assessing aspects of client health-related quality of life (HR-QOL), as well as the mediating factors of coping style, expectations, and satisfaction with a psychology service. The following will discuss these outcomes in more detail.

HR-QOL consists of physical symptoms, psychological distress, functional well-being, and social well-being (Owen et al., 2001). Since these domains have been demonstrated to improve with psychological intervention (as summarised in Table 1), measurement of these domains are critical to evaluate psychology services for cancer patients (Burke & Kissane, 1998; Meyer & Mark, 1995; Newell et al., 2002). Psychological distress, including depression, anxiety, and adjustment were also identified as the most common diagnoses in Study 1. Consequently these symptoms of psychological distress warrant particular attention when outcome measures are selected. As previously discussed (refer to Figure 3), mediating factors also influence outcome measures, including coping style. For example, there is evidence that symptoms of depression and anxiety are related to coping style (Watson et al., 1988). Psychosocial interventions aim to reduce distress, including symptoms of anxiety and depression, and to achieve this are likely to impact on coping strategies. Coping style has also been related to health and quality of life (Harter et al., 2001). Therefore, changes in coping style, together with quality of life, depression and anxiety, should be measured when examining the effectiveness of clinical services.
As discussed in the first study, it is important to consider factors predicting outcomes. Few studies have investigated factors predicting client-rated outcome measures for cancer patients attending a psychology service. Several studies of general mental health services have demonstrated that psychiatric diagnosis and gender predicted change in client-rated outcome measures of symptoms of depression and anxiety. Thus, patients diagnosed with depression reported more improvement in symptoms than clients diagnosed with an anxiety disorder (Hirsch et al., 2000). McLeod et al. (2000) also found that women reported greater improvement in mental health than men (McLeod, Johnston, & Griffin, 2000). Other studies have demonstrated baseline differences in outcome measures for sex and age, with women scoring higher on measures of anxiety and younger age associated with more symptoms of depression (Herrmann, 1997; Holzner et al., 2004; van't Spijker et al., 1997). Identifying the influence of predictive factors such as sex, age, and psychiatric diagnosis, could be used for service planning (e.g., number of likely sessions and outcomes of treatment).

However, in many evaluations of services (and identification of predictors of outcome measures), establishing a causal link between treatment and outcomes is difficult due to limited internal validity (e.g., a control group is often not possible). Analysing dose-effects is one method to establish this link. A dose-effect refers to a relationship between the amount of treatment received (e.g., number of sessions attended), and the amount of change in outcome measures. There is mixed research for supporting ‘dose-effects’ in psychotherapy (Andrews et al., 1995).

Client satisfaction with a service is another important indicator of service quality and should also be included as a client-rated outcome (Fitzpatrick, 1997). Dimensions of client satisfaction include information giving, therapist competency,
communication skills, the quality of the relationship with the therapist, access to the service (e.g., location and appointment times), cost, facilities, progress with presenting concern, met/unmet expectations, and willingness to use the service in the future (Bleber et al., 1999; Fitzpatrick, 1997; Miller et al., 2003). Feedback from clients about these dimensions can be used to assess clients’ perception of outcomes, as well as for service development and the provision of resources to meet clients’ needs in the future (Bor & du Plessis, 1997; Moore & Kenning, 1996).

One previous study investigated client satisfaction with a counselling service for cancer patients (Boudioni et al., 2000). Over 90% of patients reported that emotional health had improved at the end of counselling, with most reporting that counselling lead to improvement in present problems. More than 95% of clients reported that they would return to the counselling service in the future. Sources of dissatisfaction identified by clients were too few sessions, waiting time for first appointment, and difficulties getting to the counselling office. Overall, the results of this study confirmed that clients were satisfied with the service, and also identified unmet client needs that could be used to develop the service (e.g., reduce wait time before first appointment). Consequently, when evaluating a service, it is also important to identify what a service does well, by assessing what clients find beneficial about attending that service. Another study of a general counselling service identified helpful aspects of the service such as having someone to talk to, expressing emotion, gaining a broader perspective, and developing self confidence (McLeod et al., 2000). This is important information as it highlights what clients identify as effective aspects of the service that should be maintained for face validity of treatments.
A number of factors have been identified as influencing subsequent satisfaction with a service. Satisfaction has been related to treatment outcome, with clients who report greater improvement in symptoms also reporting more satisfaction with a service (Berghofer et al., 2002; Eklund & Hansson, 2001; Fitzpatrick, 1997; Miller et al., 2003). This may be because patients who have improved during treatment are also more satisfied with treatment. Alternatively, clients who are dissatisfied may be less likely to attend appointments or comply with treatment which affects their treatment outcome (McLeod et al., 2000).

Several client factors, other than the service provided, have also been related to satisfaction with services offering psychosocial interventions for general client samples. It is important to understand the influence of these factors when evaluating a service, to understand differing needs between client groups. Factors such as health and demographic characteristics have demonstrated relationships to satisfaction with mental health services. For example, satisfaction has been linked to health, with poorer physical health associated with less satisfaction with services (Fitzpatrick, 1997; Miller et al., 2003). Several studies have also demonstrated that clients with higher quality of life ratings are more satisfied with services (Blenkiron, 1998; Eklund & Hansson, 2001; Fitzpatrick, 1997). These findings may occur for several reasons, such as clients attributing poor health or quality of life to the quality of care, that there are real differences in quality of care, or that satisfaction with services and satisfaction with life and health all measure a common ‘satisfaction’ construct (Fitzpatrick, 1997; Ruggeri, Gater, Bisoffi, Barbui, & Tansella, 2002). Demographic differences have also been found, with several studies demonstrating that older clients are more satisfied with services (Blenkiron, 1998; Fitzpatrick, 1997; Greenwood, Key, Burns, Bristow, & Sedgwick, 1999). It
has been suggested that younger clients may have higher expectations, or drop out from a service if dissatisfied (Blenkiron, 1998; Ruggeri et al., 2002). There are mixed findings for the relationship with gender (Blenkiron & Hammill, 2003; Eklund & Hansson, 2001), with some evidence indicating females are more satisfied with services than males (Greenwood et al., 1999). Question format also influences ratings of satisfaction. For example, global questions of satisfaction tend to result in more positive feedback, whereas more specific questions about aspects of satisfaction tend to result in less positive feedback (Lovell, 1995). To adequately assess satisfaction, both types of ratings need to be included. Therefore, whilst client satisfaction with a service is an important indicator of service quality, there are many factors influencing satisfaction that are beyond the control of health professionals. These factors should be considered to understand the influence of service-related and extraneous factors when assessing client satisfaction with services.

Client expectations of psychotherapy are important to consider when evaluating a service. Expectations of a service may include beliefs about roles, techniques, content, and outcomes (Noble, Douglas, & Newman, 2001). Studies have demonstrated that client expectations influence treatment and outcomes including therapeutic alliance, number of sessions attended, and satisfaction with a service (Connolly-Gibbons et al., 2003; Noble et al., 2001). For example, Connolly-Gibbons et al. (2003) demonstrated that clients’ expectations of improvement in psychotherapy predicted therapeutic alliance. Specifically, it was shown that clients who were pessimistic about the value of psychotherapy were more likely to stay interpersonally distant and achieve poorer outcomes. Many studies of client expectations, focus on psychiatric services. For example, a study
of a psychiatric service found that clients expected a chance to talk about their feelings and problems, an explanation of their problems, to feel better, or to gain support (Blenkiron, 1998). No studies have specifically investigated cancer patient’s expectations of a psychology service. However, expectations identified in previous studies (e.g., to gain support), appear to be generic expectations of psychosocial interventions and may therefore be relevant for clients with cancer attending psychology services.

As with outcomes, it is important to identify factors predicting client expectations. Sex is one factor that has consistently demonstrated predictive value for client expectations of psychotherapy (Connolly-Gibbons et al., 2003; Egisdottir & Gerstein, 2000; Hatchett & Han, 2006; Robitschek & Hershberger, 2005; Schaub & Tokar, 1999). Several studies suggest that men expect a more directive therapeutic style, whilst women expect more involvement in the counseling process (Egisdottir & Gerstein, 2000; Hatchett & Han, 2006). Therefore, when analyzing expectations, the effect of sex should be analysed to better understand differences between clients.

Overall, few evaluation studies have thoroughly assessed client-rated outcome measures for cancer patients attending psychology services (including expectations of the service, satisfaction with the service received, as well as changes in coping and dimensions of quality of life). Many studies evaluating client-rated outcome measures have methodological flaws which limit their generalizability to other client groups and validity. For example, several studies have small samples and low questionnaire return rates, particularly for repeated measures designs (Blenkiron, 1998; Boudioni et al., 2000; Kopp et al., 2003; Sabers et al., 1999; Speer & Newman, 1996). Further, samples are not
representative as non-participants and poor compliers tend to be older, receiving palliative care, report poorer health, and are less satisfied with the service they received (Hirsch et al., 2000; Kopp et al., 2003; McLeod et al., 2000; Speer & Newman, 1996). Studies of expectations of psychology services, usually use students rather than clients, and no studies have included cancer patients attending a psychology service. Furthermore, some service evaluations have been criticized because the treating clinician is responsible for administering outcome measures (Wessex Institute for Health Research Development, 1998). For example, if a psychologist administers a satisfaction survey, the client may feel obligated to provide pleasing answers to the psychologist, and as a result responses may not be an accurate reflection of their experience of psychotherapy. Therefore, outcome measures should be administered by an individual who is clearly seen as impartial. Together, these influences on past research may result in biased samples and results, which limit the accuracy and generalizability of the evidence to support the clinical utility of providing psychosocial interventions to cancer patients.

The general aim of the current study is to extend the first study, by assessing client-rated outcome measures of coping, anxiety/depression, and quality of life, to provide more comprehensive information regarding the changes that occur whilst attending the psychology service. Features of this study are based on recommendations from the literature review of this dissertation and the previous studies reviewed above. These include using a questionnaire battery to assess recommended outcome measures for psychosocial interventions for cancer patients (refer to Figure 3). More specifically, aspects of well-being that have been demonstrated to improve in empirical studies of psychosocial interventions are
assessed including mood, coping, and dimensions of quality of life together with mediating factors such as coping style, expectations, and satisfaction with psychotherapy (Burke & Kissane, 1998; Clark et al., 2003; Compas et al., 1998; Fawzy et al., 1995; Wessex Institute for Health Research, 1998). Selection of questionnaires are based on guidelines described earlier, including that measures are practical, theoretically relevant, have good psychometric properties, and are not redundant (Andrews et al., 1995; Higginson & Carr, 2003; Newman et al., 1999; Ogles et al., 1996). These standardised questionnaires produce quantitative data to measure the amount of change, as well as relationships between outcome measures and client characteristics. The quality of the service is also measured by client expectations before attending the service, and subsequent satisfaction with the service. A combination of qualitative and quantitative data is used to assess expectations and satisfaction, to take advantage of the strengths of both types of data.

The present study has six specific aims. Firstly, this study aims to assess the representativeness of the sub-sample of clients participating in this study, to determine if results may generalize to other clients. This involves comparing the characteristics of participants (e.g., demographic and cancer treatment information) to all other clients attending the service, to determine if participants are representative of all clients attending the psychology service. As part of this aim, the reasons why clients are not referred to the study are also investigated.

The second aim is to describe clients’ expectations of the service, and identify factors associated with these expectations. It is hypothesised that client expectations will be similar to previous studies of general mental health services. For example, the chance to talk about feelings and problems, obtaining an
explanation of problems, to feel better, and/or to gain support from the clinician (Blenkiron, 1998). Based on previous research, it is also hypothesised that there will be significant differences between the expectations of males and females, with males expecting a more directive therapeutic style of the psychologist, and females focussing more on the relationship with the psychologist (Connolly-Gibbons et al., 2003; Dunkel-Schetter, Feinstein, Taylor, & Falke, 1992; Hatchett & Han, 2006; Robitschek & Hershberger, 2005; Schaub & Tokar, 1999).

Thirdly, this study aims to extend Study 1, by further describing the profile of clients referred to the service in terms of baseline client-rated outcome measure scores. This includes describing: the proportion of clients in clinical ranges; relationships between baseline outcome measures and relationships to other factors such as client demographic information, clinician-rated GAF and DSM-IV-TR diagnoses; as well as comparing results to previous studies of similar outcome measures in cancer patients to determine similarities and differences between clinical and non-clinical samples. In terms of relationships between outcome measures, based on previous studies, it is expected that coping style, health, and quality of life will correlate with depression and anxiety measures (Harter et al., 2001; Watson et al., 1988). Based, on previous research, it is also expected that clinician-rated GAF will not correlate with client-rated outcome measures indicating the distinctiveness of these different sources of information when evaluating a service (Piersma & Boes, 1995; Trauer & Callaly, 2002). Based on previous research, it is also expected that women will score higher on measures of anxiety than men, and younger age will be associated with higher scores of depression (Herrmann, 1997; Holzner et al., 2004). It is expected that scores on outcome measures will be elevated in a clinical sample, compared to previous studies of
A fourth aim of this study is to identify changes in outcome measures between baseline and a three-month follow-up. Based on previous studies of general mental health services, it is expected that there will be a significant improvement in outcome measures between baseline and follow-up (Hirsch et al., 2000; McLeod et al., 2000). Factors that have been demonstrated to predict change in client-rated outcome measure scores are investigated. Factors such as number of sessions, baseline scores, and psychiatric diagnoses will be analysed. These factors are selected based on the findings of Study 1, as well as previous research (Hirsch et al., 2000).

The fifth aim of this study is to describe clients’ satisfaction with the service, and identify factors that are associated with client satisfaction. Selection of these factors are based on previous studies, and include age, sex, expectations before first appointment as well as change scores for health, quality of life, number of sessions attended, progress rating, and GAF (Berghofer et al., 2002; Blenkiron, 1998; Eklund & Hansson, 2001; Fitzpatrick, 1997; Greenwood et al., 1999; Miller et al., 1998). It is expected that more satisfied clients will be female, healthier, older, report higher quality of life, and show greater improvement in client-rated outcome measures.

A sixth, and final, aim of this study is to ask participants for suggestions to improve the service. These recommendations could be used to assist in the development of the psychology service to better meet the needs of clients.
4.1 Method

4.1.1 Participants

Participants were recruited from the clinical psychology service at Peter MacCallum Cancer Centre over the same 16-month period as Study 1. Clients were eligible to participate in this study if they: currently, or have ever been diagnosed with cancer; were referred to the clinical psychology service; planned to attend at least one appointment at the clinical psychology service; were aged 18 years and over; were likely to be alive in three months; attended the service as an outpatient; and understood sufficient English to complete self-report questionnaires. Of the 283 clients who met these inclusion criteria, 46 (16.25%) clients were referred to this study by psychologists. Of these, 26 (9 males, 17 females) consented to participate and completed baseline questionnaires before their first appointment. The average age of participants was 47.5 years. Of the 26 participants who completed baseline questionnaires, 19 (4 males, 15 females) also completed and returned questionnaires three months after baseline (follow-up). A more detailed description of the characteristics of participants is described in the results section of this study.
4.1.2 Measures

**Demographic questionnaire.**

This questionnaire asked participants to indicate their educational level, work situation, and marital status (see Appendix A). Participants were also asked to identify their expectations of the psychology service. This was measured by both open-ended and multiple-choice questions.

**Hospital Anxiety Depression Scale (HADS).**

The HADS (Zigmond & Snaith, 1983) has been used extensively to screen and measure symptoms of anxiety and depression in hospital patients (Appendix B). It consists of 14 items measuring state anxiety (HADS-A: seven items) and depression (HADS-D: seven items), and takes approximately 5-10 minutes to complete. The HADS is designed for use with medical outpatients to assess the severity of anxiety and depression without contamination of physical symptoms, such as such as dizziness, headaches, insomnia, or fatigue (Bjelland, Dahl, Haug, & Neckelmann, 2002; Johnston, Write, & Weinman, 1995).

A cut off score of eight for HADS-A and HADS-D subscales has been supported by a review of 747 studies (including 10 studies of cancer patients), for optimal specificity and sensitivity (Bjelland et al., 2002). As a measure of internal consistency, Cronbach’s alpha has been demonstrated as 0.93 for HADS-A and 0.90 for HADS-D in a large sample of cancer patients (Moorey et al., 1991).
Subscale scores may also be used to indicate severity, with clinical ranges of normal (0-7), mild (8-10), moderate (11-14), and severe (15-21) (Johnston et al., 1995). It has also been suggested that the total of all HADS items (HADS-T) can be used as an index of psychological distress (Martin, Tweed, & Metcalfe, 2004). For screening purposes, a total cut off of 14 has demonstrated optimal sensitivity of 80% and specificity of 76% and positive predictive value 41% (Ibbotson, Maguire, Selby, Priestman, & Wallace, 1994).

The HADS also has demonstrated construct validity, performing similarly to other common measures of depression and anxiety such as the Beck Depression Inventory (BDI), the General Health Questionnaire, (GHQ) and the State-Trait Anxiety Inventory (STAI). The HADS performed better than the STAI and BDI for clients with medical problems (Bjelland et al., 2002; Herrmann, 1997). HADS scores have also been demonstrated to be sensitive to change in intervention studies, including several studies with cancer patients (Dey et al., 2002; Herrmann, 1997; Velikova, Selby, Snaith, & Kirby, 1995). Table 16 summarises HADS scores from previous studies of cancer patients (Moorey et al., 1991; Smith et al., 2002; Tsumoda et al., 2005).

A review of the HADS noted several between group differences. In cross-sectional studies, women scored higher on HADS-A than men (Herrmann, 1997). A relationship to age was also noted with age groups of <30 and 50-59 scoring higher on HADS-D (Herrmann, 1997).
Table 16
Comparison of Studies Using the HADS as a Measure for Oncology Samples

<table>
<thead>
<tr>
<th>Study*</th>
<th>n</th>
<th>HADS-D Mean (SD)</th>
<th>Range</th>
<th>HADS-A Mean (SD)</th>
<th>Range</th>
<th>HADS-T Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moorey et al., (1991)</td>
<td>568</td>
<td>3.02 (2.98)</td>
<td>0-15</td>
<td>5.44 (4.07)</td>
<td>0-19</td>
<td>-</td>
</tr>
<tr>
<td>Smith et al., (2002)</td>
<td>1474</td>
<td>Males 4.06 (3.73)</td>
<td>0-20</td>
<td>Males 5.22 (3.94)</td>
<td>0-21</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Females 4.61 (3.73)</td>
<td></td>
<td>Females 6.65 (3.99)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tsumoda et al., 2005</td>
<td>128</td>
<td>2.9 (3.0)</td>
<td>-</td>
<td>3.7 (3.1)</td>
<td>-</td>
<td>6.7 (5.5)</td>
</tr>
</tbody>
</table>

*Note. Studies reported have used the same cut off scores as the current study.


The FACT-G (Cella et al., 1993) is a 27-item scale that measures the following aspects of quality of life in cancer patients: physical well-being; social/family well-being; emotional well-being; functional well-being; and a global measure of quality of life (Appendix C). Each item is rated on a five-point Likert scale. Missing items were handled as per scoring instructions, where the average score for items in the same subscale was substituted for missing items (Fairclough & Cella, 1996). Of the many quality of life measures available, the FACT-G was selected because it is a brief measure, has good reliability and validity data, is specific to cancer, and is consistent with the dimensions of quality of life identified in Figure 3.
The FACT-G has been used extensively with cancer patients and has demonstrated reliability, validity, and sensitivity to change with treatment (Cella et al., 1993; Fairclough & Cella, 1996; Overcash, Extermann, Parr, Perry, & Balducci, 2001; Webster, Odom, Peterman, Lent, & Cella, 1999; Winstead-Fry & Schultz, 1997), including Cronbach’s alpha of 0.89 and test-retest correlation of 0.92 (Cella et al., 1993). Previous studies of the FACT-G have demonstrated that the scale is able to discriminate patients on the basis of stage of disease, performance status rating (PSR), and hospitalization status (Cella et al., 1993; Holzner et al., 2004). These findings support the measures’ sensitivity. One study has also demonstrated demographic differences in FACT-G scores, with higher ratings associated with younger age, and lower ratings reported by women (Holzner et al., 2004). Table 17 presents the means of previous studies of general cancer samples (consisting of inpatients and outpatients, patients with psychopathology were excluded from these studies) (Cella et al., 1993), bone marrow transplant patients (Kopp et al., 1994), breast cancer patients (Holzner et al., 2001), Hodgkin’s disease patients (Greil et al., 1999), and a general healthy population sample (Holzner et al., 2004).
Table 17
Comparison of FACT-G Scale Means Between Previous Studies

<table>
<thead>
<tr>
<th>FACT-G subscale*</th>
<th>General cancer(^1) (n=466)</th>
<th>Bone Marrow Transplant(^2) (n=56)</th>
<th>Breast cancer(^3) (n=87)</th>
<th>Hodgkin’s disease(^4) (n=26)</th>
<th>General population(^5) (n=926)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PWB</td>
<td>20.5</td>
<td>21.1</td>
<td>25.1</td>
<td>25.5</td>
<td>24.9</td>
</tr>
<tr>
<td>EWB</td>
<td>14.8</td>
<td>15.6</td>
<td>18.8</td>
<td>20.3</td>
<td>19.5</td>
</tr>
<tr>
<td>FWB</td>
<td>18.0</td>
<td>20.5</td>
<td>21.7</td>
<td>23.1</td>
<td>21.4</td>
</tr>
<tr>
<td>SWB</td>
<td>21.9</td>
<td>20.2</td>
<td>18.3</td>
<td>22.2</td>
<td>20.2</td>
</tr>
<tr>
<td>Total</td>
<td>82.1</td>
<td>77.8</td>
<td>83.9</td>
<td>90.9</td>
<td>86.5</td>
</tr>
</tbody>
</table>

*Note. PWB = physical well-being, SWB = social/family well-being, EWB = emotional well-being, FWB = functional well-being.

\(^1\) Cella et al., 1993; \(^2\) Kopp et al., 1994; \(^3\) Holzner et al., 2004; \(^4\) Greil et al., 1999; \(^5\) Holzner et al., 2004.

Mental Adjustment to Cancer (MAC).

The MAC (Watson et al., 1988) is a 40-item measure that assesses the coping style employed to adjust to a diagnosis of cancer (Appendix D). This measure yields five subscales, each representing a different coping style. The subscales are fighting spirit, helpless/hopeless, anxious preoccupation, fatalistic, and avoidance (Watson, Greer, & Bliss, 1989). Research into the psychometric properties of the MAC has indicated that fighting spirit and helplessness/hopelessness form a bipolar scale measuring determination to fight the illness and be optimistic. It is recommended that these subscales are amalgamated for the purposes of scoring (Johnston et al., 1995).

Reliability coefficients of the MAC have been found to be acceptable in a British sample (Watson, Haviland, Greer, Davidson, & Bliss, 1999), a US sample (Schwartz, Daltroy, Brant, Friedman, & Stolbach, 1992), a Spanish sample
(Ferrero, Barreto, & Toledo, 1994), and a Swedish sample (Nordin, Berglund, Terie, & Glimelius, 1999). The validity of the scale has been demonstrated, with MAC scores correlating with spouse ratings (Watson et al., 1988) and clinician ratings (Greer, Moorey, & Watson, 1989) of mental adjustment, as well as predicting emotional distress (Baider et al., 2003; McCaul et al., 1999). The MAC has also been correlated with the HADS, with significant correlations between: HADS-A and MAC anxious pre-occupation ($r = .48$); as well as HADS-D and MAC hopeless/helpless ($r = .19$) and fatalistic ($r = .20$) subscales. The MAC has also been demonstrated to be sensitive to change with treatment (Tacon, Caldera, & Ronaghan, 2004). Standardised scores (t-scores) for the MAC scale are available (Watson et al., 1989). T-scores represent a normalised distribution, with a mean of 50 and standard deviation of 10.

**Global health and quality of life ratings.**

As a broad indicator of participants’ perception of their health and quality of life, two questions asked participants to rate their current quality of life and health on seven-point Likert scales (Appendix E). These questions were based on two items from the brief version of the World Health Organisation’s quality of life measure (WHOQOL-BREF) (Murphy, Herrman, Hawthorne, Pinzone, & Evert, 2000).

A global measure of quality of life was included because some researchers have suggested that measurement of specific aspects of quality of life can be inaccurate if someone assigns little importance to a particular domain (O’Boyle et al., 1992). Therefore, a global measure was included to account for this possibility. In addition, a global measure of health was included to measure participant’s
perception of their own health, which may differ from objective descriptions such as current cancer treatment and purpose.

*Client satisfaction survey.*

This questionnaire was designed for this study (see Appendix F). The questionnaire consisted of a series of multiple-choice and open-ended questions. Specifically, it included 14 items measuring satisfaction with various aspects of a psychology service, such as the service provided by the psychologist, clinic facilities, appointment times, and progress with presenting problem. Selection of client satisfaction dimensions to include in the questionnaire were based on recommendations by previous reviews and guidelines of client satisfaction (Bleber et al., 1999; Fitzpatrick, 1997). Participants also rated their progress with presenting concerns on a five-point Likert scale, and indicated if they received other concurrent psychosocial interventions/supports. This survey was developed for this study, therefore the psychometric properties of this measure were not established.

*Survey of psychologists.*

A small referral rate of clients to the study was noted throughout the duration of the recruitment period. Therefore a survey was developed and administered to psychologists at the service to identify the reasons why clients were not referred to the study. The survey consisted of a list of reasons why clients were not referred to the study (see Appendix G). Psychologists could list additional reasons not
identified by the researcher. The survey asked psychologists to estimate the overall proportion that each reason contributed to their decision not to refer clients. Psychologists’ responses to the survey were anonymous.

4.1.3 Procedure

When a new client was booked for their first appointment at the clinical psychology service, they were sent a letter explaining the study (Appendix H). All subsequent contacts regarding the study were conducted by an independent researcher to avoid psychologists’ involvement with the study which might influence participant responses (Ogles et al., 1996; Wessex Institute for Health Research Development, 1998). Eligible participants were then telephoned by an independent researcher, inviting them to participate in the study. If the client agreed to participate, they met with the independent researcher 30 minutes before their initial appointment at the service. At this time they completed the participant information and consent form (see Appendix J) and baseline questionnaires, which consisted of the demographic questionnaire (Appendix A), HADS (Appendix B), FACT-G (Appendix C), MAC (Appendix D), and global health and quality of life (Appendix E). This recruitment protocol was required by the hospital ethics committee.

Participants were followed-up three months after their initial appointment. Selection of time points (baseline and three month follow-up) were based on recommendations for psychotherapy research to allow sufficient time to detect for intervention effects, as well as brief enough to minimise missing data (including from participant mortality) (Miller et al., 2003; Smith, Waxman, Snyder, & Raphael, 1996). Participants were posted follow-up questionnaires which consisted of
HADS, FACT-G, MAC, and the Client Satisfaction Survey (Appendix F).

Participants were asked to complete and return the questionnaires to the independent researcher in a free-post envelope. If participants did not return questionnaires within one week, they received a reminder telephone call from the independent researcher. This reminder aimed to minimise missing data and delay in returning questionnaires.

During this study, it was apparent that there was a low referral rate to the study. When it became apparent that the intensive recruitment procedure required by the hospital ethics committee contributed to the low recruitment rate, investigators unsuccessfully attempted to renegotiate recruitment procedures with the committee. Instead, to better understand the barriers to recruitment and to account for the low recruitment rate, a survey of the psychologists working at the service was undertaken following completion of the recruitment phase of this study (Appendix G). Psychologists’ responses to the survey were anonymous. Results were collated, to identify factors impeding referral to the study, as well as the representativeness of the sample referred.

4.1.4 Data Analyses

Data were analysed using Statistical Package for the Social Sciences (SPSS - Version 12). Descriptive statistics for quantitative data (mean, SD, range, percentage n in each group) were used to summarise data comparing the characteristics of the samples referred/not referred to the study, outcome measure subscales and totals, expectations, and responses to the satisfaction questionnaire. Responses to open-ended questions (expectations and satisfaction
with the service) were coded according to underlying themes reflected in participants’ responses, and then presented as frequency data.

Between group differences for categorical variables were analysed using chi-square for variables with \(n>5\) (Hinkle, Wiersma, & Jurs, 1994). Chi-square evaluates whether a statistical relationship exists between two categorical variables (Green & Salkind, 2003). Significance tests for between group differences were not possible for groups \(n<5\), and therefore only a description of group differences were possible. For between group differences for continuous variables, independent samples \(t\)-tests were used for normally distributed data. The \(t\)-test evaluates whether the mean of one group differs significantly from the mean of another group (Green & Salkind, 2003). Alternatively, for continuous data that did not meet assumptions for parametric analyses, Mann-Whitney \(U\) tests were conducted. The Mann-Whitney \(U\) test is a non-parametric test that evaluates whether the medians on a dependent variable differ significantly between two groups (Green & Salkind, 2003).

Correlations were conducted to determine relationships between continuous variables. For normally distributed data, Pearson’s \(r\) was used. For data that was not normally distributed, Spearman’s rho was conducted. For both types of correlations, Bonferroni corrections were used to minimise Type I error. The Bonferroni correction is a safeguard against multiple tests of statistical significance on the same data, and states that if comparing \(n\) variables, then the statistical significance level that should be used for each correlation is \(.05/n\) (Green & Salkind, 2003).

To assess between group differences in multiple outcome measures, MANOVA’s were conducted for categorical independent variables. MANOVA
includes multiple dependent variables and evaluate if the population means of these dependent variables vary across one or more factors (independent variables) (Green & Salkind, 2003). For significant MANOVA results, ANOVA and pair-wise comparisons were used as follow-up analyses (with Bonferroni adjustments to minimise Type I error).

Missing values due to drop-out of participants between baseline and follow-up were assessed using Missing Values Analysis (MVA) in SPSS. MVA can be used for categorical or quantitative data, describing the pattern of missing data as well as estimates of means. Missing data were estimated and replaced using the Expectation Maximisation (EM) method. This method estimates missing values on the basis of responses to theoretically-related variables (Garson, 2007). This is the most commonly used method for estimating values (Garson, 2007; Howell, 1998). One study comparing several MVA techniques using data sets with deliberately removed data, demonstrated that the EM method provided missing value estimates closest to the original values (Musil, Warner, Yobas, & Jones, 2002). Therefore, the EM method was employed to estimate and replace values for missing follow-up data for outcome measures. These values were used in subsequent analyses of change between baseline and follow-up data.

A repeated measures design was used to evaluate whether participants changed significantly over time, between baseline and follow-up. Several dependent continuous variables were not normally distributed. Also, this study consisted of a small sample size (n<100) (Hill & Lewicki, 2006). Therefore, Wilcoxon tests were used as a non-parametric alternative to evaluate differences in repeated measures outcome measures (Green & Salkind, 2003). A Wilcoxon test evaluates if medians between groups differ significantly (Green & Salkind, 2003).
The sample size of the current study was adequate for Wilcoxon tests \((n > 16)\) (Green & Salkind, 2003). To minimize Type I error for multiple repeated measures analyses, a Bonferroni adjustment was made, where \(p = .05\) was divided by the number of dependent variables (14), therefore \(p = .004\) was set as the criterion for significance (Speer & Newman, 1996). Reduced sensitivity of non-parametric tests should be considered when interpreting these results (Hill & Lewicki, 2006).

Factors associated with change in scores between baseline and follow-up were analysed. The percentage change between baseline and follow-up were calculated for each participant using the following formula:

\[
\text{(Follow-up score - Baseline score) / Baseline score} \times 100
\]
4.2 Results

4.2.1 Representativeness of Study Sample

To determine the representativeness of the sample of clients participating in this study, reasons for declining participation, not returning follow-up questionnaires, and comparing characteristics of participants and non-participants were analysed.

Table 18 presents reasons for referred clients not participating in the study. Several clients were unable to be contacted before their first appointment. Of the clients that were contacted, several indicated that they felt too overwhelmed to participate, or did not want to participate in an evaluation study when they were not sure what to expect from the service.

<table>
<thead>
<tr>
<th>Reason did not participate</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unable to contact before first appointment</td>
<td>8</td>
</tr>
<tr>
<td>Did not attend/cancelled appointment</td>
<td>2</td>
</tr>
<tr>
<td>Client declined participation because:</td>
<td></td>
</tr>
<tr>
<td>Feeling too overwhelmed</td>
<td>6</td>
</tr>
<tr>
<td>Not sure what to expect of the service</td>
<td>3</td>
</tr>
<tr>
<td>Client not able to meet before appointment</td>
<td>1</td>
</tr>
</tbody>
</table>
Reasons for not completing follow-up questionnaires were: the participant reported feeling too distressed \((n = 2)\); the participant died in the interim \((n = 1)\); and the participant agreed to return questionnaires when reminded, but questionnaires were never received \((n = 4)\).

To examine the representativeness of the sample, participants’ demographic and cancer details were compared to all other clients attending the psychology service who were eligible, but did not participate in the study. Chi-square analyses demonstrated no significant differences between participants and other eligible clients who did not participate for sex, \(\chi^2(1, N = 279) = .46, p = .50\), marital status, \(\chi^2(5, N = 266) = 1.35, p = .93\), education (see Table 19, \(\chi^2(7, N = 170) = 6.27, p = .51\)), reasons for referral to the service, \(\chi^2(7, N = 279) = 4.47, p = .72\), cancer type, \(\chi^2(14, N = 276) = 8.15, p = .88\), DSM-IV-TR diagnosis, \(\chi^2(5, N = 482) = 3.55, p = .62\), current cancer treatment (see Table 20, \(\chi^2(7, N = 269) = 7.74, p = .36\)), or treatment purpose (see Table 20, \(\chi^2(4, N = 276) = 7.09, p = .13\)). There were also no significant differences between receiving a DSM-IV-TR diagnosis, \(\chi^2(1, N = 280) = 1.84, p = .13\), or co-morbidity, \(\chi^2(1, N = 283) = 1.54, p = .14\), or not. However, for some of these analyses, cell sizes were less than five and therefore may not have detected significant differences. Visual analysis of the data (refer to Table 19) indicate that a higher proportion of clients who did not finish school, with a bachelor degree, or a graduate diploma/certificate participated in the study compared to other clients. Table 20 demonstrates that a higher proportion of participants received all three medical treatments, surgical and systemic agent, surgical or radiotherapy, and less received radiotherapy and systemic agent, or radiotherapy only, compared to other eligible clients. As can also be seen in Table
20, a higher proportion of participants were receiving curative treatment, however there is also considerable missing data for non-participants.

Work situation was significantly different between groups, $\chi^2(5, N = 222) = 16.77, p = .005$, with more participants working (either full-time or part-time), and less participants retired or on sickness benefits when compared to eligible non-participants (refer to Table 21).

<table>
<thead>
<tr>
<th>Education level</th>
<th>Eligible non-participants</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did not finish school</td>
<td>9.3</td>
<td>19.2</td>
</tr>
<tr>
<td>High school (year 7-12)</td>
<td>18.7</td>
<td>11.5</td>
</tr>
<tr>
<td>Certificate level</td>
<td>5.8</td>
<td>7.7</td>
</tr>
<tr>
<td>Advanced diploma</td>
<td>3.1</td>
<td>7.7</td>
</tr>
<tr>
<td>Bachelor degree</td>
<td>12.5</td>
<td>26.9</td>
</tr>
<tr>
<td>Graduate diploma/ certificate</td>
<td>3.1</td>
<td>15.4</td>
</tr>
<tr>
<td>Postgraduate degree</td>
<td>7.0</td>
<td>7.7</td>
</tr>
<tr>
<td>Apprenticeship</td>
<td>.004</td>
<td>3.8</td>
</tr>
<tr>
<td>Not stated</td>
<td>40.1</td>
<td>-</td>
</tr>
</tbody>
</table>
Table 20
Comparison of Current Cancer Treatment and Treatment Purpose for Eligible Clients Who Did Not Participate and Study Participants

<table>
<thead>
<tr>
<th>Cancer treatment detail</th>
<th>Eligible non-participants</th>
<th></th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% of non-participants</td>
<td>n</td>
<td>% of participants</td>
</tr>
<tr>
<td>Type of treatment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No treatment</td>
<td>15.2</td>
<td>39</td>
<td>11.5</td>
</tr>
<tr>
<td>Radiotherapy</td>
<td>11.7</td>
<td>30</td>
<td>3.8</td>
</tr>
<tr>
<td>Surgical treatment</td>
<td>10.1</td>
<td>26</td>
<td>7.7</td>
</tr>
<tr>
<td>Systemic agent therapy</td>
<td>21.0</td>
<td>54</td>
<td>19.2</td>
</tr>
<tr>
<td>Surgical &amp; radiation treatment</td>
<td>4.3</td>
<td>11</td>
<td>7.7</td>
</tr>
<tr>
<td>Surgical &amp; systemic agent treatment</td>
<td>6.2</td>
<td>16</td>
<td>15.4</td>
</tr>
<tr>
<td>Radiation &amp; systemic agent treatment</td>
<td>12.1</td>
<td>31</td>
<td>3.8</td>
</tr>
<tr>
<td>All three treatment types</td>
<td>14.8</td>
<td>38</td>
<td>23.1</td>
</tr>
<tr>
<td>Unknown</td>
<td>4.7</td>
<td>12</td>
<td>7.7</td>
</tr>
<tr>
<td>Purpose of treatment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did not have treatment</td>
<td>4.7</td>
<td>12</td>
<td>3.8</td>
</tr>
<tr>
<td>Prophylactic</td>
<td>1.4</td>
<td>4</td>
<td>3.8</td>
</tr>
<tr>
<td>Curative</td>
<td>26.8</td>
<td>69</td>
<td>50.0</td>
</tr>
<tr>
<td>Non-curative or palliative</td>
<td>17.1</td>
<td>44</td>
<td>15.4</td>
</tr>
<tr>
<td>Not stated</td>
<td>49.8</td>
<td>128</td>
<td>26.9</td>
</tr>
</tbody>
</table>
Table 21
*Work Situation for Eligible Clients Who Did Not Participate and Study Participants*

<table>
<thead>
<tr>
<th>Work situation</th>
<th>Eligible non-participants % of non-participants</th>
<th>n</th>
<th>Participants % of participants</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full time</td>
<td>16.7</td>
<td>43</td>
<td>38.5</td>
<td>10</td>
</tr>
<tr>
<td>Part time</td>
<td>18.7</td>
<td>48</td>
<td>26.9</td>
<td>7</td>
</tr>
<tr>
<td>Sickness benefit/disabled</td>
<td>14.4</td>
<td>37</td>
<td>15.4</td>
<td>4</td>
</tr>
<tr>
<td>Home duties</td>
<td>7.0</td>
<td>18</td>
<td>11.5</td>
<td>3</td>
</tr>
<tr>
<td>Retired</td>
<td>15.6</td>
<td>40</td>
<td>3.8</td>
<td>1</td>
</tr>
<tr>
<td>Other</td>
<td>6.2</td>
<td>16</td>
<td>3.8</td>
<td>1</td>
</tr>
<tr>
<td>Not stated</td>
<td>21.4</td>
<td>55</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Age differences between participants and other clients were investigated. A Levene’s test found that the assumption of homogeneity of variance was met, \( p = .12 \). Therefore an independent samples \( t \)-test based on equal variances was carried out. A significant age difference was found between participants and other clients, \( t(275) = -2.00, p = .05, d = -.40, 95\% CI (-.80, .01) \), with participants significantly younger than non-participating eligible clients. Refer to Table 22 for a summary of results for age differences.

Table 22
*Age (Years) for Eligible Clients Who Did Not Participate and Study Participants*

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Eligible non-participants</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>52.7</td>
<td>47.5</td>
</tr>
<tr>
<td>SD</td>
<td>12.9</td>
<td>9.8</td>
</tr>
<tr>
<td>Range</td>
<td>19.8 - 86.8</td>
<td>29.9 - 64.5</td>
</tr>
</tbody>
</table>
An independent samples $t$-test did not demonstrate a significant difference in baseline GAF scores between participants and non-participants, $t(189) = .57$, $p = .57$, $d = .13$, 95%CI (-.32, .58).

Table 23 presents the proportion of DSM-IV-TR diagnoses for participants and non-participants. Visual analysis of the proportions of groups in each diagnostic category, indicates fewer participants were diagnosed with a personality disorder, compared to other clients. All other diagnostic categories appear to contain similar proportions of clients in each group of participants and non-participants.

<table>
<thead>
<tr>
<th>DSM-IV-TR Diagnosis</th>
<th>Eligible non-participants (N=257)</th>
<th>Participants (N=26)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mood disorder</td>
<td>19.8 % 51</td>
<td>19.2 % 5</td>
</tr>
<tr>
<td>Anxiety disorder</td>
<td>16.3 % 42</td>
<td>19.2 % 5</td>
</tr>
<tr>
<td>Personality disorder</td>
<td>8.9 % 23</td>
<td>3.8 % 1</td>
</tr>
<tr>
<td>Substance abuse</td>
<td>4.3 % 11</td>
<td>3.8 % 1</td>
</tr>
<tr>
<td>Adjustment disorder</td>
<td>24.9 % 64</td>
<td>26.9 % 7</td>
</tr>
<tr>
<td>Sexual dysfunction</td>
<td>1.2 % 3</td>
<td>3.8 % 1</td>
</tr>
<tr>
<td>Other</td>
<td>3.9 % 10</td>
<td>3.8 % 1</td>
</tr>
</tbody>
</table>

*Note: Some clients were diagnosed with more than one disorder*
A Mann-Whitney U test demonstrated a significant difference between participants and non-participants for the number of sessions attended $z = -3.64$, $p = .00$. Participants had an average rank of 179.31, while non-participants had an average rank of 124.50. Figure 12 shows the distribution of the number of sessions attended for the two groups, and demonstrates that participants attended more appointments than non-participants.

![Figure 12. Distribution of number of sessions for study participants and eligible non-participants.](image)
Factors influencing psychologists’ decision to refer to the study.

To understand the small referral rate to the study (46 out of 283 clients), a survey was completed by psychologists at the service to identify the reasons why clients were not referred to the study. All seven psychologists employed at the service at the conclusion of the study completed and returned the survey.

Results were collated by averaging all psychologists’ responses for each reason. Table 24 presents the results of the survey. Survey results clearly demonstrate that study methodologies were the main barrier reported by psychologists to refer clients to the study. Specifically, difficulties listed by psychologists were: not enough time between booking the first appointment and date of first appointment with the service to send clients the letter about the study; the psychologist did not have time to complete letter and contact the student researcher to refer the client; researcher availability to recruit during clinic times; and the client was ambivalent about seeing a psychologist. Other reasons not to refer were the client was feeling too distressed, or not knowing enough about the client to be comfortable referring them onto the study (e.g., unknown level of client distress). The results of the survey indicate that the sample referred to the study may not be representative of all clients attending the psychology service, where clients who were more distressed and/or seen urgently, were less likely to be referred to the study.
<table>
<thead>
<tr>
<th>Reason psychologists did not refer clients to the study</th>
<th>Average % contributed to decision not to refer to the study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study methodologies were prohibitive</td>
<td>61</td>
</tr>
<tr>
<td>Client was too distressed/in crisis/at risk</td>
<td>16</td>
</tr>
<tr>
<td>Reluctant to refer because didn’t know enough about the client (including level of distress, mental state, etc)</td>
<td>11</td>
</tr>
<tr>
<td>Client was unlikely to be alive at Time 2</td>
<td>5</td>
</tr>
<tr>
<td>Forgot to refer to the study</td>
<td>4</td>
</tr>
<tr>
<td>Client did not speak sufficient English</td>
<td>3</td>
</tr>
<tr>
<td>Did not see relevance of the study</td>
<td>0</td>
</tr>
</tbody>
</table>

Overall, these results indicate that the sample was not representative. Participants were younger, more likely to be working, and attended more sessions compared to eligible non-participants. Other analyses of between group differences were difficult due to small group sizes, however it appears that there may be differences in education level achieved, current cancer treatment, cancer treatment purpose, and rate of diagnosis of personality disorders between participants and non-participants. Therefore the following results may not generalize to other clients attending the psychology clinic.
4.2.2 Client Expectations

Client expectations of the service were measured in two ways. Firstly participants were asked to respond to an open-ended question about what they hoped to gain from attending the psychology service. Responses to open-ended questions were then coded according to the underlying themes reflected in participant’s responses. These themes are summarized in Table 25. Most clients reported that they wanted assistance with stress management strategies (e.g., “Stop being stressed”, Participant 1). Several comments about stress management, directly attributed stress to cancer diagnosis and treatment (e.g., “A decrease in stress resulting from brain tumour diagnosis”, Participant 11). Many comments also reflected the expectation of gaining a different perspective by talking with a psychologist (e.g., “Speaking freely to an unbiased person about my concerns”, Participant 16).

Secondly, participants were asked to select their expectations from a list. Results from the list are also presented in Table 25. Most clients expected to gain assistance with stress management strategies and support from the psychologist.

As can be seen in Table 25, the two question formats resulted in different responses from participants. Many participants ticked responses to the multiple-choice items, but these same themes were not evident in responses to the open-ended question (e.g., information about cancer, assertiveness training, management of physical symptoms/side effects, and relationship problems). Coding of responses to the open-ended question revealed themes that were not included in the multiple-choice question, such as developing an understanding of problems, treatment for depression, not sure what to expect, review medications,
access to support groups, better quality of life, and dealing with a family member’s cancer.

Due to small group sizes, significance tests for some themes between males/females and measurement methods were not possible. For larger groups ($n>5$) using the multiple-choice question results, analyses were conducted between males and females, with Bonferroni adjustment to control Type 1 error, $p = .05/6 = .008$. Results were not significant for strategies to deal with stress, $\chi^2(1, N = 26) = 1.80, p = .53$, to gain support from therapist, $\chi^2(1, N = 26) = 2.50, p = .26$, interpersonal communication/relationships, $\chi^2(1, N = 26) = .04, p = 1.00$, information about disease, $\chi^2(1, N = 26) = 1.53, p = .41$, management of physical symptoms $\chi^2(1, N = 26) = 7.29, p = .009$, or opportunity to discuss cancer $\chi^2(1, N = 26) = .04, p = 1.00$. Visual analysis of the smaller groups indicate that in response to the open-ended question, more men expected treatment for depression attributed to cancer and to develop an understanding of their problems; more women expected support from the psychologist, to discuss relationships and communication strategies, and to discuss cancer. Interestingly, sex differences in the expectation of support from the psychologist differed by method of measurement. For the open-ended question, women expected support more than men and for the multiple-choice question more men expected support than women.
Table 25
*Differences Between Male (n = 9) and Female (n = 17) Expectations in Response to Multiple-Choice and Open-Ended Questions*

<table>
<thead>
<tr>
<th>Client expectations of service</th>
<th>Measurement technique*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Open ended</td>
</tr>
<tr>
<td></td>
<td>Male</td>
</tr>
<tr>
<td>Stress management strategies</td>
<td>55.6</td>
</tr>
<tr>
<td><em>(for stress attributed to cancer)</em></td>
<td>(33.3)</td>
</tr>
<tr>
<td>Treatment for depression</td>
<td>11.1</td>
</tr>
<tr>
<td><em>(for depression attributed to cancer)</em></td>
<td>(11.1)</td>
</tr>
<tr>
<td>Support from psychologist/A different perspective</td>
<td>0</td>
</tr>
<tr>
<td>Interpersonal communication techniques/Relationship problems</td>
<td>0</td>
</tr>
<tr>
<td>Opportunity to discuss cancer</td>
<td>0</td>
</tr>
<tr>
<td><em>(discuss cancer treatment decisions)</em></td>
<td>(0)</td>
</tr>
<tr>
<td>Management of physical symptoms</td>
<td>11.1</td>
</tr>
<tr>
<td>Information about cancer</td>
<td>0</td>
</tr>
<tr>
<td>Assertiveness training</td>
<td>-</td>
</tr>
<tr>
<td>Develop an understanding of problems</td>
<td>33.3</td>
</tr>
<tr>
<td>Better quality of life</td>
<td>0</td>
</tr>
<tr>
<td>Dealing with family member’s cancer</td>
<td>0</td>
</tr>
<tr>
<td>Access to support groups</td>
<td>11.1</td>
</tr>
<tr>
<td>Review medications</td>
<td>0</td>
</tr>
<tr>
<td>Not sure</td>
<td>0</td>
</tr>
</tbody>
</table>

*Note. Values represent the percentage of each sex. Participants may have selected or written more than one response.

4.2.3 Relationships Between Baseline Outcome Measures

To determine relationships between outcome measure scores at baseline, correlation coefficients were computed among the 14 outcome measure scales. All baseline scale scores were distributed normally, and therefore Pearson’s $r$ were
calculated. Using the Bonferroni approach to control for Type I error across the 91 correlations, a $p$ value of less than .0005 ($.05/91 = .0005$) was required for significance. The results of the correlational analyses (refer to Table 26) show 11 correlations were statistically significant. Results indicate that the global scale for quality of life positively correlated with the functional scale of the FACT-G (higher scores on global quality of life associated with higher functional quality of life), the global health scale (higher scores on quality of life associated with higher scores on health), and negatively correlated with depression (higher depression scores associated with lower quality of life scores). Global health also correlated with HADS-T (more symptoms of depression/anxiety associated with lower health ratings) and functional well-being (higher health ratings associated with higher functioning in daily activities). Higher scores of functional well-being were also correlated with lower scores on HADS-T. Higher emotional well-being scores were correlated with lower scores of HADS-A. Thus participants reported a higher quality of life if they reported better health and fewer symptoms of depression and anxiety.
Table 26

| Subscale**        | HADS-D | HADS-A | HADS-T | FACT-G PWB | FACT-G SWB | FACT-G EWB | FACT-G FWB | FACT-G total | MAC FS/HH | MAC AX | MAC FT | MAC AV | Global health |
|-------------------|--------|--------|--------|------------|------------|------------|------------|---------------|------------|--------|--------|--------|--------|----------------|
| HADS- A           | .343   |        |        |            |            |            |            |                |            |        |        |        |        |                |
| HADS - T          | .799*  | .839*  |        |            |            |            |            |                |            |        |        |        |        |                |
| FACT-G PWB        | -.418  | -.164  | -.347  |            |            |            |            |                |            |        |        |        |        |                |
| FACT-G SWB        | -.518  | -.301  | -.493  | .105       |            |            |            |                |            |        |        |        |        |                |
| FACT-G EWB        | -.321  | -.695* | -.630  | .154       | .018       |            |            |                |            |        |        |        |        |                |
| FACT-G FWB        | -.789  | -.540  | -.803* | .256       | .519       | .472       |            |                |            |        |        |        |        |                |
| FACT-G total      | -.593  | -.353  | -.570  | .397       | .539       | .300       | .699*      |                |            |        |        |        |        |                |
| MAC FS/HH         | -.459  | -.502  | -.587  | .054       | .452       | .624       | .562       | .558          |            |        |        |        |        |                |
| MAC AX            | -.042  | .389   | .224   | -.041      | .109       | -.514      | -.063      | .032          | -.350      |        |        |        |        |                |
| MAC FT            | .270   | .232   | .305   | .063       | -.101      | -.296      | -.390      | -.359         | -.381      | .174   |        |        |        |        |                |
| MAC AV            | -.035  | .354   | .206   | .255       | -.181      | -.307      | -.238      | -.193         | -.259      | .236   | .008   |        |        |        |                |
| Global health     | -.803* | -.370  | -.702* | .482       | .447       | .300       | .656*      | .523          | .457       | .072   | -.282  | .227   |        |                |
| Global quality of life | -.732* | -.257  | -.589  | .349       | .331       | .251       | .652*      | .453          | .308       | .127   | -.125  | .047   | .719* |                |

* Correlation is significant at the 0.005 level (2-tailed).

**HADS-D = HADS depression; HADS-A = HADS anxiety; HADS-T = HADS total score; FACT-G PWB = FACT-G physical well-being, FACT-G SWB = FACT-G social/family well-being, FACT-G EWB = FACT-G emotional well-being, FACT-G FWB = FACT-G functional well-being; FACT-G total = FACT-G total score; MAC FS/HH = MAC fighting spirit/helplessness-hopelessness; MAC AX = MAC anxiety; MAC FT = MAC fatalistic; MAC AV = MAC avoidance.
Relationships Between Baseline Outcome Measures and Demographic Characteristics.

MANOVAs were used to investigate differences in baseline outcome measure scores (self-rated by clients) between males and females and DSM-IV-TR diagnosis (identified by psychologists). For each independent variable, outcome measures were entered into a single-factor between-subjects multivariate analyses of variance. No significant multivariate effects were found for sex, Wilks’ Λ = .36, $F(14, 11) = 1.41, p = .29$, multivariate $\eta^2 = .64$, 95%CI (.00, .57). A significant multivariate effect was found for DSM-IV-TR diagnosis, Wilks’ Λ = .01, $F(56, 33.29) = 2.00, p = .02$, multivariate $\eta^2 = .76$, 95%CI (.03, .49). Univariate analyses of variances (ANOVA) were used to determine which dependent variables differed significantly between groups. To minimise Type I error, a Bonferroni adjustment was made and each ANOVA was tested at the .004 (.05/14) level. The ANOVA for HADS-A subscale was significant, $F(4, 21) = 9.12, p = .000, \eta^2 = .64$. Post hoc analyses consisted of conducting pairwise comparisons to find which diagnostic categories differed. Each pairwise comparison was tested at the .0008 (.004/5). Participants with no diagnosis scored significantly lower on the HADS-A subscale than those diagnosed with an anxiety disorder ($p = .000$) or adjustment disorder ($p = .000$). Therefore, participants with no DSM-IV-TR diagnosis reported less symptoms of anxiety, than those diagnosed with an anxiety disorder or adjustment disorder. The ANOVA for HADS-T was also significant, $F(4, 21) = 11.57, p = .000, \eta^2 = .69$. Pairwise comparisons were conducted to determine which groups differed, and demonstrated that participants without a psychiatric DSM-IV-TR
diagnosis scored significantly lower (indicating fewer symptoms of depression and anxiety) on the HADS-T subscale than participants diagnosed with depression \( (p = .000) \) or an adjustment disorder \( (p = .000) \). This indicates that the HADS is a useful screening tool for excluding possible cases of depression and anxiety for cancer patients.

To determine relationships between outcome measure scores at baseline with age and GAF rating at assessment, correlation coefficients were computed among the 14 outcome measure subscales. Using the Bonferroni approach to control for Type I error across the correlations, a \( p \) value of less than .002 \( (.05/28) \) was required for significance. The results of the correlational analyses are presented in Table 27. There were no significant relationships between outcome measures with age at referral or baseline GAF.
Table 27  
*Intercorrelations Between Outcome Measures, Age, and Baseline GAF Rating*

<table>
<thead>
<tr>
<th>Baseline outcome measure*</th>
<th>Age when referred</th>
<th>Baseline GAF</th>
</tr>
</thead>
<tbody>
<tr>
<td>HADS-D</td>
<td>-.011</td>
<td>-.149</td>
</tr>
<tr>
<td>HADS-A</td>
<td>.173</td>
<td>-.391</td>
</tr>
<tr>
<td>HADS-T</td>
<td>.104</td>
<td>-.348</td>
</tr>
<tr>
<td>FACT-G PWB</td>
<td>.149</td>
<td>-.180</td>
</tr>
<tr>
<td>FACT-G SWB</td>
<td>-.008</td>
<td>.283</td>
</tr>
<tr>
<td>FACT-G EWB</td>
<td>-.109</td>
<td>.014</td>
</tr>
<tr>
<td>FACT-G FWB</td>
<td>-.165</td>
<td>.340</td>
</tr>
<tr>
<td>FACT-G total</td>
<td>-.127</td>
<td>.242</td>
</tr>
<tr>
<td>MAC FS-HH</td>
<td>-.105</td>
<td>.145</td>
</tr>
<tr>
<td>MAC AX</td>
<td>-.283</td>
<td>-.013</td>
</tr>
<tr>
<td>MAC FT</td>
<td>.461</td>
<td>-.290</td>
</tr>
<tr>
<td>MAC AV</td>
<td>.072</td>
<td>-.471</td>
</tr>
<tr>
<td>Global health</td>
<td>-.186</td>
<td>-.025</td>
</tr>
<tr>
<td>Global quality of life</td>
<td>.061</td>
<td>.085</td>
</tr>
</tbody>
</table>

*Note: No correlation was significant at p=.002*

*HADS-D = HADS depression; HADS-A = HADS anxiety; HADS-T = HADS total score; FACT-G PWB = FACT-G physical well-being, FACT-G SWB = FACT-G social/family well-being, FACT-G EWB = FACT-G emotional well-being, FACT-G FWB = FACT-G functional well-being; FACT-G total = FACT-G total score; MAC FS/HH = MAC fighting spirit/helplessness-hopelessness; MAC AX = MAC anxiety; MAC FT = MAC fatalistic; MAC AV = MAC avoidance*
4.2.4 Differences in outcome measures between baseline and follow-up

Depression and anxiety.

HADS subscale means, standard deviations, ranges, and repeated measures test results for baseline and follow-up are summarized in Table 28. Wilcoxon tests were used to assess differences between baseline and three-month scores. As can be seen in Table 28, there were no significant differences between baseline and three-month follow-up for HADS-A, HADS-D, or HADS-T scores.

Table 28
Descriptive Statistics for Each Time-point and Significance Tests for HADS Subscales

<table>
<thead>
<tr>
<th>HADS subscale*</th>
<th>Baseline</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>Range</td>
<td>M</td>
<td>SD</td>
<td>Range</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HADS-D</td>
<td>6.03</td>
<td>4.02</td>
<td>0-13</td>
<td>5.88</td>
<td>3.76</td>
<td>0-14</td>
<td></td>
<td></td>
<td></td>
<td>$z = - .06, p = .95$</td>
</tr>
<tr>
<td>HADS-A</td>
<td>10.77</td>
<td>4.44</td>
<td>3-17</td>
<td>10.3</td>
<td>3.73</td>
<td>3-17</td>
<td></td>
<td></td>
<td></td>
<td>$z = - .75, p = .46$</td>
</tr>
<tr>
<td>HADS-T</td>
<td>16.81</td>
<td>6.94</td>
<td>4-29</td>
<td>16.19</td>
<td>6.55</td>
<td>4-13</td>
<td></td>
<td></td>
<td></td>
<td>$z = - .70, p = .48$</td>
</tr>
</tbody>
</table>

*Note. HADS-D = HADS depression; HADS-A = HADS anxiety; HADS-T = HADS total score

**p = .004

Table 29 shows the proportion of participants in the clinical ranges for HADS scores. Again, there are no significant differences between baseline and follow-up for HADS-D, $\chi^2(1, N = 45) = .14, p = .71$, or HADS-A, $\chi^2(1, N = 45) = .58, p = .45$. Visual analysis of the data indicates that generally, more participants were in the clinical ranges for HADS-A at baseline and follow-up, compared to HADS-D.
Table 29
Clinical Ranges of the HADS-D And HADS-A Subscales for Participants at Baseline and Three Month Follow-Up

<table>
<thead>
<tr>
<th>Symptom severity range</th>
<th>Baseline HADS-A</th>
<th>HADS-D</th>
<th>Three months HADS-A</th>
<th>HADS-D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>23.1</td>
<td>69.2</td>
<td>23.1</td>
<td>46.2</td>
</tr>
<tr>
<td>Mild</td>
<td>23.1</td>
<td>11.5</td>
<td>19.2</td>
<td>11.5</td>
</tr>
<tr>
<td>Moderate</td>
<td>26.9</td>
<td>19.2</td>
<td>11.5</td>
<td>15.4</td>
</tr>
<tr>
<td>Severe</td>
<td>26.9</td>
<td>-</td>
<td>19.2</td>
<td>-</td>
</tr>
<tr>
<td>Missing</td>
<td>-</td>
<td>-</td>
<td>26.9</td>
<td>26.9</td>
</tr>
</tbody>
</table>

*Note. Values represent percentage of participants at each time point for each subscale. HADS-D = HADS depression; HADS-A = HADS anxiety

It has been suggested that a HADS total cut-off of 14 is useful for screening purposes for subjective distress (Ibbotson et al., 1994). There was no significant change in HADS-T scores between baseline and follow-up, \( \chi^2(1, N = 45) = 1.43, p = .23 \).

In terms of change in HADS categories for HADS-D, HADS-A, and HADS-T, Table 30 demonstrates that most participants remained in the same category for HADS-D and HADS-T scores at baseline and follow-up. Most participants improved (reduced by at least one category) on the anxiety scale.

Table 30
Change in Clinical Ranges for HADS-D, HADS-A, and HADS-T Scales for Participants at Baseline and Three Month Follow-Up

<table>
<thead>
<tr>
<th>Change between baseline and follow-up</th>
<th>HADS subscale*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HADS-D</td>
</tr>
<tr>
<td>Improved</td>
<td>15.6</td>
</tr>
<tr>
<td>No change</td>
<td>69.2</td>
</tr>
<tr>
<td>Worse</td>
<td>15.6</td>
</tr>
</tbody>
</table>

*Note. Values represent percentage of participants for each scale. HADS-D = HADS depression; HADS-A = HADS anxiety; HADS-T = HADS total score.
Quality of life was measured by the FACT-G (Version 4) and a global rating of quality of life. FACT-G results are summarized in Table 31. The maximum that can be scored for PWB, SWB, and FWB subscales is 28, and 24 for the EWB subscale. Large ranges were noted for all subscales, indicating considerable variability between participants’ reported quality of life for each domain.

Wilcoxon tests indicated a significant difference between baseline and three-month follow-up for the SWB (social/family well-being) subscale. The mean rank for baseline was 13.13, and for three months 10.10. The distributions for social/family well-being scores for baseline and three months are shown in Figure 13, and indicate that social/family well-being declined over three months. There were no significant differences for other subscales or total score of the FACT-G between baseline and three months.

<table>
<thead>
<tr>
<th>FACT-G subscale*</th>
<th>Baseline</th>
<th>Three months</th>
<th>Significance tests</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>Range</td>
</tr>
<tr>
<td>PWB</td>
<td>17.10</td>
<td>7.57</td>
<td>0-28</td>
</tr>
<tr>
<td>SWB</td>
<td>20.14</td>
<td>6.67</td>
<td>2-28</td>
</tr>
<tr>
<td>EWB</td>
<td>13.96</td>
<td>4.02</td>
<td>6-19</td>
</tr>
<tr>
<td>FWB</td>
<td>17.85</td>
<td>5.70</td>
<td>7-28</td>
</tr>
<tr>
<td>Total</td>
<td>66.08</td>
<td>16.29</td>
<td>38-98</td>
</tr>
</tbody>
</table>

*Note. PWB = physical well-being, SWB = social/family well-being, EWB = emotional well-being, FWB = functional well-being.

**Test is significant at p = .004 level
The average for global quality of life ratings at baseline was 4.72 ($SD = 1.21$, range 3-7), and at follow-up was 4.92 ($SD = .89$, range 3-7). The scale ranged from one (very poor) to seven (excellent). Mean scores at both baseline and follow-up were around the mid-point of the scale (four to five). There was not a significant difference between baseline and three month follow-up ratings, $z = - .66$, $p = .51$. 

*Figure 13.* Distributions of social/family well-being quality of life ratings at baseline and three months.
Mental adjustment to cancer.

Adjustment to cancer was measured by the MAC. Standardised scores (t-scores) are available for fighting spirit-helpless/hopeless, anxious preoccupation, and fatalistic subscales (Watson et al., 1989). Results for these subscales are summarised in Table 32. A higher score on a subscale indicated more utilization of particular coping style in response to a diagnosis of cancer (Johnston et al., 1995). Average t-scores for fighting spirit-helpless/hopeless at baseline and follow-up were generally around the centre of the t-score distribution (50T± SD 10T). Anxious preoccupation scores appear elevated at both baseline and follow-up. A large range is noted for all t-scores at both time points. There were no significant differences between t-scores at baseline and follow-up.

Table 32
Descriptive Statistics for MAC Subscales T-Scores of Participants at Baseline and Three Month Follow-Up

<table>
<thead>
<tr>
<th>MAC subscale*</th>
<th>Baseline</th>
<th>Follow-up</th>
<th>Significance tests**</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Range</td>
</tr>
<tr>
<td>FS/HH</td>
<td>55.72</td>
<td>12.33</td>
<td>32-77</td>
</tr>
<tr>
<td>AX</td>
<td>61.69</td>
<td>8.72</td>
<td>46-79</td>
</tr>
<tr>
<td>FT</td>
<td>49.11</td>
<td>9.34</td>
<td>32-70</td>
</tr>
</tbody>
</table>

*FS/HH = fighting spirit/helplessness-hopelessness; AX = anxiety; FT = fatalistic.
**p = .004 as criterion for significance.
Avoidance was measured by one item on the MAC. Frequencies of responses to this item at both time points are presented in Table 33. There was not a significant difference between baseline and follow-up for the average of this item, $z = -.79$, $p = .43$.

Table 33  
Frequencies of Responses to Avoidance Item “I Don’t Really Believe I Had Cancer” on The MAC At Baseline and Follow-Up

<table>
<thead>
<tr>
<th>Response option</th>
<th>Time point</th>
<th>Definitely does not apply to me</th>
<th>Does not apply to me</th>
<th>Applies to me</th>
<th>Definitely applies to me</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Baseline</td>
<td>13</td>
<td>8</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Follow-up</td>
<td>8</td>
<td>7</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>

Overall health.

The average global health rating at baseline was 4.92 ($SD = 1.38$), range 2-7), and at follow-up was 4.77 ($SD = 1.21$, range 2-7). The scale ranged from one (very poor) to seven (excellent). Mean scores at both baseline and follow-up were around the mid-point of the scale (four to five). A large range is noted (two-seven), indicating varying health ratings between participants. There was not a significant difference between baseline and three month ratings, $z = -.72$, $p = .47$. 
4.2.5 Correlates with Change in Outcome Measures

The percentage change between baseline and three month follow-up scores were calculated for all 14 outcome measures. Several factors were analysed to identify relationships with percentage change scores of outcome measures, including the number of sessions attended at the psychology service, baseline outcome measure scores, and psychiatric diagnoses.

Continuous variables (number of sessions, and baseline scores for each subscale) were correlated with percentage change scores. Using the Bonferroni approach to control for Type I error across the correlations, a $p$ value of less than .002 (.05/28) was required for significance. The results of the correlational analyses are presented in Table 34. There were no significant relationships between outcome measure percentage change scores with number of sessions attended. This indicates no relationship between the amount of change in outcome measures and the number of sessions attended. Several subscale change scores correlated negatively with the corresponding outcome measure baseline score, including physical well-being, functional well-being, social well-being, FACT-G total score, MAC avoidance, and global health scores. For these scales, greater percentage change was associated with lower baseline scores. Therefore, participants rating lower quality of life (particularly for physical and social well-being) and health ratings, showed more improvement in these scales. Participants reporting more use of avoidance as a coping strategy at baseline, also showed a greater reduction in the use of this coping strategy between baseline and follow-up.
Differences in percentage change scores of outcome measures between DSM-IV-TR diagnoses were analysed using Kruskal-Wallis statistics. Using the Bonferroni approach to control for Type I error between tests, a $p$ value of less than .004 (.05/14) was required for significance. Results are presented in Table 35 and demonstrate that there were no significant differences between DSM-IV-TR categories for any change scores.

Table 34

<table>
<thead>
<tr>
<th>Scale change score**</th>
<th>Number of sessions</th>
<th>Baseline scale scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>HADS-D</td>
<td>.05</td>
<td>.27</td>
</tr>
<tr>
<td>HADS-A</td>
<td>.32</td>
<td>.48</td>
</tr>
<tr>
<td>HADS-T</td>
<td>.28</td>
<td>.39</td>
</tr>
<tr>
<td>FACT-G PWB</td>
<td>-.27</td>
<td>-.72*</td>
</tr>
<tr>
<td>FACT-G EWB</td>
<td>.51</td>
<td>-.36</td>
</tr>
<tr>
<td>FACT-G SWB</td>
<td>.46</td>
<td>-.83*</td>
</tr>
<tr>
<td>FACT-G FWB</td>
<td>.27</td>
<td>-.59*</td>
</tr>
<tr>
<td>FACT-G total</td>
<td>.42</td>
<td>-.64*</td>
</tr>
<tr>
<td>MAC FS-HH</td>
<td>.38</td>
<td>.050</td>
</tr>
<tr>
<td>MAC AX</td>
<td>-.54</td>
<td>-.37</td>
</tr>
<tr>
<td>MAC FT</td>
<td>-.06</td>
<td>-.51</td>
</tr>
<tr>
<td>MAC AV</td>
<td>-.49</td>
<td>-.68*</td>
</tr>
<tr>
<td>Global health</td>
<td>.13</td>
<td>-.81*</td>
</tr>
<tr>
<td>Global quality of life</td>
<td>.19</td>
<td>-.55</td>
</tr>
</tbody>
</table>

*Note: Correlation was significant at $p=.002$

**HADS-D = HADS depression; HADS-A = HADS anxiety; HADS-T = HADS total score; FACT-G PWB = FACT-G physical well-being; FACT-G SWB = FACT-G social/family well-being; FACT-G EWB = FACT-G emotional well-being; FACT-G FWB = FACT-G functional well-being; FACT-G total = FACT-G total score; MAC FS/HH = MAC fighting spirit/helplessness-hopelessness; MAC AX = MAC anxiety; MAC FT = MAC fatalistic; MAC AV = MAC avoidance
Table 35
Significance Test Results for Outcome Measure Percentage Change Scores Between DSM-IV-TR Diagnoses

<table>
<thead>
<tr>
<th>Scale change score**</th>
<th>Kruskal-Wallis results between DSM-IV-TR diagnoses*</th>
</tr>
</thead>
<tbody>
<tr>
<td>HADS-D</td>
<td>$\chi^2(4, N = 14) = 1.32, p = .86$</td>
</tr>
<tr>
<td>HADS-A</td>
<td>$\chi^2(4, N = 14) = 5.05, p = .28$</td>
</tr>
<tr>
<td>HADS-T</td>
<td>$\chi^2(4, N = 14) = 3.70, p = .45$</td>
</tr>
<tr>
<td>FACT-G PWB</td>
<td>$\chi^2(4, N = 14) = 5.08, p = .22$</td>
</tr>
<tr>
<td>FACT-G EWB</td>
<td>$\chi^2(4, N = 14) = 4.39, p = .36$</td>
</tr>
<tr>
<td>FACT-G SWB</td>
<td>$\chi^2(4, N = 14) = 4.70, p = .32$</td>
</tr>
<tr>
<td>FACT-G FWB</td>
<td>$\chi^2(4, N = 14) = 3.00, p = .56$</td>
</tr>
<tr>
<td>FACT-G total</td>
<td>$\chi^2(4, N = 14) = 4.48, p = .30$</td>
</tr>
<tr>
<td>MAC FS/HH</td>
<td>$\chi^2(4, N = 14) = 8.19, p = .09$</td>
</tr>
<tr>
<td>MAC AX</td>
<td>$\chi^2(4, N = 14) = 1.80, p = .77$</td>
</tr>
<tr>
<td>MAC FT</td>
<td>$\chi^2(4, N = 14) = 1.94, p = .75$</td>
</tr>
<tr>
<td>MAC AV</td>
<td>$\chi^2(4, N = 14) = 3.63, p = .46$</td>
</tr>
<tr>
<td>Global health</td>
<td>$\chi^2(4, N = 14) = 5.27, p = .26$</td>
</tr>
<tr>
<td>Global quality of life</td>
<td>$\chi^2(4, N = 14) = 3.15, p = .53$</td>
</tr>
</tbody>
</table>

*Note: No correlation was significant at $p=.004$

***HADS-D = HADS depression; HADS-A = HADS anxiety; HADS-T = HADS total score; FACT-G PWB = FACT-G physical well-being, FACT-G SWB = FACT-G social/family well-being, FACT-G EWB = FACT-G emotional well-being, FACT-G FWB = FACT-G functional well-being; FACT-G total = FACT-G total score; MAC FS/HH = MAC fighting spirit/helplessness-hopelessness; MAC AX = MAC anxiety; MAC FT = MAC fatalistic; MAC AV = MAC avoidance
4.2.6 Client Satisfaction

Client satisfaction with the service was measured by a series of multiple-choice questions. Firstly, participants were asked to rate their satisfaction with various aspects of the service. These results are presented in Table 36. Sample sizes were too small to allow for statistical analysis between ratings. Visual analysis of the data indicate that participants were generally satisfied with the service (mode ratings for all items were either ‘agree’ or ‘strongly agree’). Four participants indicated dissatisfaction by rating aspects of satisfaction in either the ‘disagree’ or ‘strongly disagree’ categories for clinic times, improvement in coping, and aspects of their relationship with their psychologist. Overall, the elements of satisfaction measured were relevant, with only a small proportion of participants \( n = 3 \) indicating an aspect did not apply to them. All participants were satisfied overall with the service and valued the service in their overall care.

An indicator of satisfaction with a service is willingness to return to the service if necessary in the future. Nearly all clients (94.7%, \( n = 18 \)) indicated they would return to the service, with only one client indicating ‘maybe’ to return. No clients indicated they would not return.
Table 36

Participant Ratings of Satisfaction with the Psychology Service (N = 19)

<table>
<thead>
<tr>
<th>Aspect of satisfaction with the service</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
<th>Does not apply to me</th>
</tr>
</thead>
<tbody>
<tr>
<td>Felt free to express myself</td>
<td>0.0</td>
<td>5.3</td>
<td>31.6</td>
<td>68.4</td>
<td>0.0</td>
</tr>
<tr>
<td>Psychologist understood what I was thinking/feeling</td>
<td>0.0</td>
<td>5.3</td>
<td>36.8</td>
<td>57.9</td>
<td>0.0</td>
</tr>
<tr>
<td>Able to focus on what I wanted</td>
<td>0.0</td>
<td>5.3</td>
<td>31.6</td>
<td>63.2</td>
<td>0.0</td>
</tr>
<tr>
<td>Short wait time for appointment</td>
<td>0.0</td>
<td>5.3</td>
<td>26.3</td>
<td>68.4</td>
<td>0.0</td>
</tr>
<tr>
<td>Appointments on time</td>
<td>0.0</td>
<td>0.0</td>
<td>31.6</td>
<td>68.4</td>
<td>0.0</td>
</tr>
<tr>
<td>Able to attend on clinic days</td>
<td>10.5</td>
<td>5.3</td>
<td>36.8</td>
<td>36.8</td>
<td>10.5</td>
</tr>
<tr>
<td>Satisfied with cleanliness and comfort of facilities</td>
<td>0.0</td>
<td>0.0</td>
<td>42.1</td>
<td>57.9</td>
<td>0.0</td>
</tr>
<tr>
<td>Better able to cope</td>
<td>0.0</td>
<td>5.3</td>
<td>47.4</td>
<td>42.1</td>
<td>5.3</td>
</tr>
<tr>
<td>Overall satisfied with the service</td>
<td>0.0</td>
<td>0.0</td>
<td>31.6</td>
<td>63.2</td>
<td>0.0</td>
</tr>
<tr>
<td>Service valuable to overall care</td>
<td>0.0</td>
<td>0.0</td>
<td>36.8</td>
<td>63.2</td>
<td>0.0</td>
</tr>
</tbody>
</table>

*Note. Percentage values represent the proportion of participants at follow-up for each aspect of satisfaction.

Participants also rated their progress with their presenting problem. Eighty-nine percent of participants reported making progress with their presenting problem whilst attending the psychology clinic. Two participants rated ‘things got worse’ (although this was not directly related to attending the service), 5 made ‘some progress’, 10 made ‘quite a lot of progress’, and 2 made ‘a great deal’ or progress. The rating of progress was correlated with other outcome measure change scores (both self-report and clinician-rated). Using the Bonferroni approach to control for Type I error between correlations, a $p$ value of less than .003 (.05/17) was required
for significance. There were no significant correlations between the rating of progress, and change scores for HADS, MAC, FACT-G, general quality of life, health, or GAF (see Table 37).

Table 37
*Intercorrelations Between Outcome Measure Change Scores with Progress Rating*

<table>
<thead>
<tr>
<th>Scale change score**</th>
<th>Correlation with progress rating*</th>
</tr>
</thead>
<tbody>
<tr>
<td>HADS-D</td>
<td>.16</td>
</tr>
<tr>
<td>HADS-A</td>
<td>.08</td>
</tr>
<tr>
<td>HADS-T</td>
<td>.07</td>
</tr>
<tr>
<td>FACT-G PWB</td>
<td>-.09</td>
</tr>
<tr>
<td>FACT-G EWB</td>
<td>.38</td>
</tr>
<tr>
<td>FACT-G SWB</td>
<td>.10</td>
</tr>
<tr>
<td>FACT-G FWB</td>
<td>-.26</td>
</tr>
<tr>
<td>FACT-G total</td>
<td>-.16</td>
</tr>
<tr>
<td>MAC FS-HH</td>
<td>.20</td>
</tr>
<tr>
<td>MAC AX</td>
<td>-.57</td>
</tr>
<tr>
<td>MAC FT</td>
<td>-.34</td>
</tr>
<tr>
<td>MAC AV</td>
<td>.01</td>
</tr>
<tr>
<td>Global health</td>
<td>-.15</td>
</tr>
<tr>
<td>Global quality of life</td>
<td>-.13</td>
</tr>
<tr>
<td>GAF</td>
<td>-.20</td>
</tr>
</tbody>
</table>

*Note: No correlation was significant at p=.003

**HADS-D = HADS depression; HADS-A = HADS anxiety; HADS-T = HADS total score; FACT-G PWB = FACT-G physical well-being, FACT-G SWB = FACT-G social/family well-being, FACT-G EWB = FACT-G emotional well-being, FACT-G FWB = FACT-G functional well-being; FACT-G total = FACT-G total score; MAC FS/HH = MAC fighting spirit/helplessness-hopelessness; MAC AX = MAC anxiety; MAC FT = MAC fatalistic; MAC AV = MAC avoidance

Several open ended questions asked participants to identify the most helpful and least helpful aspects of the service, as well as any suggestions for improvements. These responses were coded and grouped together by themes. A
summary of the frequency of themes reflected in participants’ comments about helpful aspects are presented in Table 38. Nearly half of participants’ ‘helpful’ themes reflected the progress made with their presenting issue, and the opportunity to discuss their concerns. Interestingly, one participant mentioned being prescribed medication as being helpful, which is a medical intervention not offered by the psychology service.

Table 38  

<table>
<thead>
<tr>
<th>Most helpful aspect of service</th>
<th>% (n)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>General progress with presenting problem</td>
<td>47.4 (9)</td>
</tr>
<tr>
<td>Opportunity to discuss issue/s of concern</td>
<td>47.4 (9)</td>
</tr>
<tr>
<td><em>(Opportunity to talk with an unbiased person)</em></td>
<td><em>(10.5 (2))</em></td>
</tr>
<tr>
<td><em>(To gain a different perspective)</em></td>
<td><em>(5.3 (1))</em></td>
</tr>
<tr>
<td>Normalized/validated my feelings</td>
<td>26.3 (5)</td>
</tr>
<tr>
<td>Psychologist listened to me</td>
<td>5.3 (1)</td>
</tr>
<tr>
<td>Caring attitude of psychologist</td>
<td>5.3 (1)</td>
</tr>
<tr>
<td>Other - onwards referral, that service is offered, given medication</td>
<td>15.8 (3)</td>
</tr>
</tbody>
</table>

*Note. Percentage values represent the proportion of respondents at follow-up. Participants may have written more than one response.

A summary of the frequency of themes reflected in participants comments about unhelpful aspects are presented in Table 39. Most clients indicated no unhelpful aspects (e.g., “nothing”, Participant 12) or left the question blank. Difficult aspects that were identified included structural aspects of the service (appointment times, location, or the physical environment), and aspects of the relationship with the psychologist (e.g., “I felt I needed more direction on how to deal with the issues I had, more concrete ideas as such”, Participant 10).
Table 39

<table>
<thead>
<tr>
<th>Least helpful aspect of service</th>
<th>% (n)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>36.8 (7)</td>
</tr>
<tr>
<td>No response</td>
<td>36.8 (7)</td>
</tr>
<tr>
<td>Restricted appointment times</td>
<td>5.3 (1)</td>
</tr>
<tr>
<td>Traveling</td>
<td>5.3 (1)</td>
</tr>
<tr>
<td>Uncomfortable consulting rooms</td>
<td>5.3 (1)</td>
</tr>
<tr>
<td>Lack of direction by psychologist</td>
<td>5.3 (1)</td>
</tr>
<tr>
<td>No help in a crisis</td>
<td>5.3 (1)</td>
</tr>
</tbody>
</table>

*Note. Percentage values represent the proportion of respondents at follow-up. Participants may have written more than one response.

Themes reflected in participants’ suggestions to improve the service are presented in Table 40. Most participants indicated no improvements were necessary (e.g., “For me it does not need to be improved. They have always been there for me at any time”, Participant 5). The most frequent suggestion was after hours appointments (e.g., “More flexibility in after hours appointments”, Participant 7). Other suggestions appear to reflect more specific aspects for the participant’s situation (e.g., Lesbian specific support groups).

Several common themes are reflected across the results of unhelpful aspects and suggested improvements (e.g., appointment times and comfort of consulting rooms), indicating consistent responding by participants. However, no participants indicated dissatisfaction with the comfort/cleanliness of the facilities in response to a multiple choice question about facilities, but did comment on this in the open-ended questions.
Table 40

<table>
<thead>
<tr>
<th>Suggested improvement</th>
<th>% (n)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>No improvements</td>
<td>26.3 (5)</td>
</tr>
<tr>
<td>After hours appointment times</td>
<td>21.1 (4)</td>
</tr>
<tr>
<td>No response</td>
<td>15.8 (3)</td>
</tr>
<tr>
<td>Offer groups</td>
<td>10.5 (2)</td>
</tr>
<tr>
<td>Reduce wait time for initial appointment</td>
<td>5.3 (1)</td>
</tr>
<tr>
<td>More comfortable consulting rooms</td>
<td>5.3 (1)</td>
</tr>
<tr>
<td>Offer meditation class</td>
<td>5.3 (1)</td>
</tr>
<tr>
<td>More knowledge by psychologist</td>
<td>5.3 (1)</td>
</tr>
<tr>
<td>More positive</td>
<td>5.3 (1)</td>
</tr>
<tr>
<td>Lesbian specific support</td>
<td>5.3 (1)</td>
</tr>
</tbody>
</table>

*Note. Percentage values represent the proportion of respondents at follow-up. Participants may have written more than one response.

Analyses were conducted to identify factors associated with participant satisfaction. Age, sex, health, quality of life, and percentage change scores of outcome measures were analysed for relationships with satisfaction.

A combined satisfaction score was calculated from correlating items on the satisfaction questionnaire. Client satisfaction items were correlated with each other to determine internal consistency. Items that correlated with each other were considered to be measuring the same construct and could therefore be added to calculate a total satisfaction score (Andrews et al., 1995; Higginson & Carr, 2003). Spearman’s rho was used as many variables were not normally distributed. Table 41 presents the correlation results between satisfaction items on the questionnaire. Bonferroni approach to control for Type I error across 45 correlations, a p value of less than .001 (.05/45) was required for significance. Items that did not correlate
with others were ‘overall satisfaction’, ‘free to express myself’, and ‘overall value’.
All other items correlated significantly with each other indicating internal consistency. Therefore these items were added to calculate a total satisfaction score.
Table 41
*Intercorrelations Between Satisfaction Items for Participants (N = 19)*

<table>
<thead>
<tr>
<th>Satisfaction variable</th>
<th>Overall satisfaction</th>
<th>Free to express myself</th>
<th>Understood me</th>
<th>Focus on what I wanted</th>
<th>Improved coping</th>
<th>Did not wait long for appointment</th>
<th>Appointments on time</th>
<th>No difficulty attending clinic days</th>
<th>Clean facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Free to express myself</td>
<td>.671</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Understood me</td>
<td>.524</td>
<td>.380</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Focus on what I wanted</td>
<td>.407</td>
<td>.451</td>
<td>.717*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improved coping</td>
<td>.106</td>
<td>.217</td>
<td>.337</td>
<td>.559</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did not wait long for appointment</td>
<td>.179</td>
<td>.228</td>
<td>.705*</td>
<td>.591</td>
<td>.407</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appointments on time</td>
<td>.146</td>
<td>.269</td>
<td>.712*</td>
<td>.585</td>
<td>.411</td>
<td>.990*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No difficulty attending clinic days</td>
<td>.207</td>
<td>-.054</td>
<td>.495</td>
<td>.374</td>
<td>.357</td>
<td>.238</td>
<td>.218</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clean facilities</td>
<td>-.023</td>
<td>.109</td>
<td>.492</td>
<td>.390</td>
<td>.150</td>
<td>.789*</td>
<td>.797*</td>
<td>.400</td>
<td></td>
</tr>
<tr>
<td>Valuable to overall care</td>
<td>.270</td>
<td>.420</td>
<td>.389</td>
<td>.482</td>
<td>.275</td>
<td>.660</td>
<td>.655</td>
<td>.084</td>
<td>.675</td>
</tr>
</tbody>
</table>

* Correlation is significant at the $p = 0.001$ level (2-tailed).
Correlations were calculated between total satisfaction scores with age, health, and quality of life scores at follow-up, as well as change scores in client-(HADS, FACT-G, MAC, and global health) and clinician-rated (GAF) outcome measures. Results are presented in Table 42. Using a Bonferroni approach to control for Type I error across 21 correlations, a $p$ value of less than .002 (.05/21) was required for significance. No factors were significantly correlated with total satisfaction scores.

Between group differences in total satisfaction scores were analysed for sex and expectations of the service. Expectation variables were coded by combining data from open- and multiple-choice questions into dichotomous variables to indicate if each expectation was reported by each participant. Not all expectation categories could be included due to small sample sizes (e.g., $n = 1$ for dealing with family member’s cancer, access to support groups, review medications, not sure, and better quality of life). A series of Mann-Whitney $U$ tests were conducted to analyse between group differences for each dichotomous variable. There were no significant differences in satisfaction between males and females ($z = -.36, p = .72$) or expectations of the service (results are presented in Table 43).

Overall, these results suggest that satisfaction was not related to age, sex, health, quality of life, or percentage change in outcome measures scores in this sample.
Table 42
Correlations Between Demographic and Outcome Measures with Total Satisfaction Scores

<table>
<thead>
<tr>
<th>Demographic and outcome measures*</th>
<th>Total satisfaction score**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>-.036</td>
</tr>
<tr>
<td>Number of sessions attended</td>
<td>.161</td>
</tr>
<tr>
<td>Progress to dealing with problem</td>
<td>.429</td>
</tr>
<tr>
<td>Global health at follow-up</td>
<td>.125</td>
</tr>
<tr>
<td>Global quality of life at follow-up</td>
<td>.048</td>
</tr>
<tr>
<td>FACT-G total at follow-up</td>
<td>-.214</td>
</tr>
<tr>
<td>HADSD change score</td>
<td>-.100</td>
</tr>
<tr>
<td>HADS A change score</td>
<td>.512</td>
</tr>
<tr>
<td>HADST change score</td>
<td>.351</td>
</tr>
<tr>
<td>FACT-G PWB - change score</td>
<td>-.205</td>
</tr>
<tr>
<td>FACT-G SWB - change score</td>
<td>.323</td>
</tr>
<tr>
<td>FACT-G EWB - change score</td>
<td>.315</td>
</tr>
<tr>
<td>FACT-G FWB - change score</td>
<td>-.004</td>
</tr>
<tr>
<td>FACT-G total - change score</td>
<td>-.129</td>
</tr>
<tr>
<td>MAC AV - change score</td>
<td>.306</td>
</tr>
<tr>
<td>MAC FS/HH - change score</td>
<td>.177</td>
</tr>
<tr>
<td>MAC AX - change score</td>
<td>-.351</td>
</tr>
<tr>
<td>MAC FT - change score</td>
<td>-.239</td>
</tr>
<tr>
<td>Global health change - change score</td>
<td>.005</td>
</tr>
<tr>
<td>Global quality of life change - change score</td>
<td>.025</td>
</tr>
</tbody>
</table>

*HADS-D = HADS depression; HADS-A = HADS anxiety; HADS-T = HADS total score; FACT-G PWB = FACT-G physical well-being; FACT-G SWB = FACT-G social/family well-being; FACT-G EWB = FACT-G emotional well-being; FACT-G FWB = FACT-G functional well-being; FACT-G total = FACT-G total score; MAC FS/HH = MAC fighting spirit/helplessness-hopelessness; MAC AX = MAC anxiety; MAC FT = MAC fatalistic; MAC AV = MAC avoidance

**No correlations significant at the .002 level
Table 43
*Mann-Whitney U Test Results for Whether or Not Participants Had Each Expectation of the Service and Total Satisfaction Scores*

<table>
<thead>
<tr>
<th>Expectation</th>
<th>Mann-Whitney U test results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stress management strategies</td>
<td>$z = -0.14, p = .89$</td>
</tr>
<tr>
<td>Treatment for depression</td>
<td>$z = -1.19, p = .23$</td>
</tr>
<tr>
<td>Support from psychologist</td>
<td>$z = -0.68, p = .50$</td>
</tr>
<tr>
<td>Help with relationships</td>
<td>$z = -0.46, p = .65$</td>
</tr>
<tr>
<td>Opportunity to discuss cancer</td>
<td>$z = -0.09, p = .93$</td>
</tr>
<tr>
<td>Management of physical symptoms</td>
<td>$z = -1.11, p = .27$</td>
</tr>
<tr>
<td>Information about cancer</td>
<td>$z = -0.08, p = .93$</td>
</tr>
<tr>
<td>Assertiveness training</td>
<td>$z = -1.04, p = .30$</td>
</tr>
<tr>
<td>To develop an understanding of problems</td>
<td>$z = -0.83, p = .40$</td>
</tr>
</tbody>
</table>

4.2.7 *Use of Other Professional Supports*

Participants were asked about their use of other professional supports.

Nearly 39% ($n = 7$) sought other professional support. These supports were from a support group ($n = 4$), a psychologist outside of Peter MacCallum Cancer Centre ($n = 3$), a counselor outside of Peter MacCallum Cancer Centre ($n = 1$), a GP ($n = 1$), and a breast cancer support service ($n = 1$).
Overall, this study has provided further information about the characteristics of clients with cancer referred to the psychology service, and client-rated outcome measures.

The first aim was to establish the representativeness of the sub-sample referred to this study. Approximately 10% of all clients attending the psychology service were referred to the study. This sub-sample was not representative of the total sample of clients for demographic or service usage measures. In this sub-sample, participants were younger, attended more sessions, and were more likely to be working. This may indicate that participants were more active, healthy, motivated, and mobile (e.g., working full-time, not on sickness benefit), and therefore more willing to participate in the study. There was some evidence that participants were less distressed when referred to the psychology service, compared to other clients. For example, the survey of psychologists suggested that distressed clients were less likely to be referred to the study, and some clients referred to the study declined participating because they reported feeling too distressed. However, there were no significant differences between participants and non-participants for baseline GAF ratings with the psychology service. Therefore, it is likely that psychologists' perception of clients' distress based on preliminary triage information (before seeing a client) influenced referral to the study, rather than information about symptom severity and functioning obtained via subsequent clinical interview. More importantly, study procedures also appeared to impede referral, with psychologists indicating referral procedures stipulated by the hospital were prohibitive, as well as several referred clients unable to be
contacted/met for recruitment before their first appointment. The intensive recruitment procedure, required by the hospital ethics committee, contributed to the low recruitment rate. Overall, these results indicate that the sample was not representative of all clients attending the service, and therefore the following results may not generalize to other clients at the service.

The second aim of this study was to identify client expectations of attending the psychology service. Before attending an appointment with the psychology service, clients typically expected stress management strategies, treatment for depression, support from a psychologist/different perspective, help with relationship difficulties, management of physical symptoms, and information about cancer. These expectations appear reasonable of a psychology service. The exception was one participant who expected to review their medications, which would be a medical intervention (not appropriate for a psychology service). Comparison of the two methods of measuring expectations used in this study, highlight that the format of questions (e.g., multiple-choice or open-ended questions) affected findings. Participants provided more responses to the multiple-choice question format than the open-ended question about their expectations. This may be explained as the clients were unable to identify expectations in response to the first open-ended question, but were subsequently prompted by the choices presented in the second multiple-choice format. As hypothesised, some themes identified by clients were similar to those identified by Blenkiron and Hammill (2003), such as the opportunity to talk and to develop an understanding of problems. However, many themes identified in the current study, were also specifically related to the client’s cancer (e.g., stress or depression attributed to cancer). Therefore, whilst expectations of general clients and cancer patients are
similar, cancer patients appear to expect a more specialised service for cancer-related issues. The current study used a combination of open and multiple-choice questions, which resulted in more expectations identified compared to previous studies.

Sex differences in expectations were difficult to analyse due to small group sizes. Expecting assistance with management of physical symptoms approached significance, with more men than women expecting this from the service. Visual analysis of smaller groups indicated that more men expected treatment for depression and help to understand their problems. In contrast, women tended to expect support from the psychologist, to discuss relationships/communication strategies, and to discuss cancer. Women’s expectations of the service placed more emphasis on the working relationship with the psychologist, whereas men tended to focus on strategies (e.g., treatment for depression and physical symptoms). This is consistent with previous research, where men expect a more directive approach, whereas women emphasise the counselling process (Egisdottir & Gerstein, 2000; Hatchett & Han, 2006). Therefore, there is some indication of sex differences in expectations of a psychology service for male and female cancer patients. These sex differences should be considered and addressed early when attending a service. If not addressed, unrealistic expectations may lead to a mismatch between client expectations and a psychologist’s therapeutic style which may adversely affect the working relationship and outcome from psychotherapy (Connolly-Gibbons et al., 2003; Noble et al., 2001).

The third aim of this study was to describe the profile of clients by baseline outcome measures scores, relationships to other factors (such as demographic characteristics and GAF), and compare these results to previous studies. There
was evidence for strong relationships between health, quality of life, and depression/anxiety symptoms. As expected, clients who reported poorer quality of life also reported poorer health and more symptoms of depression/anxiety. Participants with better health also reported less symptoms of depression/anxiety, and better functioning in daily activities. The findings of the current study support another study which demonstrated that poor health was associated with more symptoms of anxiety and depression (Harter et al., 2001). Surprisingly, the results of this study did not find a relationship between coping and other outcome measures. This contradicts a previous study which correlated the MAC subscales with the HADS subscales, with significant correlations between HADS-A and MAC anxious pre-occupation, and HADS-D with hopeless/helpless and fatalistic coping styles (Watson et al., 1988). In the current study, no subscales correlated significantly between the MAC and the HADS. Therefore this study does not support a relationship between symptoms of anxiety and depression, with the coping styles of anxious pre-occupation, hopeless/helplessness, or fatalism. HADS-D and HADS-T scores were not related to the quality of life dimension of emotional well-being. However, HADS-A correlated negatively with emotional well-being, indicating that participants who reported more symptoms of anxiety also reported less ‘emotional well-being’. Therefore, the FACT-G emotional well-being subscale appears to assess symptoms of anxiety, rather than depression.

Factors related to participants’ presentation at time of referral were also investigated. There was a significant difference in HADS-A and HADS-T scores for psychiatric diagnosis. As would be expected, participants who scored lower on the HADS-A were less likely to be diagnosed with an anxiety or adjustment disorder, and those who scored lower on the HADS-T were less likely to be diagnosed with
depression or an adjustment disorder. These findings support the construct validity of the HADS, as it demonstrates that scores are related to subsequent psychiatric diagnosis by clinical interview. There were no significant differences in baseline measures for sex, age, or baseline GAF. These findings, particularly lack of differences in age and sex, do not support results from previous studies (Herrmann, 1997; Holzner et al., 2004; van't Spijker et al., 1997). This outcome may have been due to sample differences. For example Holzner et al. (2004) did not use a sample of cancer patients, and therefore results may differ to the current study. The lack of relationship between client- and clinician-rated outcome measures supports previous research findings that these are unrelated outcomes (Piersma & Boes, 1995; Trauer & Callaly, 2002). Therefore client and clinician outcome measures need to be included in evaluations of psychology services, and treated as distinct outcomes.

HADS baseline scores indicated that more clients were in the clinical range for anxiety (76.9%) than depression (30.7%). In contrast, equal numbers of participants were diagnosed with anxiety and mood disorders (both 19%). These findings indicate that HADS-A scores may be more sensitive to sub-clinical levels of anxiety. As expected, when HADS subscale averages from this study are compared to previous studies of cancer patients, the present sample reported higher average HADS-A, HADS-D, and HADS-T scores. For example, Moorey et al.’s. (1991) study of cancer patients reported only 8.7% of patients were in the clinical range for HADS-D, and 27% in clinical range for HADS-A. This contrast can be explained by sample differences, with the sample of the current study consisting of clients attending a psychology service, and the studies presented in Table 16 using samples of general cancer patients. Together with the high rate of
diagnoses of depression and anxiety in the current sample, it would therefore be expected that results of this study would reflect higher HADS scores. This supports the construct validity of the HADS as measuring symptoms of depression and anxiety in cancer patients. These results also support that clients with cancer referred to a psychology service report more symptoms of depression and anxiety, compared to other cancer patients.

The sample of the current study reported poorer physical and total quality of life scores compared to previous studies of cancer and general population samples. However, the current sample had similar scores to the general cancer sample for emotional, social, and functional well-being. This is surprising, as it would be expected that clients attending a psychology service would have lower emotional well-being scores, compared to a general cancer sample who were not seeking psychosocial intervention. This finding is also surprising given the number of clients referred to the service for assistance with depression, anxiety, and/or adjustment. Together, it appears that cancer patients attending a psychology service report lower cancer-related quality of life for physical well-being, but not for emotional or social well-being.

The MAC assessed clients’ coping style. MAC subscale baseline averages for fatalistic and fighting-spirit/helpless-hopeless were around the centre of the t-score distribution, indicating that they were in the ‘normal’ range. The average t-score for anxious pre-occupation was slightly elevated (i.e., >1 standard deviation above the mean). Given that the current sample was a clinical sample referred to a psychology service, together with the prevalence of diagnosed anxiety disorders, it would be expected that scores for anxious preoccupation would be higher. No standardised scores were available for the avoidance coping item, but frequencies
at baseline for this scale indicated that most clients (nearly 81%) did not use avoidance to cope with cancer. Overall, MAC results indicated that clients referred to a psychology service tended to use ‘anxious preoccupation’, rather than fatalistic, optimism (fighting spirit/helplessness-hopelessness), or avoidance to cope with their illness. It may be that clients who use fatalistic or avoidant coping styles are less likely to seek help, such as attending a psychology service.

There were few changes in outcome measures over the time that participants attended the psychology service. Based on previous studies of mental health services, it was expected that the outcome measures would show significant improvement (Hirsch et al., 2000; McLeod et al., 2000). However, the only significant difference found in the current study between baseline and follow-up, was a decline in social well-being. The reason for a decline in social well-being and lack of change in other measures is not known as this was an uncontrolled study. One other study of social support also found that perceived social support of cancer patients decreased over time for an unknown reason (Arora, Finney Rutten, Gustafson, Moser, & Harkins, 2007). The decline in social support may be the result of ongoing demand for support over time leading to burnout of support providers, or that clients’ support needs changed and support providers did not meet these changing needs. No other outcome measures were significantly different between baseline and follow-up, indicating that participants’ symptoms did not significantly improve or decline. It may be that attending the service was associated with preventing clients from declining further on many outcome measures. Also, results may indicate that symptoms were subclinical range and these measures were not sensitive enough to detect changes in these symptoms.
Factors associated with change in outcome measures were investigated. The association between the number of sessions attended and the amount of change in outcome measures would provide an indication of dose-effects (Andrews et al., 1995). However there was no relationship between these variables. There was also no relationship between amount of change in outcome measures and psychiatric diagnoses. Previous studies have demonstrated that clients with particular diagnoses (e.g., depression) improve more with psychosocial intervention than other diagnoses (Hirsch et al., 2000). The current study does not support this finding. Change in outcome measures were related to baseline scores, with clients who reported poorer physical, functional, or social well-being, or using avoidance as a coping strategy, showing more benefit from attending the service. This would be expected as clients with more symptoms (including maladaptive coping strategies), have a greater potential for improvement.

Overall, most clients were satisfied with the service they received, including their relationship with the psychologist, facilities, appointment times, and value of the service. Most clients indicated that they made progress with their presenting problem, and would return to use the service in the future. However, two participants indicated that ‘things got worse’ with their presenting problem. The reason/s for this are unknown. The findings of this study are similar to Boudioni et al.’s. (2000) results, where approximately 10% of clients attending a general counseling service reported worsening of symptoms during contact with the service. Interestingly, the change scores for outcome measures were not related to clients’ ratings of progress. Such findings suggest that the outcome measures were not measuring relevant aspects of clients’ presenting problems. Helpful aspects of the service included progress with presenting problem, together with the
opportunity to discuss concerns/cancer. These helpful aspects appear to match
the expectations of many clients, who wanted to discuss their concerns. These
‘helpful’ aspects are also similar to those identified by Blenkiron (1998) of a general
counseling service, where clients reported that talking to someone, and gaining a
different perspective where helpful aspects of that service. In the present study,
aspects of the service which were ‘least helpful’ and/or could be improved,
indicated that more flexible appointment times would improve access to the
service. Access to a service is an important indicator of a service’s clinical utility
(Levant, 2005). This feedback from participants can be used to improve access
and further develop the service. Otherwise, the most common responses to
identify difficulties/improvements were ‘no improvements’ or difficulties. This may
be further evidence for clients’ satisfaction with the service. Alternatively, clients
may have been unwilling to write down difficulties/improvements. It is also possible
that participants who did not return follow-up questionnaires were not satisfied with
the service. Previous studies of mental health services have found that
participants that are not satisfied with a service, are less likely to return follow-up
data (Kopp et al., 2003; McLeod et al., 2000). This omission may bias results in
favour of positive feedback. Interestingly, more participants responded to
suggestions for improvements rather than unhelpful aspects of the service. It is
possible that asking about improvements may encourage more feedback from
clients, rather than what they found difficult.

Relationships between satisfaction questions, demonstrated that ‘overall
satisfaction’ was not related to other aspects of satisfaction. This supports a
This indicates that both general and specific questions are measuring different constructs and both should be included in satisfaction surveys.

There were no significant relationships between satisfaction and age, sex, expectations before first appointment, or change scores for health, quality of life, or GAF. Generally, these findings are inconsistent with previous studies of these factors (Berghofer et al., 2002; Blenkiron, 1998; Eklund & Hansson, 2001; Fitzpatrick, 1997; Greenwood et al., 1999; Miller et al., 1998).

Several limitations of the current study should be recognized when interpreting results. Firstly, the results are based on a small sample that was not representative of other clients attending the psychology service. This prohibits the generalisability of findings to other clients attending the service. This also may suggest that results are unreliable, as studies with smaller samples are more susceptible to Type II errors (Hinkle, Wireman, & Jurs, 1994). Ideally, when evaluating a service, all consumers should be offered the opportunity to provide data to achieve a thorough representation of outcomes and feedback. The survey of staff, suggests that the complicated recruitment procedure and psychologists’ estimates of client distress were responsible for the low referral rate. Therefore results are not generalizable to other clients and services. The complex recruitment process that psychologists reported as prohibitive, was mandated by the hospital ethics committee. Simplifying the recruitment procedure in future evaluations would provide a more representative sample to provide feedback about outcomes and satisfaction with the psychology service. Whilst it is considered good practice for an evaluation of a service to be conducted by an independent party (e.g., not the treating psychologist), the results of this study indicate that that routine administration of outcome measures would achieve a more representative
sample of clients and questionnaire data could be utilised by psychologists to inform their practice (e.g., what symptoms clients report as improved, treatment goals achieved and yet to be achieved).

Also, as the study used a naturalistic design (i.e., no control group), causal claims between measures of outcome and psychotherapy cannot be made as other confounding factors may have influenced outcomes. This is supported, by nearly one third of clients reporting the use of other professional supports. Clients would have also attended other services (such as medical appointments), which may also have influenced outcome measures. This highlights that outcomes may not have been solely related to attending the psychology service. This study also did not measure other factors that may influence results, such as the occurrence of stressful life events (including changes in cancer prognosis and treatment), which would lead to changes in well-being measures without necessarily being related to the activities of the psychology service.

Future studies should include larger samples and simpler recruitment procedures. Future evaluations should also include a direct measure of treatment goals, rather than standardised questionnaires which did not detect changes in this study. This study did not include a measure of treatment goal achievement during attendance at the psychology service, and therefore outcomes that were measured by questionnaires may not have been relevant. This may explain lack of findings between baseline and follow-up, because measures that are not related to treatment goals would not be expected to change. This is further supported by the clients’ ratings of progress, which indicates that clients experienced benefit from attending the service, despite non-significant differences between baseline and follow-up outcome measures. Further, although this study measured client
expectations and satisfaction, it did not directly ask clients if their expectations of
the service were met. Further study is needed to clarify the relationship between
client expectations, their satisfaction, and experience of the psychology service.

In conclusion, this study aimed to assess client-rated outcome measures to
provide more information about changes that occur for cancer patients attending a
psychology service. Clients appeared satisfied with the service they received,
despite no evidence of improvement in client-rated outcome measures and a
decline in social well-being. This indicates that client-rated outcome measures
were not relevant to clients' perception of the usefulness of the service. Therefore,
results do not support the routine use of the outcome measures used in this study.
Keeping in mind the small sample, the measures did not appear sensitive to
change, as no differences were detected despite participants being satisfied with
the service they had received. Factors associated with improvement in symptoms
were identified (e.g., baseline symptoms), together with the characteristics of
clients referred to the service (e.g., more symptoms of anxiety, depression, and
poorer health when compared to other cancer patients). Overall, clients appeared
to have realistic expectations of the service. Improvements identified by clients
(e.g., flexible appointment times) could be used to improve access to the service.
5.0 Study 3: Using Qualitative Data to Further Understand Participants’ Experience of the Psychology Service

The third study aimed to further understand clients’ expectations and experiences of the psychology service, using qualitative data from interviews with clients. It was anticipated that the information obtained from client interviews would clarify the inconsistent findings of Study 2, where participants reported being satisfied with the psychology service despite questionnaire results showing little change in symptoms. Indeed, the findings of Study 2 indicate that when rating satisfaction with the psychology service, participants may have focussed on outcomes other than those evaluated by the questionnaire battery. Moreover, although participants’ expectations were identified in Study 2, it remains unknown whether expectations were met or how expectations may have impacted on participants’ experience of psychotherapy. Study 3 was therefore designed to provide qualitative data detailing clients’ experiences of the psychology service, including how they evaluated the service in terms of meeting their needs and the role of expectations in their overall experience of the service.

As noted in the literature review of this dissertation, guidelines for service evaluation recommend including qualitative data and research strategies to overcome the limitations of quantitative methods (Fitzpatrick, 1997; Kiss, 1995; Wagner, 2002). For example, qualitative methods (e.g., semi-structured interviews) appear to provide a broader range of information and opinions because they are less constrained by language compared to quantitative methods (e.g., multiple-choice questionnaires). Interviewing clients will therefore assist in
developing a boarder understanding of clients’ experiences of attending the psychology service, by allowing participants the opportunity to explain their responses (Link, Robbins, Mancuso, & Charlson, 2004). There is also evidence to support the use of particular qualitative methods (such as interviewing) which provide more information than questionnaires. Lovell (1995), for example, demonstrated that clients provided more critical feedback in interviews compared to questionnaires when evaluating an inpatient psychiatric service. Clearly, a comprehensive evaluation of a service should include client interviews (Attkisson & Greenfield, 1994; Fitzpatrick, 1997; Lovell, 1995; McLeod, 2000).

Qualitative methods are also better suited to measure the distinctive nature of change for each client. In psychotherapy service evaluation, it is recognized that change is complex and unique to each individual (Wagner, 2002). Qualitative data can account for these differences via descriptive accounts from clients to clarify the nature of changes and the relationship between changes and interventions (Barbour, 2000; Long & Godfrey, 2004; McLeod, 2000). This information should offer additional insights to the clinical utility of a psychology service.

Several previous studies have used qualitative data to understand the experiences of cancer patients, including difficulties and positive changes, and the role of psychosocial interventions to assist in these changes. The investigation of these experiences is important because identifying the stressors cancer patients experience and the factors that assist coping with these stressors, should provide valuable information about how psychosocial support services can assist patients. Summaries of these studies are discussed below.

Several studies using qualitative methods have investigated the difficulties cancer patients’ experience. Cancer-related stressors identified by these studies
included the patient’s reaction to diagnosis/treatment (e.g., treatment side-effects), adjusting to life after treatment, changes in roles, changes in relationships with family/friends (e.g., feeling disconnected or concerned about family/friends), facing death, and living with uncertainty about future health (e.g., fear of recurrence of cancer) (Blinderman & Cherny, 2005; Fife, 1994; Greenstein, 2000; Gustafson, 2002; Howell, Fitch, & Deane, 2003; Kissane, Grabsch, Clarke et al., 2004; Link et al., 2004; Roberts, Black, & Todd, 2002; Sellers, 2000). Many of these stressors reflect existential concerns (e.g., death or isolation), rather than psychiatric symptoms (Blinderman & Cherny, 2005; Gustafson, 2002). Whilst it is typical to confront these existential issues when diagnosed with a life-threatening illness, concerns may develop into an existential crisis for about 10% of cancer patients (Blinderman & Cherny, 2005; Holland & Chertkov, 2001). To describe how an existential crisis may present by patients with a life-threatening illness, Clark and Kissane (2002) developed the concept of ‘demoralization syndrome’. This syndrome refers to a cluster of existential symptoms presented by some patients, including a sense of hopelessness/loss of meaning, pessimism, helplessness, loss of drive or motivation to cope differently, and social isolation (Clark & Kissane, 2002; Kissane & Clark, 2007). There is evidence to support that demoralisation syndrome is distinct from depression. The key characteristic of demoralisation syndrome is a loss of meaning, where as depression is characterised by anhedonia (Kissane & Clark, 2007).

It has also been noted that cancer patients report positive changes that occur as a result of cancer. Studies have demonstrated that patients adjustment to cancer and related stressors leads to personal growth in terms of greater understanding of self, developing an accepting attitude, more compassion, closer
relationships with family and friends, modifying life priorities, greater resilience, and developing a more complete conceptualization of how one wants to live (Brennan, 2001; Coward & Kahn, 2005; Greenstein, 2000; Gustafson, 2002; Kissane, Grabsch, Clarke et al., 2004; Link et al., 2004; Mason & Hargreaves, 2001). Some authors refer to these changes as ‘post-traumatic growth’, which describes positive changes following a period of adjustment to an event that challenges someone’s understanding of the world (e.g., a life-threatening illness) (Tedeschi & Calhoun, 2004).

Qualitative data has also been utilised to investigate what has helped patients to manage stressors, overcome existential concerns, and make positive changes. These include support from family, friends, church communities, and various formal psychosocial supports (e.g., support groups and counselling services) (Howell et al., 2003; MacCormack et al., 2001; Sellers, 2000). Specifically, studies that have focussed on outcomes of counselling services for cancer patients have identified the main benefits as developing self-understanding, gaining insight into the origin of difficulties, and modifying life priorities (including a greater appreciation for life) (Coward & Kahn, 2005; McLeod et al., 2000; Sellers, 2000). Cancer patients have also reported that the most useful aspects of psychotherapy were talking with a counsellor who was interested, understanding, and listened (MacCormack et al., 2001). This finding suggests that cancer patients want a safe environment to talk through their concerns, rather than therapies that are more focussed on problem-solving and developing strategies (MacCormack et al., 2001).

Qualitative data would also provide more understanding of clients’ expectations, including the influence of clients’ expectations on their subsequent
experience of a service. One previous qualitative study of a cognitive therapy program for depression, found that expectations influenced participant’s experience of the treatment program (Mason & Hargreaves, 2001). In particular, participants who were open minded about the program described fewer barriers and initial negative experiences, compared to those with rigid, highly optimistic expectations. This highlights the role of expectations in client evaluations, as well as the usefulness of using qualitative data to link expectations to subsequent experience with a service.

In summary, interviewing participants to gather qualitative data would clarify findings of Study 2, as well as follow methodological recommendations of guidelines for service evaluation. The above studies demonstrate the utility of using qualitative data to understand the experiences of cancer patients. However, so far the focus of each of these studies has been narrow, confined to single experiences. For example, Coward and Kahn (2005) focussed on identifying stressors, and MacCormack et al. (2001) compared different interventions (e.g., relaxation versus CBT). No single study has attempted to comprehensively understand cancer patients’ experiences of psychotherapy in terms of expectations, change, helpful/unhelpful aspects of psychotherapy, and relationships between these factors in a naturalistic setting (e.g., outpatient service).

Therefore, this study aims to collect qualitative data by interviewing participants from Study 2, so as to understand clients’ perception of change since attending the service, the role of this psychological support in these changes, and the role of client expectations in their appraisal of the service. It is envisaged that
this feedback will assist in producing practical recommendations to support the development of the psychology service.

This study has four aims. Firstly, to clarify changes, both positive and negative, that may have occurred for clients since first attending the psychology service and what has contributed to these changes. Investigating these factors further will clarify the findings of Study 2, including identifying the role of other events which may have influenced change (or lack of change) in questionnaire outcomes. Secondly, this study aims to clarify if and how working with the psychology service contributed to recent changes. This includes asking for more information about what was helpful about the service, and about working with a psychologist. Thirdly, this study aims to collect more feedback from clients regarding what was difficult, and how to improve the service. Fourthly, this study aims to overcome a limitation of Study 2, so as to clarify whether clients’ expectations of the service were met, and the basis for their expectations. It is expected that this information will clarify the role of client’s expectations in their subsequent experience of the service, as well as the origin of expectations.
5.1 Method

5.1.1 Participants

Participants from Study 2 were invited to take part in an interview after they had returned follow-up questionnaires. A total of 15 participants were interviewed for this study, from the 19 eligible participants (79%) who returned follow-up questionnaires in the Study 2. Reasons reported by participants who declined to be interviewed included feeling too distressed \((n = 2)\), experiencing poor health \((n = 1)\), or being too busy to complete an interview \((n = 1)\). Demographic characteristics of participants are presented in Table 44. There was considerable variability between participants’ age (29-64 years), time since diagnosis (<1-12 years), and the number of sessions attended at the psychology service (1-16 sessions).

As noted in Study 2, the sample was not representative of all clients attending the psychology service. However, this study did not aim to be representative, but instead to present a detailed understanding of participants’ experience of attending the psychology service.

5.1.2 Procedure

Qualitative data were collected via a semi-structured interview with each participant. Interviews were held either the Peter MacCallum Cancer Centre, the RMIT Psychology Clinic, or at the participant’s home, depending on what was
convenient for the participant. Interviews were conducted by the independent student researcher who was responsible for collecting data in Study 2.

Table 44
Demographic, Cancer, and Service Usage Characteristics for Each Participant

<table>
<thead>
<tr>
<th>Participant number (from Study 2)</th>
<th>Age (years)</th>
<th>Sex</th>
<th>Marital status</th>
<th>Time since cancer diagnosis (years)</th>
<th>Cancer type</th>
<th>Number of sessions attended</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>32.18</td>
<td>Female</td>
<td>Married</td>
<td>.26</td>
<td>Uterus</td>
<td>6</td>
</tr>
<tr>
<td>9</td>
<td>35.74</td>
<td>Female</td>
<td>Married</td>
<td>3.25</td>
<td>Breast</td>
<td>4</td>
</tr>
<tr>
<td>10</td>
<td>29.90</td>
<td>Female</td>
<td>Never married</td>
<td>.52</td>
<td>Breast</td>
<td>6</td>
</tr>
<tr>
<td>11</td>
<td>51.05</td>
<td>Female</td>
<td>Married</td>
<td>.65</td>
<td>Head and neck</td>
<td>3</td>
</tr>
<tr>
<td>12</td>
<td>59.74</td>
<td>Female</td>
<td>Divorced</td>
<td>.73</td>
<td>Breast</td>
<td>16</td>
</tr>
<tr>
<td>13</td>
<td>53.41</td>
<td>Female</td>
<td>Divorced</td>
<td>12.32</td>
<td>Breast</td>
<td>10</td>
</tr>
<tr>
<td>14</td>
<td>49.66</td>
<td>Female</td>
<td>Married</td>
<td>7.58</td>
<td>Bone</td>
<td>3</td>
</tr>
<tr>
<td>16</td>
<td>56.11</td>
<td>Female</td>
<td>Divorced</td>
<td>.8</td>
<td>Cervical</td>
<td>5</td>
</tr>
<tr>
<td>17</td>
<td>39.77</td>
<td>Male</td>
<td>Married</td>
<td>.04</td>
<td>Lymphoma</td>
<td>2</td>
</tr>
<tr>
<td>18</td>
<td>58.97</td>
<td>Male</td>
<td>Married</td>
<td>.9</td>
<td>Leukaemia</td>
<td>7</td>
</tr>
<tr>
<td>19</td>
<td>41.92</td>
<td>Female</td>
<td>Never married</td>
<td>.15</td>
<td>Lymphoma</td>
<td>3</td>
</tr>
<tr>
<td>20</td>
<td>45.51</td>
<td>Female</td>
<td>De facto</td>
<td>.04</td>
<td>Breast</td>
<td>1</td>
</tr>
<tr>
<td>21</td>
<td>64.46</td>
<td>Male</td>
<td>Married</td>
<td>.22</td>
<td>Melanoma/skin</td>
<td>3</td>
</tr>
<tr>
<td>24</td>
<td>55.12</td>
<td>Male</td>
<td>Married</td>
<td>.34</td>
<td>Head and neck</td>
<td>2</td>
</tr>
<tr>
<td>26</td>
<td>42.29</td>
<td>Female</td>
<td>Never married</td>
<td>2.31</td>
<td>Breast</td>
<td>3</td>
</tr>
</tbody>
</table>

The development of the interview schedule was based on guidelines for conducting qualitative research (Kvale, 1996; Rubin & Rubin, 2005). The format of the interview was semi-structured with several open-ended questions (refer to Appendix K). When appropriate, responses to each question were clarified with
follow-up questions to elicit more information. A summary of the interview was provided verbally to participants by the student researcher at the end of each interview, to give each participant the opportunity to clarify their responses. Each interview lasted approximately 40-60 minutes. Interviews were audio-tape recorded with the written consent of participants, and then transcribed verbatim and coded by the student researcher. All identifying information (i.e., participant’s, family members’, and psychologists’ names) were removed from transcripts before coding, as recommended for qualitative data (Xuereb & Dunlop, 2003).

5.1.3 Data Analysis

Analysis of data were based on guidelines for handling qualitative data (Long & Godfrey, 2004; Richards, 2005; White & Marsh, 2006). A directed qualitative content analysis approach was used to code the data. Content analysis is a method to analyse text data, such as interview transcripts, to examine and categorise the meaning within the text (Hsieh & Shannon, 2005). Directive content analysis involves developing a coding system based on the results of previous studies, to allow comparison between studies (Hsieh & Shannon, 2005). Therefore, consistent with the content analysis approach, a checklist of relevant themes was developed based on the research questions of this study (White & Marsh, 2006). This checklist was developed from a review of the previous literature (e.g., studies evaluating psychology services and the concerns of cancer patients), together with a preliminary review of interview transcripts of the current study. Transcripts were then coded using the checklist, by identifying the common themes in participants’ narratives. As new themes were identified during the
coding process, these themes were added to the checklist. Each theme identified was assigned a numerical code and title. Where possible, titles of themes were based on the language used by participants to reflect the content of that theme, consistent with recommendations for coding of qualitative data (Richards, 2005). After coding all transcripts, themes were reviewed and those that overlapped were combined. Relationships were identified between themes from participants’ narratives.

Coder consistency (reliability of the coding checklist) was measured, as recommended by qualitative data guidelines (Richards, 2005). Approximately 20% of the data was analysed by a second independent coder to check the reliability of the coding checklist. Reliability was 90% agreement between coders. This indicates that the checklist was a reliable tool for coding participant’s interviews.
5.2 Results

The main themes identified in this study are presented diagrammatically in Figure 14. Overall, these themes represent changes over the preceding three months since first attending the psychology service, and included: improvements in coping; the influence of stressors, and supportive factors such as the psychology service; and participants’ experience of the psychology service, including the influence of participants’ expectations on their subsequent experience of the service. Each of these themes will be described in more detail in the following sections. A description of each theme will be discussed, including its relationship to other themes. Examples of themes are provided by quotes from interviews.
Figure 14. Summary of changes since attending the psychology service three months ago, and experience of attending the psychology service.
5.2.1 Changes Over the Last Three Months

Participants were asked to identify recent changes in the last three months, and what contributed to these changes. Participants’ responses generally reflected perceptions that their coping had improved, in the context of changes in multiple stressors and supportive factors. To better understand these factors, a detailed representation of the relationships between stressors-coping-supportive factors was developed (see Figure 15). Each of these factors will be discussed in more detail below.

Improvement in coping skills.

All participants reported some improvement in coping with cancer and other stressors over the preceding three months. ‘Improvement in coping’ referred to participants developing effective strategies for dealing with stressors. Analyses of responses indicated three main areas of improvement: less anxiety; improved mood; and dealing with loss. Fifty-three percent ($n = 8$) of participants reported experiencing less anxiety about their health (e.g., fewer panic attacks), more confidence. One participant described changes in her anxiety about cancer:

“I was getting panic attacks, tingly fingers and things like that, and I still get them a little bit, but I know what they are now and I can calm myself down and they go away.” (Participant 9)
Improvement in coping skills

Supportive factors assisting coping

Support and information from:
- Friends and family
- Support groups
- Staff/services at Peter Mac (including the Psychology service)
- Information sessions
- Meditation classes
- Internet

Figure 15. Relationships between changes over the last three months, including the impact of stressors and supportive factors.
Forty percent of participants \((n = 6)\) also reported experiencing difficulties with low mood, including sadness, hopelessness about future health, and considering suicide. Reported changes over the last few months included becoming more optimistic, happier, and having less frequent thoughts of suicide. For example, a participant described improvement in his optimism about his health:

“I thought I was never going to get well again and at that stage I was hoping that the rest of my life wasn’t a long life. So I’ve had a remarkable turnaround in how I feel.” (Participant 24)

Twenty-seven percent of participants \((n = 4)\) also indicated that they had grieved for lost opportunities or changes in relationships due to their cancer. One participant described her lost opportunities due to cancer (e.g., unable to start a new business and move house):

“I was going to change my life, I was going to do all these lovely things, and then I found the lump and that was the end of it. So I lost all my incentive to do things. And now that’s all better again, I’m back to being me again.” (Participant 12)

Reprioritising.

Reported improvement in coping skills appeared to have a reciprocal relationship with changes in life priorities. ‘Reprioritising’ referred to a shift in what participants reported as important in their lives. This change in life priorities was often linked by participants to confronting their own mortality following the diagnosis of cancer. Eighty percent of participants \((n = 12)\) indicated that relationships with family and
friends had become much more important to them, as well as a greater appreciation for life. For example, when talking about her relationship with her partner, a participant stated that:

“I think it might be a bit stronger. We are dealing with life and death issues, so things are much more intense, and priorities change. It’s certainly different. It makes all the little stuff irrelevant.” (Participant 20)

More generally, another participant commented on developing a greater appreciation for life:

“It didn’t know if I was going to live or die or how serious it was, so obviously it made me look at what I had and not to take life for granted.”

(Participant 7)

Personal growth.

Improvement in coping skills and reprioritising were also associated with a sense of personal growth for many participants. This appeared to be the result of improvement in coping (managing stressors), changes in priorities, as well as confronting mortality. One participant summarised the impact of several recent improvements in her health, family, and employment:

“I feel better now and I am different. I can’t really explain it, but I’m a lot better now than I was before I got sick. I think the whole process has been a transformation of some sort, because you sort of go to hell and back again, and you come back a different person...stronger.”

(Participant 7)
5.2.2 Factors Assisting Coping and Well-being

Social support and information about cancer and coping skills appeared to be important for assisting participants’ ability to cope with stressors. All participants mentioned that services at the Peter MacCallum Cancer Centre were helpful. Ninety-three percent of participants \((n = 14)\) reported that attendance at the psychology service assisted their coping and well-being. For example, one participant described multiple stressors (including moving house, recurrence of cancer, and death of a family member), and how the psychology service helped her to manage these events:

“I saw <psychologist> in May and I felt that over that term I have coped with all of that very well because of strategies that <psychologist> has given me.” (Participant 9)

Participants also discussed how other staff at the hospital helped, including a psychiatrist (and medication), nurses, and reception staff. For example, one participant described the importance of the support of nursing staff during her cancer treatment:

“Coming in, you always knew no matter what you were coming for, you’d be cared about.” (Participant 19)

Other factors that assisted coping were support from family and friends, cancer-specific support groups, meditation (both at the hospital and through other organisations), and information about cancer and coping (from the internet, self-help books, and hospital staff and brochures). For example, one participant explained the benefits of being part of a breast cancer support group, particularly during her recent diagnosis of recurrent cancer:
“They justify your feelings that I’m not that special, that everyone feels this. And even when I had the lump, I rang up one of the girls. So I’ve got someone to ask, we can compare things. You don’t have to gather the information yourself and if everyone gathers a bit between us all, you are covering things.” (Participant 9)

5.2.3 Stressors

Stressors that challenged coping skills were described by all participants as stemming from other life events, as well as from cancer. Participants described fluctuating improvements and worsening in these stressors over the last few months. For example, several participants discussed recent worsening of stressors such as suspected recurrence of cancer, treatment side-effects, or diagnosis of other health problems. However, participants also described improvements in some stressors, such as the end of medical treatment for cancer which was associated with improvement in side effects, less restriction of activities, and improvements in relationships. Alleviation of these stressors was associated with improvement in coping (particularly anxiety and mood) for 40% (n = 6) of participants. Therefore stressors fluctuated over time as well as between participants. These are discussed in more detail below.

All participants discussed recent difficulties associated with cancer diagnosis and/or treatment. Some participants mentioned the shock of diagnosis (47%, n = 7) or ongoing difficulty coping with their diagnosis of cancer (20%, n = 3) such as believing they had done something to deserve cancer. For example, one
participant attributed her cancer to her high stress levels and poor stress management:

“I wish I had of been better at being able to work through my stress, and then maybe I wouldn’t have gotten the cancer.” (Participant 19)

Sixty-two percent of participants ($n = 9$) discussed the stress of cancer treatment, particularly improvement/worsening of side-effects from cancer treatment. Side effects of treatment reported by participants included fatigue, pain, loss of hair, amenorrhea, dry skin, seizures, nausea, and early menopause. Twenty-seven percent of participants ($n = 4$) described improvement in side effects (e.g., “It has taken me a while to get my energy back.”, Participant 7), whilst 60% ($n = 9$) reported ongoing difficulties with side effects (e.g., “Physically the loss of my hair, my skin drying out, lack of feeling in my hands, and general sickness has made me tired and weak”, Participant 19).

Many cancer-related stressors were associated with changes in relationships. Several participants described being treated differently by friends/family/work colleagues after being diagnosed with cancer:

“I was treated differently, like being treated with kid gloves, and that was a real pressure. It only lasted about a week or two. Then it probably went back to normal.” (Participant 14)

Many participants also discussed restriction of their lifestyle and daily activities due to diagnosis and treatment of cancer, and how this impacted relationships with friends, family, and work colleagues. Activities that were restricted included working, exercising, driving, home duties, socialising with friends/family, and travelling overseas. Treatment side effects, time to attend appointments, and people’s reactions to cancer were identified by participants as
contributing to restrictions in these activities. For some participants, restrictions in activities improved over the last three months. For example, one participant discussed finishing his cancer treatment and experiencing fewer side-effects restricting his activities:

“The actual physical recovery I’ve made in the last four weeks is quite amazing because to be sitting here in my suit, going to work on a daily basis (albeit for half a day). Everyday in reaching new gains.”

(Participant 24)

However, other participants discussed ongoing difficulties with everyday activities:

“Now I can’t even look after my own back yard. That’s what frustrates me - that I can’t do what I used to do. Not in the same way because I get tired so easily.” (Participant 18)

Participants discussed their concerns about the recurrence of cancer. Thirteen percent of participants ($n = 2$) had been diagnosed with recurrent cancer in the preceding three months, whereas another 20% ($n = 3$) discussed their fear that cancer may reoccur in the future. Participants mentioned that their ability to cope with a recurrence had improved over the last several months due to improvement in coping skills due to working with the psychology service:

“And I found that I have found a new lump, and I haven’t dropped the bundle over that because <psychologist> is saying ‘live in the moment’.”

(Participant 9)

Several changes in life events not related to cancer were identified. These included employment, finances, a family member with a physical or mental illness, death of a family member, moving/renovating house, difficulty adjusting to children growing up, and other health problems. Changes in these areas were identified by
participants as either positive events (e.g., a new job), or negative (e.g., forced to retired from employment).

5.2.4 How the Psychology Service was Helpful

The majority of participants (93%, $n = 14$) identified their attendance at the psychology service as helping them to improve their coping strategies and reprioritise what is important in their lives. Only one participant did not link recent improvements to attending the psychology service. Instead she attributed her recent changes in coping to seeing a psychiatrist at the hospital, because she preferred his directive therapeutic style.

Participants were asked to describe how seeing a psychologist helped them to achieve recent improvements in coping and relationships. Themes identified from participants’ responses and relationships between these themes are represented in Figure 16. Characteristics of the psychology service were identified as assisting participants to be comfortable discussing their concerns, which enabled participants to develop insight and strategies to improve coping. Two characteristics of the service contributed to these outcomes. Firstly that the service was easily accessible in terms of: a short waitlist; flexible appointment times; that clients could return to the service whenever they needed; convenient facilities for children; and that relatives of patients at the hospital could also use the service. Secondly participants described the characteristics of the psychologist and their relationship with the psychologist which lead to improvements in coping. For example, several participants described how the relationship with the
psychologist was different to relationships with their family and friends, where the
psychologist was unbiased and separate from other relationships. For example:

“I found it was good talking to someone who doesn’t know me really,
doesn’t know my friends. So an impartial thing.” (Participant 16)

This difference between relationships with participants’ family/friends and the
psychologist was often discussed with reference to the difficulties in relationships
with family and friends, such as concern about how friends/family are coping. For
example:

“If I’m with the psychologist I’m not trying to take care of them, but if I’m
with my friends I am.” (Participant 18)

A characteristic of being unbiased, was that the psychologist listened to what
clients had to say:

“She <the psychologist> just listened, and that was what I felt was the
most important thing of all.” (Participant 19)

Twenty percent of participants ($n = 3$) also identified that it was helpful that
the psychology service was a specialist service for cancer patients. Participants
attributed more expertise to the psychologist at a specialist service for cancer
patients, which lead participants to feel more comfortable, understood, and
confident in the skills of psychologist. For example, one participant discussed the
value of her psychologist having experience with cancer patients:

“I think the main thing for me was having someone who had experience
with people who had gone through something similar to your
circumstances.” (Participant 10)

As part of offering a specialist service, 40% of participants ($n = 6$) reported
that they believed the psychologist was more qualified to reassure clients by
explaining that the participants’ difficulties were typical for people in a similar situation:

“She <the psychologist> reassured me that it’s all normal - my thoughts about death and fearing the worst.” (Participant 16)

*Comfortable to be honest and express feelings.*

The characteristics of the psychology service and the psychologist discussed above, were linked by participants as helping them to feel comfortable to be open, honest, and express their feelings during sessions with a psychologist. One participant explained how they felt more comfortable expressing emotion to the psychologist, compared to other relationships with family/friends:

“It was good to share how I was feeling with someone, where I didn’t have to hide any emotions, or be strong, and I could cry and do whatever I needed to do.” (Participant 25)

*Develop insight.*

As a result of feeling comfortable to discuss their concerns in sessions, 33% of participants ($n = 5$) described how they developed insight into the origin of their coping difficulties. This was through explanations by the psychologist as well as participants’ own reflection. For example:

“She <the psychologist> explained how you get these feelings and what caused it, but I had a good idea what caused it.” (Participant 21)
Develop strategies to manage stressors.

Developing insight and being comfortable discussing concerns lead participants to develop strategies with the psychologist to improve coping and overcome difficulties. For example, one participant reported how strategies discussed with their psychologist assisted them to help manage their anxiety:

“She <the psychologist> suggested the breathing exercise. It helped because you take your mind off thinking about your situation and focusing on something. The breathing helped a lot.” (Participant 18)
PSYCHOLOGY SERVICE CHARACTERISTICS

Easily accessible

Psychologist’s characteristics and skills
- Unbiased/non-judgmental (listened)
- Expertise working with cancer patients (normalize reactions)

Comfortable to be honest and express emotion

Developing insight
Developing strategies to manage stressors

Improvement in coping

Figure 16. Factors identified by participants as contributing to the usefulness of the psychology service to improve coping skills.
5.2.5 Difficulties and Suggested Improvements.

Participants were asked to identify what was difficult about attending the psychology service, and as well as suggestions for improvements to the psychology service. The main themes identified included limited appointment times, uncomfortable environment for sessions, and specific difficulties related to clients’ presenting problems. Each of these will be discussed in more detail below.

Appointment times.

Twenty-seven percent of participants ($n = 4$) found it difficult to maintain attending appointments regularly because appointment times were limited to office hours. Participants reported that this lead them to attend infrequently or to discontinue attending because of work commitments. For example:

“I have stopped going. That was not really my choice, but I found it really hard with work. Psychology only operates during business hours and my boss had well and truly had enough of me having time off. So it was getting way to hard, so I ended up leaving it.” (Participant 10)

To overcome this difficulty, 20% ($n = 3$) of participants mentioned that after hours appointments would improve the accessibility of the service, enabling them to continue to attend appointments regularly with less disruption to other commitments. For example, the same participant quoted above stated that:

“If I could go at a time that was before or after work, I would have made more of an effort to have maintained it.” (Participant 10)
Comfort of setting for sessions.

Twenty-seven percent of participants ($n = 4$) discussed discomfort with aspects of the hospital setting for sessions with their psychologist. These difficulties included uncomfortable outpatient consultation rooms, lack of privacy if seen on the ward as an inpatient, coming to the hospital for appointments, and lack of tea/coffee facilities. For example, one participant explained that they did not feel comfortable coming to the hospital for their psychology appointments:

“This place <the hospital> is a great institution, but I would rather not come here. To me, while they do great work, it’s a sorrowful place.” (Participant 21)

Another participant discussed her discomfort with the consultation rooms:

“It would make it easier from a psychological point of view, if you didn’t feel like you’re in a clinical room. You don’t relax as much. I don’t think the chairs were comfortable.” (Participant 14)

Participants proceeded to suggest ways to improve the comfort of settings. This included offering appointments at a location other than the hospital, such as at the client’s own home or another outpatient facility. For example, one participant discussed his preference to attend the psychology service at a location other than the hospital:

“If it was somewhere else, or away from that mass waiting room, I think it would be a lot more pleasant. That’s just my view. It’s just not good for the mind or soul to see all those sick people. Perhaps in some rooms outside or in one of the apartments.” (Participant 17)
Other suggestions included more comfortable consultation rooms and offering tea/coffee to clients. One participant described more specifically what would make the rooms more comfortable:

“Just each room with a couple of comfy chairs, a coffee table, a picture, or flowers.” (Participant 14)

*Other difficulties and recommendations.*

Other difficulties identified were the psychologist’s lack of medical knowledge, unhelpful strategies from psychologist to deal with difficult emotions, psychologist was only available until the end of the year, another psychologist sitting in on a session, and feeling uncomfortable discussing same sex relationships with the psychologist. Each of these difficulties were mentioned by \( n = 1 \) participants.

Participants also mentioned suggestions for improvements that were specific to these particular presenting problems. Approximately 27\% \( (n = 4) \) participants mentioned that they wanted more information from their psychologist, such as the impact of cancer/treatment for same sex couples, common reactions to an initial diagnosis of cancer, or how to plan for death. For example, a participant discussed wanting more information for same sex couples:

“There’s a lot of literature that you get. And it’s very useful and it’s free. But there is nothing on same sex relationships and dealing with cancer. It’s all heterosexual.” (Participant 20)

Another participant whose cancer was not responding to treatment, reported wanting more information about what to organize if they were likely to die in the near future:
“I guess one thing I would like to see is just a simple list of a few good things to do to make sure your affairs are in order, you have your Will done and have you looked at care of children and whatever, just a list to work through.” (Participant 14)

Thirty-three percent of participants \( (n = 5) \) mentioned that they wanted more access to support from other cancer patients (including support groups at the hospital). These participants described this as an opportunity to talk to people who had been through similar experiences:

“There’s got to be something for patients to talk to other patients, to talk to someone who’s been through it and recovered, on a voluntary system or something. I really needed it.” (Participant 24)

Thirteen percent of participants \( (n = 2) \) mentioned that there was nothing about the service that they would improve:

“I’m quite satisfied. Everyone’s been very polite and easy to get on with. I find everybody here has been friendly and helpful.” (Participant 12).

5.2.6 Expectations of the Psychology Service

When asked if their expectations of the service were met, participants provided a variety of responses: 7% \( (n = 1) \) reported that their expectations were met; 40% \( (n = 6) \) reported that their expectations were exceeded; 7% \( (n = 1) \) reported that their expectations were not met but that they were still satisfied with the service they received; 27% \( (n = 4) \) discussed a combination of met and unmet
expectations; and 20% \((n = 3)\) were unsure what to expect from the service (e.g., “I don’t know what I expected because I’d never had counseling.” Participant 16).

The nature of participants’ expectations of the psychology service appeared to play an important role in their subsequent experience of the psychology service (including how they evaluated the usefulness of the service and difficulties identified). The influence of met and unmet expectations on participants’ experience with the service depended on whether participants expected that attending the service would be helpful or not (i.e., optimistic or pessimistic) and how this matched with their subsequent experience of attending the service. The graphic summary of results for this study (refer to Figure 14) illustrates the influence of each of these scenarios (met and unmet optimistic/pessimistic expectations) and are discussed in more detail below.

**Met optimistic expectation.**

Met optimistic expectations refer to participants anticipating positive outcomes from attending the psychology service, and subsequently achieving these outcomes. The met optimistic expectation reported by participants involved expecting (and achieving) improvement in mood and coping skills, for example:

“I was really happy. I think I’ve got some life skills.” (Participant 9)

**Unmet pessimistic expectations.**

For some clients, their expectations were pessimistic (e.g., that the psychologist would take advantage of the client). When these expectations were
not met, the participant’s subsequent experience with the psychology service exceeded their expectations. This included participants feeling more comfortable and achieving more than they expected whilst working with their psychologist. For example, one participant had previously seen a psychologist at another service and found the experience traumatic and unhelpful. The participant explained that she attended the psychology service at the Peter MacCallum Cancer Centre because she was prepared to trying anything to help herself, and she subsequently found the service beneficial:

“Before I used to think if you go them <psychologists>, they’ll only make you worse. They will take away what little bit hope, self-courage you have left and they will destroy it. And I don’t think that now. I think that they genuinely do care.” (Participant 19)

Another participant discussed their past experience of psychoanalysis, and how she was surprised at how different the experience of the psychology service was:

“Well, my only experience with any sort of therapy was psychoanalysis, so if anything I was a bit nervous, and it was a relief that it was quite comfortable and relaxing, wasn’t difficult. Just conversation.”

(Participant 20)

Unmet optimistic expectations.

Forty percent \((n = 6)\) of participants reported that they had anticipated achieving more from working with the psychology service. Specifically these unmet optimistic expectations of the service included: the psychologist being more directive to work faster during sessions; more information about medical treatment
options and participant’s medical prognosis; spending more time discussing past events to develop insight into the origin of problems; and a more thorough assessment of the history of the client’s presenting problems.

Unmet optimistic expectations appear to be experienced by participants as difficulties when working with the psychologist. For example, one participant was recently diagnosed with secondary cancers and discussed her expectation that her psychologist would be able to provide her with a clear prognosis regarding her health in the future:

“But what I was really looking for, was ‘What will happen from here? What is the likely outcomes? What is the typical time that it develops further?’ What I really wanted to know was what the future would be.” (Participant 14)

However, this participant also acknowledged that this expectation was unrealistic:

“What I was looking for was not really givable.” (Participant 14)

Participant 14 evaluated her progress with the psychology department by this expectation and reported feeling less satisfied because this expectation was not met, despite acknowledging it was unrealistic. This participant subsequently recommended that the psychology service could be improved by providing more medical information.

Another unmet optimistic expectation was to achieve more during sessions. This expectation was associated with participants negatively evaluating the skills of the psychologist. Two participants commented that the service was less useful because their progress was slower than expected. Participants attributed this to the psychologist’s less directive therapeutic style in sessions as a result of the psychologist’s inexperience:
“Like the girl that I was dealing with <psychologist> was great, but I think that she was…not a trainee… but she had obviously not been doing it very long. And as lovely as she was I did feel like that I was expecting it to go a little faster, I was expecting perhaps to get a bit more direction about where I wanted to go.” (Participant 7)

Therefore expectations of the psychologist’s therapeutic style and rate of progress influenced this participant’s experience of the service.

5.2.7 Origin of Expectations

Participants identified two sources of expectations of the service. Thirty-three percent of participants \((n = 5)\) attributed their expectations to previous experience with either a psychologist, psycho-analyst, or support group. In particular, 20% \((n = 3)\) of participants reported that previous negative experiences with a psychologist were associated with negative expectations of future psychotherapy. For example:

“I had seen a psycho-analyst a while back and the difference was extreme. The psycho-analyst was like hard work, and this was more pleasant, more conversational and quite useful.” (Participant 20)

Twenty percent of participants \((n = 3)\) also mentioned that their expectations of seeing a psychologist were from the media, including movies and television programs. Participants reported that these expectations from the media matched with their subsequent experience of the service:

“I mean when I went to the psychologist, my only view of what to do at a psychologists was from the Sopranos, the telly show. So that’s what I
thought the psychologist did, so that turned out to be alright as a way of attending a psychologist.” (Participant 11)
This study has demonstrated that information from interviews can provide useful data when evaluating a psychology service, in terms of participants’ perceptions of change, experience of a psychology service, and the role of expectations. Results of this study have also clarified the findings of Study 2.

This study had four aims. The first aim was to clarify changes, both positive and negative, that clients experienced since first attending the psychology service. Participants’ responses indicated improved coping skills in the context of fluctuating stressors and supportive factors.

Most stressors identified by participants were cancer-related, such as diagnosis, treatment, treatment side-effects, confronting mortality, fear of recurrence, as well as changes in relationships and roles. These stressors are similar to previous studies of the difficulties faced by cancer patients (Blinderman & Cherny, 2005; Fife, 1994; Greenstein, 2000; Gustafson, 2002; Howell et al., 2003; Kissane, Grabsch, Clarke et al., 2004; Link et al., 2004; Roberts et al., 2002; Sellers, 2000). Clearly, cancer patients are consistently reporting difficulties in these areas.

Overall, participants described improved coping (after experiencing difficulties with mood, anxiety, and loss), reprioritising, and personal growth. Some difficulties reported by participants reflected symptoms of demoralisation, such as a sense of hopelessness and pessimism about future health and social isolation. In addition, improvement in coping skills and overcoming these difficulties were associated with reprioritising and a sense of personal growth. These changes are
consistent with aspects of post-traumatic growth, where participants reported a period of adjustment which lead to positive changes (Tedeschi & Calhoun, 2004).

The findings of recent improvements in coping contrast with the lack of significant differences between baseline and follow-up questionnaire results in Study 2. This may be explained by the complex relationship reported by participants between stressors, supportive factors, and changes. For example, although participants noted that their coping skills improved, they also reported that stressors and their ability to cope with these stressors fluctuated over the three month period. Further, although reporting improvement, many participants also described an ongoing struggle to manage stressors (e.g., treatment side-effects). The variety and changes in stressors, together with fluctuations in coping may not have been captured by multiple-choice quantitative questions for such a small sample (i.e., questionnaires in Study 2). The changes described by participants also may not have been detected by questionnaires focusing on psychiatric diagnoses. For example, while the HADS focused on psychiatric symptoms of depression and anxiety, instead participants reported symptoms during interviews consistent with demoralisation/existential concerns. Therefore, as there is evidence that demoralisation and depression are distinctly different (Clark & Kissane, 2002; Kissane & Clark, 2007), the HADS may not have detected changes in symptoms of demoralisation. Clearly, future studies need to consider how to measure demoralisation when evaluating psychosocial services for cancer patients.

Participants also identified the supportive factors which helped to improve their coping. Generally, information and support from a range of sources were reported as helpful factors. Sources of support and information were
friends/family, the psychology service (as well as other staff/services at the hospital), the internet, and support/information/meditation groups. These are consistent with previous studies of factors that have assisted cancer patients to make positive changes and manage stressors (Howell et al., 2003; MacCormack et al., 2001; Sellers, 2000). Together, these results highlight the range of factors that may contribute to positive changes in coping. In particular, these results have important implications for the current service evaluation as this clarifies the range of extraneous supports which may have impacted change, other than intervention from the psychology service which is the focus of this evaluation. For example, the results of this study highlight the important role of friends/family, cancer groups, the internet, and various staff at the hospital in facilitating changes in clients' well-being.

Secondly, this study aimed to clarify the role of the psychology service in recent changes in participants' coping. Nearly all participants described specific benefits of attending the psychology service. This provides evidence for the clinical utility of the service. Only one participant did not link the psychology service to recent improvements, instead reporting that she preferred the therapeutic style of a psychiatrist. Overall, comments about how the service was helpful focussed on the accessibility of the service, the skills of the psychologist, and how these facilitated participants’ comfort in sessions, to develop insight and strategies to improve coping. These aspects are important to understand, as they provide an indication of how participants perceive their psychologist as helping to assist improvements in coping. These findings are consistent with previous studies where cancer patients have identified developing insight and modifying life priorities as the main benefits of attending counselling (Coward & Kahn, 2005;
In the current study, comments about the psychologist focused on two skills: firstly the psychologists’ ability to listen which gave the impression of being unbiased and non-judgemental; and secondly the ability to normalise patients’ reactions to stressors, which was attributed to the psychologist’s expertise working as part of a specialist service for cancer patients. Many of the characteristics described by participants in the current study reflected characteristics of the relationship with the psychologist. This is consistent with previous studies, which emphasise that cancer patients value process skills (such as listening) and feeling comfortable to talk in sessions (MacCormack et al., 2001). However, participants in the current study also discussed how these factors contributed to developing strategies/insight to aid their coping/well-being. These factors have not been linked in previous studies of cancer patients attending counselling services.

The third aim of this study was to collect more information from participants regarding what they found difficult, and suggestions to improve the service. The main difficulties identified by participants were limited appointment times and uncomfortable settings for sessions. Participants suggested that after hours appointments would improve accessibility to the service. This is consistent with the results of Study 2 which also indicated that limited appointment times were a difficulty for some clients. As noted in Study 2, accessibility is an important indicator of service effectiveness (Levant, 2005), and therefore this feedback could be used to improve the service. Suggestions also included improving the environment for sessions, including home visits, an outpatient clinic away from the hospital, and more comfortable consultation rooms (e.g., couch, flowers, paintings on walls, tea/coffee facilities). Again, this is valuable feedback to enable clients be
more comfortable during sessions. Other recommendations were also discussed, including access to more support from other cancer patients at the hospital, and providing more information (e.g., for same sex couples, plan for dying, and common reactions following a diagnosis of cancer). These suggestions reflect a need for further support and information to assist participants to manage stressors and develop their coping skills. Therefore, providing these additional resources would further support clients. This may include extra training for staff, developing more resources (e.g., same sex relationships, reactions to cancer diagnosis, and planning for death), conducting more cancer support groups, and providing resources to make consultation rooms more comfortable.

Fourthly, this study aimed to overcome a limitation of Study 2, to clarify whether expectations of the service were met, and the basis for clients’ expectations. Overall, reports from participants contained a combination of met and unmet expectations. Feedback from participants highlighted the important role of expectations in their subsequent experience and evaluation of the service. Results indicated that the influence of expectations depended on the nature of expectations (i.e., optimistic or pessimistic) and whether these expectations were subsequently met by the clients’ experience with the service. For example, if pessimistic expectations of psychotherapy were not met, participants were more comfortable and able to work towards developing strategies/insight. This result contrasts with the findings of the study by Connolly-Gibbons et al. (2003), where pessimistic expectations of psychotherapy were associated with achieving poorer outcomes. Instead, the findings of the current study suggest that if pessimistic expectations are not met, positive outcomes may be achieved. In the current study, some difficulties/recommendations identified by participants appeared to be
the result of the participants' unrealistic expectations before attending the service (e.g., wanting medical advice from a psychologist). Results also indicate that despite recognising that expectations were not realistic, a service may still be evaluated as lacking according to an unrealistic expectation. Therefore, this highlights the importance of considering client expectations when evaluating services. Clarifying expectations early in psychotherapy may be an important consideration where clients are unclear about the boundaries between psychologists and doctors regarding medical issues.

Participants identified that their expectations were from the media and past psychotherapy. Participants' expectations based on past psychotherapy were generally pessimistic. This may be useful information, as psychologists can check the accuracy of expectations if aware a client has past experience in psychotherapy, to avoid any negative influence of expectations in current therapy.

Overall, the results of this study indicate that participants have experienced benefit from attending the psychology service, as well as provided an understanding of how these benefits were achieved and how the service could be improved. This feedback will assist in producing practical recommendations to support the development of the psychology service. Recommendations include incorporating feedback from participants into the service, such as offering after hours appointment times and more comfortable settings for sessions. Factors contributing to changes should also continue to be recognized, such as the skills of the psychologist and the importance of offering a specialist service to meet the specific needs of cancer patients.

Results of this study generally appear reliable (i.e., supported by inter-rater reliability) and valid (i.e., results consistent with previous studies). However, there
are several imitations of this study. The accounts of 15 participants represent a small sample of clients attending the service, which limits the generalizability of results. However, qualitative methods place less emphasis on generalizability, instead aiming for depth of information (Ambert et al., 1995; Barbour, 2000; National Health and Medical Research Council, 2005). Therefore, although results may not generalize, findings reflect a depth of understanding that was not provided by questionnaires in Study 2.

Another limitation was that this study was retrospective, relying on recall by participants of the last few months. Post hoc explanations of our experiences may be different from what we experienced at the time (MacCormack et al., 2001). It is also possible that, because results rely on the delayed recall of participants, more subtle aspects of psychotherapy may have been overlooked. Therefore, although important aspects of participants’ experience were identified in this study, other aspects may have been missed. Future studies could overcome these limitations by including larger representative samples of clients attending a service, as well as collecting qualitative data more regularly and immediately following sessions to be less reliant on clients’ memory.

In conclusion, it is important to understand the experiences of cancer patients, so that services know what to target with interventions, and what clients perceive as effective elements of a service. Importantly, results of this study have identified that changes had occurred for participants, and that participants attributed improvement in coping skills to the psychology service. This supports the clinical utility of the service. Results also identified sources and influences of client expectations of psychotherapy, as well as suggestions for improvements which can be used to develop the service further. These findings demonstrate that
a better understanding of cancer patients’ experiences can help services to better meet the needs of patients.
6.0 Summary and Discussion

As psycho-oncology services are being utilised more by oncology patients, it is important to ensure that treatments provided are effective when delivered in clinical settings. However, whilst these interventions have demonstrated treatment efficacy, there is little published evidence of their clinical utility. This dissertation investigated the clinical utility of a psychology service for cancer patients.

Overall, results of this project demonstrated the clinical utility of the psychology service at the Peter MacCallum Cancer Centre, in terms of accessibility of the service and acceptability of interventions to clients. Recommendations to further develop the service can be made, based on analysis of referral patterns, results from outcome measures, and feedback from clients. Methodological recommendations for future evaluations of similar services are suggested, based on the limitations and findings of the present studies. Each of these will be discussed in more detail below.

6.1 Clinical Utility of the Service

The assessment of clinical utility is based on several key elements, including client characteristics, type and duration of interventions delivered, the accessibility of a service, and the acceptability of interventions by clients (including experiencing positive outcomes as a result of accessing a service). Client characteristics were described by the first two studies, in terms of demographic characteristics of referrals received by the service, outcomes from referral (including diagnosis of co-morbidities and psychiatric disorders, number of
sessions attended, etc.), and client-rated measures of mood, coping, and quality of life. This information outlines the activities of the psychology service, and allows for a better understanding of patients’ needs (including rates of service uptake, and benefit of the service) which can assist in the planning and development of the psychology service.

The type of intervention received and duration of service usage was described in Study 1, by analysing outcomes of referrals to the service. Results indicated that clients attended an average of three sessions with the psychology service, with the largest proportion of clients attending a single appointment. Approximately one quarter of clients assessed did not proceed with further sessions after assessment. As for session content, common psychological interventions included supportive-expressive psychotherapy and cognitive behavioural therapy. The literature review of psychosocial interventions for cancer patients indicated that these interventions have reasonable evidence to support their treatment efficacy. Therefore, combined with the improvements in coping described by clients, this study supports the clinical utility of these interventions.

Accessibility of a service is also an important indicator of clinical utility, including wait-time before first appointment and service uptake. Service uptake is an important measure of effectiveness, because it is an indicator of the consumer’s perception of the usefulness of the program. Most cancer patient referrals to the psychology service resulted in a review by a psychologist. For those attending, most clients were seen within a relatively short time (within two weeks). As would be expected, inpatients were seen significantly sooner than outpatients. Overall, the high rate of service uptake, brief wait-time for first appointment, and qualitative feedback about access to the service demonstrate the accessibility of the service.
However, some difficulties identified by participants included limited appointment times (e.g., during office hours) which restricted participants' ability to attend appointments. This feedback was consistent across questionnaires and interviews with clients.

Overall, the service was acceptable to clients. Acceptability of a service, includes clients’ satisfaction and their experience of positive outcomes. Whilst client responses to the questionnaires did not show significant differences across time, interviews with clients suggested that the psychology service assisted clients to improve coping strategies. This contrast between results may be explained by the complex relationship reported by participants in Study 3 between fluctuating stressors, supportive factors, and improvements in coping. Thus, these results explain why improvements in coping described by participants would not have been detected by the questionnaires focusing on psychiatric diagnoses in Study 2.

Overall, most clients were satisfied with the service they received, including their relationship with the psychologist, facilities, appointment times, value of service, and would return to use the service in the future. Most clients also indicated that they made progress with their presenting problem.

In summary, the findings of this project support the clinical utility of the service as the majority of clients referred attended the service, generally found the service accessible, reported benefits from attending, and were generally satisfied with the service they received.
6.2 Limitations of the Present Study and Suggestions for Future Research

Several major limitations of this project should be recognized when interpreting results. Firstly, the results are based on a small sample that was not fully representative of other clients attending the psychology service. Therefore results regarding the clinical utility of the service may be unreliable, and limit the applicability of results to other clients and services. The complex recruitment process required by the hospital ethics committee contributed to recruitment difficulties. Simplifying the recruitment procedure in future evaluations would provide a more representative sample to provide feedback about outcomes and satisfaction with the psychology service. For example, whilst it is considered good practice for an evaluation of a service to be conducted by an independent party (e.g., not the treating psychologist), the results of this study indicate that that routine administration of outcome measures would achieve a more representative sample of clients and questionnaire data could be utilised by psychologists to inform their practice (e.g., what symptoms clients report as improved/worsened, treatment goals achieved and yet to be achieved). Therefore, future studies should include larger samples by utilising simpler recruitment procedures.

Given that the project used a naturalistic design (i.e., no control group), causal claims between measures of outcome and psychotherapy cannot be made as other confounding factors can influence outcomes. Whilst interviewing participants clarified the role of the psychology service in changes in coping, these accounts also highlighted a range of other factors contributing to change (e.g., relationships with family, friends, support groups, etc). It should be noted,
however, that although the naturalistic design of these studies limits internal validity, the outcomes measures focused on the everyday activities of the service and the characteristics of clients accessing this service. Therefore, results may be more representative of the typical operation and client outcomes of such psychology services. Consequently the methodologies of this project would be appropriate for future studies, to further develop evidence for the clinical utility of similar services.

Future studies could also investigate if distressed patients are identified by health care professionals and referred on to appropriate services (possibly the psychology service). This may involve implementing systematic screening of patients using a simple questionnaire, and training of health care staff about identifying distressed patients and how to refer on to appropriate services.

6.3 Recommendations to Develop the Service

Based on results from this project, several recommendations can be made to further develop the service to meet the needs of clients, and ongoing monitoring of outcomes. Firstly, it is recommended that the service sustain the characteristics of the service, which participants identified as helpful. These include offering a specialist service for cancer patients, and easy access to the service (i.e., flexible appointment times, short wait-list, able to return to the service as necessary, and that family members can access the service).

It is also recommended that the service continue with ongoing monitoring of the referrals rates, and outcomes of these referrals (e.g., number of sessions attended by clients), to identify resources to be able to match these needs. It was
noted that the psychology department expanded during the 16-month study period and if this trend continues, there will be a need for further resources/staff to accommodate this increasing demand. Monitoring referrals will detect this trend and indicate the resources needed. The database developed for this evaluation was a useful tool to collect this information about referrals. However, checks to monitor missing data, which was a pervasive problem in Study 1, would need to be developed to overcome this limitation.

Participants provided specific suggestions to improve the service, including after hours appointments to improve accessibility of the service, more comfortable facilities for sessions (e.g., home visits, an outpatient clinic away from the hospital, and more comfortable consultation rooms), access to more support from other cancer patients at the hospital (e.g., support groups), and providing more information (e.g., for same sex couples, plan for dying, and common reactions following diagnosis of cancer). Providing these additional resources would further support clients.

Information about client characteristics, such as common psychiatric diagnosis and co-morbidities can be used as indicators for staff skills. For example, treatment for depression, anxiety, coping, and relationship difficulties would be appropriate focus of staff expertise. This information could be used for recruitment of future staff, as well as to focus ongoing training of existing staff.

Finally, results indicate the importance of client expectations in the experience and evaluation of psychotherapy. Therefore psychologists need to clarify the expectations of clients, so as to avoid the influence of unrealistic expectations on psychotherapy and evaluation of the service (e.g., if clients are
unclear about the boundaries between psychologists and doctors regarding medical issues).

6.4 Methodological Recommendations for Future Service Evaluations

Based on this evaluation, a number of recommendations can be suggested for future evaluations of psychology services (including for cancer patients). Firstly, this project supports collecting data from both clients and clinicians, as each provides distinctive information. Therefore, using both clients and clinicians as sources of information will provide a more thorough investigation of a service’s activities and outcomes.

Secondly, there was no evidence to support using the questionnaire battery routinely with clients to measure changes in mood, coping, or quality of life. Questionnaire results detected no significant results, despite clients reporting improvements in a number of these areas when interviewed. This is despite carefully selecting outcome measures in terms of constructs (e.g., depression/anxiety, coping, and quality of life), as well as supporting validity and reliability data. This indicates that these measures may not have been sensitive to the changes that clients experienced. Instead, measuring treatment goal achievement may be a more appropriate outcome for future evaluations, as such a generic measure would be relevant for the majority of clients. In contrast, the satisfaction questionnaire provided a range of useful feedback from clients, and could be used in future evaluations. Results support collecting both qualitative and quantitative (written and verbal) feedback about client satisfaction, as each provided distinctive information. Findings also indicate that both general and
specific questions of satisfaction should be included as they measure different constructs.

Thirdly, feedback from participants highlighted the important role of expectations in their subsequent experience and evaluation of the service. Therefore, it is important to assess the role of client expectations when evaluating services.
6.5 Conclusion

In conclusion, evaluations such as this dissertation contribute to the evidence base for the clinical utility of offering specialist services for cancer patients. Overall, the results of the three studies in this project support the clinical utility of a specialist psychology service for cancer patients. Specifically, results detailed the activities of the psychology service, and indicated that participants experienced benefit from attending the psychology service. In addition, findings have provided an understanding of how these benefits were achieved and how the service could be improved. Characteristics of the service contributing to changes should be recognized, including the importance of offering a specialist service to meet the specific needs of cancer patients. Ongoing evaluation of such services will continue to develop evidence for psycho-oncology services and ensure that services meet the needs of clients.
References


Appendices
Appendix A.

Demographic questionnaire

Before completing these questionnaires, we would like to know a little bit more about you. Please tick the appropriate box for each of the questions below.

1. What is the highest educational level that have you attained?
   - Did not finish school
   - High school (year 7-12)
   - Certificate level
   - Advanced diploma
   - Bachelor degree
   - Graduate diploma/certificate
   - Postgraduate degree
   - Apprenticeship

2. What is your current work situation?
   - Full time
   - Part time
   - Sickness benefit/disabled
   - Home duties
   - Retired
   - Other

3. What is your current marital status?
   - Married
   - De Facto
   - Widowed
   - Divorced
   - Separated
   - Never married
   - Other, please specify

4. What do you hope to gain from attending the clinical psychology service at Peter Mac?

_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
5. What do you want to gain from attending the psychology service at Peter Mac?
Of the following items, please tick the items that are relevant for you.

___ Information about disease
___ Support from therapist
___ Coping techniques to deal with stress
___ Assertiveness techniques
___ Help with management of physical symptoms of cancer treatment and side effects
___ Interpersonal communication techniques
___ To discuss cancer
___ Other______________________________________
Appendix B.

Hospital Anxiety and Depression Scale (HADS)

Please read each item and tick the reply that comes closest to how you have been feeling in the past week. Don’t take too long over your replies: your immediate reaction to each item will probably be more accurate than a long thought-out response.

I feel tense or ‘wound up’:
- Most of the time
- A lot of the time
- From time to time, occasionally
- Not at all

I feel as if I am slowed down:
- Nearly all the time
- Very often
- Sometimes
- Not at all

I still enjoy the things I used to enjoy:
- Definitely as much
- Not quite so much
- Only a little
- Hardly at all

I get a sort of frightened feeling like “butterflies” in the stomach:
- Not at all
- Occasionally
- Quite often
- Very often

I get a sort of frightened feeling as if something awful is about to happen:
- Very definitely and quite badly
- Yes, but not too badly
- A little, but it doesn’t worry me
- Not at all

I have lost interest in my appearance:
- Definitely
- I don’t take as much care as I should
- I may not take quite so much care
- I take just as much care as ever

I can laugh and see the funny side of things:
- As much as I always could
- Not quite so much now
- Definitely not so much now
- Not at all

I feel restless as if I have to be on the move:
- Very much indeed
- Quite a lot
- Not very much
- Not at all

Worrying thoughts go through my mind:
- A great deal of the time
- A lot of the time
- From time to time, but not too often
- Only occasionally

I look forward with enjoyment to things:
- As much as ever I did
- Rather less than I used to
- Definitely less that I used to
- Hardly at all

I can enjoy a good book or radio or TV programme:
- Often
- Sometimes
- Not often
- Very seldom

I feel cheerful:
- Not at all
- Not often
- Sometimes
- Most of the time

I get a sudden feeling of panic:
- Very often indeed
- Quite often
- Not very often
- Not at all

I can sit at ease and feel relaxed:
- Definitely
- Usually
- Not often
- Not at all
### Appendix C.

**Functional Assessment of Cancer Therapy (FACT-G, version 4)**

Below is a list of statements that other people with your illness have said are important. **By circling one (1) number per line, please indicate how true each statement has been for you during the past 7 days.**

<table>
<thead>
<tr>
<th><strong>PHYSICAL WELL-BEING</strong></th>
<th>Not at all</th>
<th>A little bit</th>
<th>Somewhat</th>
<th>Quite a bit</th>
<th>Very much</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have a lack of energy.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I have nausea.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Because of my physical condition, I have trouble meeting the needs of my family.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I have pain.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I am bothered by side effects of treatment.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I feel ill.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I am forced to spend time in bed.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>SOCIAL/FAMILY WELL-BEING</strong></th>
<th>Not at all</th>
<th>A little bit</th>
<th>Somewhat</th>
<th>Quite a bit</th>
<th>Very much</th>
</tr>
</thead>
<tbody>
<tr>
<td>I feel close to my friends.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I get emotional support from my family.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I get support from my friends.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>My family has accepted my illness.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I am satisfied with family communication about my illness.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I feel close to my partner (or the person who is main my support).</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

*Regardless of your current level of sexual activity, please answer the following questions. If you prefer not to answer it, please check this box and go to the next section.*

<table>
<thead>
<tr>
<th><strong>EMOTIONAL WELL-BEING</strong></th>
<th>Not at all</th>
<th>A little bit</th>
<th>Somewhat</th>
<th>Quite a bit</th>
<th>Very much</th>
</tr>
</thead>
<tbody>
<tr>
<td>I feel sad.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I am satisfied with how I am coping with my illness.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I am losing hope in the fight against my illness.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I feel nervous.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I worry about dying.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I worry that my condition will get worse.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>FUNCTIONAL WELL-BEING</strong></th>
<th>Not at all</th>
<th>A little bit</th>
<th>Somewhat</th>
<th>Quite a bit</th>
<th>Very much</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am able to work (include work at home).</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>My work (include work at home) is fulfilling.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I am able to enjoy life.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I have accepted my illness.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I am sleeping well.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I am enjoying the things I usually do for fun.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I am content with the quality of my life right now.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
INSTRUCTIONS: A number of statements are given below which describe people’s reactions to having cancer. Please circle the appropriate number to the right of each statement, indicating how far it applies to you at present. For example, if the statement definitely does not apply to you, then you should circle 1 in the first column.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Definitely does not apply to me</th>
<th>Does not apply to me</th>
<th>Applies to me</th>
<th>Definitely applies to me</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I have been doing things that I believe will improve my health eg. Change my diet.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2. I feel I can’t do anything to cheer myself up.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3. I feel that problems with my health prevent me from planning ahead.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4. I believe that my positive attitude will benefit my health.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5. I don’t dwell on my illness.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6. I firmly believe that I will get better.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>7. I feel that nothing I can do will make a difference.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>8. I’ve left it all to my doctors.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>9. I feel that life is hopeless.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>10. I have been doing things that I believe will improve my health eg. Exercise.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>11. Since my cancer diagnosis, I now realise how precious life is and I’m making the most of it.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>12. I’ve put myself in the hands of God.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>13. I have plans for the future eg holiday, jobs, housing.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>14. I worry about the cancer returning or getting worse.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>15. I’ve had a good life; what’s left is a bonus.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>16. I think my state of mind can make a lot of difference to my health.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>17. I feel that there is nothing I can do to help myself.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>18. I try to carry on my life as I’ve always done.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>19. I would like to make a contact with others in the same boat.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>20. I am determined to put it all behind me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
21. I have difficulty in believing that this happened to me. 1 2 3 4
22. I suffer great anxiety about it. 1 2 3 4
23. I am not very hopeful about the future. 1 2 3 4
24. At the moment I take one day at a time. 1 2 3 4
25. I feel like giving up. 1 2 3 4
26. I try to keep a sense of humour about it. 1 2 3 4
27. Other people worry about me more than I do. 1 2 3 4
28. I think of other people who are worse off. 1 2 3 4
29. I am trying to get as much information as I can about cancer. 1 2 3 4
30. I feel that I can't control what is happening. 1 2 3 4
31. I try to keep a very positive attitude. 1 2 3 4
32. I keep quite busy, so I don't have time to think about it. 1 2 3 4
33. I avoid finding out more about it. 1 2 3 4
34. I see my illness as a challenge. 1 2 3 4
35. I feel fatalistic about it. 1 2 3 4
36. I feel completely at a loss about what to do. 1 2 3 4
37. I feel very angry about what has happened to me. 1 2 3 4
38. I don't really believe I had cancer. 1 2 3 4
39. I count my blessings. 1 2 3 4
40. I try to fight the illness. 1 2 3 4

Thank you for taking the trouble to complete this scale!
Appendix E.

Global health and quality of life questions

1. During the past week, how would you rate your overall health?

   1 2 3 4 5 6 7
   Very poor Excellent

2. During the past week, how would you rate your overall quality of life?

   1 2 3 4 5 6 7
   Very poor Excellent
Appendix F.
Client Satisfaction Survey

We would appreciate your opinions about the psychological services currently offered by Peter Mac. We would like to know how much the services meet your individual needs and what you think may help us to improve our service. Your opinion is valuable to us. Your answers will be kept confidential and will not be used to identify you.

PART A

Please circle the number that best describes your opinion.

<table>
<thead>
<tr>
<th></th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
<th>Does not apply to me</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Overall, I am satisfied with the services I have received from my psychologist</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>2. I felt free to express myself</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>3. My psychologist seemed to understand what I was feeling and thinking</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>4. I was able to focus on what was of real concern to me</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>5. I am now better able to cope</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>6. I did not have to wait long for an appointment</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>7. My psychology appointments were on time</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>8. I have no trouble attending on clinic days</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>9. I was satisfied with the overall cleanliness and comfort of facilities</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>10. The program was valuable to my overall care</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
PART B.

1. How much progress do you feel you made in dealing with your problem?

   Things got worse  No progress  Some progress  Quite a lot  A great deal

2. What aspects of the therapy were most helpful?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

3. What aspects of the therapy were least helpful?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

4. How could the psychology service be improved?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

5. If you needed further help, would you return to the psychology service at Peter Mac?

   ○ Yes    ○ No

6. Have you sought help/support from any other services, beside the psychology service at Peter Mac?

   ○ No    ○ Yes, from a
   ○ Counselor (outside Peter Mac)
   ○ Psychologist (outside Peter Mac)
   ○ Psychiatrist
   ○ Support group
   ○ Other (please list)________________________
Appendix G.

Survey of factors influencing referral of clients to the study

As I've finished recruitment for my thesis, I am interested to learn about the factors influencing clinicians’ decision-making regarding referral to the study (or not to refer to the study). To find out this information, I would appreciate it if you could take a few minutes to complete the following form. Be honest - this will be important information not only for my thesis, but may help any future research with the department. You can remain anonymous, just put the form in the attached envelope and post it back to me.

Instructions

Please indicate below the proportion the following reasons contributed to your decision to not to refer clients to the evaluation study (e.g. if you estimate that 'there would not enough time to send letter, etc., before the first appointment with the service', contributed to 25% of your decision not to refer, then write this down). Please note that the sum of all the percentages you write down should add to 100%.

_____% Client did not speak sufficient English

_____% Client was too distressed/in crisis

_____% Client was unlikely to be alive at Time 2 (3 months)

_____% I was reluctant to refer to the study because didn’t know enough about the client (including cancer prognosis, level of distress, mental state, etc)

_____% I forgot to refer to the study

_____% I did not see the relevance of the study

_____% Study methodologies were prohibitive (including recruitment procedures, measures, etc). If so, please tick those which apply

☐ I decided that if the client was referred, there would not be enough time to send the letter about the study, before the first appointment with the service

☐ I did not have time to complete the letter and contact student researcher to refer

☐ Other, please specify

Any other reasons, please specify:

_____% _____________________________________________ _______________

_____% _____________________________________________ _______________

100%
Appendix H.
Letter notifying client about the study

Date ___________________
Dear ___________________

You recently accepted a referral to see one of the psychologists at Peter Mac. The clinical psychology team at Peter Mac is currently evaluating its services for clients. This evaluation is being undertaken jointly with Royal Melbourne Institute of Technology. All clients attending the clinical psychology outpatient clinic at Peter Mac will be invited to participate. This study is collecting information and feedback, to ensure that the service is meeting the needs of the people who attend the service.

This letter is to inform you that you will be telephoned by the Research Assistant, Kate Neilson, shortly before your first appointment at the clinical psychology service, to invite you to participate in this evaluation. You are under no obligation to take part. However if you do decide to take part, this will involve completing some questionnaires about your emotional and physical health, expectations of the psychology service, and some basic demographic details. These questionnaires take approximately 25 minutes to complete. These questionnaires will be completed when you attend your first appointment at the clinical psychology service, and again three months later. When these second questionnaires have been received, you will also be invited to participate in a brief interview, where you will be asked your opinion of the service. Your personal responses will be kept confidential and will not be disclosed to your psychologist.

Your decision to participate (or not to participate) in this study will not affect your treatment at the clinical psychology service, or any other service at the Peter MacCallum Centre. In addition to providing information for the psychology service evaluation the information from this study will also form part of a Doctoral thesis.

This letter has been approved by the Ethics Committee at Peter Mac.

With kind regards

[Signature]
Professor Sanchia Aranda
Executive Sponsor Psychology and Supportive Care
Appendix J.
Participant information and consent form.

Study title - An Exploratory Study of an Outpatient Psychology Service for Cancer Patients: Client Characteristics and Outcomes
PMCI number: E36-04

A signed copy of this form must be provided to the participant prior to study entry.

INTRODUCTION
You are being invited to take part in a research study for cancer patients attending the clinical psychology service at the Peter MacCallum Cancer Centre.

The staff at the Peter MacCallum Cancer Centre study the nature of disease and try to develop better methods of diagnosis and treatment. In order for you to decide whether you should agree to be part of this study, you should understand enough about its benefits and risks to make an informed decision. This process is known as informed consent.

BACKGROUND AND PURPOSE
This is a study for patients with cancer who attend the clinical psychology service at the Peter MacCallum Cancer Centre.

The aim of the study is to assess and improve the service to patients who attend the clinical psychology service.

The clinical psychology service at Peter Mac is relatively new and this project represents the first stage of evaluating the program's activities from both the hospitals’ and participants’ perspectives. It is important to evaluate the effectiveness of the clinical psychology service, to determine if the service is being utilised by patients and referrers, as well as patients’ opinion of and satisfaction with the service.

Your decision to participate (or not to participate) in this study will not effect your treatment at the clinical psychology service, or any other service at the Peter MacCallum Centre.
PROCEDURES.

Study 1.
A total of 160 people from the Peter MacCallum Centre will be invited to participate in this study.

Your participation will involve completing a set of questionnaires before your initial appointment at the clinical psychology service. These questionnaires will inquire about your emotional and physical well-being, expectations of the psychology service and some basic demographic details. These questionnaires will be completed before your initial appointment at the psychology service and will usually take around 25 minutes of your time. The information you give is confidential, it will not be given to your psychologist or treating team. Three months after your initial appointment at the psychology service, one other set of questionnaires concerning your emotional and physical well-being, and satisfaction with the psychology service will be posted to you for completion. You will also receive a reminder telephone call. Again, these questionnaires will take approximately 25 minutes of your time. The purpose of these questionnaires is to determine the treatment effects, any symptoms you may have and your satisfaction with the psychology service. Routinely collected information concerning your attendance at the psychology clinic will also be accessed, such as the number of sessions attended at the clinic and treatment plan.

Study 2.
All participants who complete Study 1 will be invited to participate in a second study that consists of a short interview with a student researcher. The purpose of this interview is to gather more information about people’s experience of the clinical psychology service and will take approximately 30-45 minutes. The interview questions will ask about changes in your life over the past 3 months, as well as your experience with the service. You do not have to answer all questions, and can stop the interview at any time. This interview will be audio-taped. The personal responses to questions discussed during the interview will not be fed back to your psychologist.

POSSIBLE OUTCOMES/POTENTIAL BENEFITS
The results of this evaluation will be useful in terms of describing the activities of the psychology service (such as the number of new patients) and the outcomes of patients who attend the psychology service. This information can then be used to determine the quality of the service that you and other patients receive. Direct benefit to you cannot be guaranteed, however other patients may benefit in future from information gained from this study.

POSSIBLE SIDE EFFECTS/RISKS/DISCOMFORT
When filling out questionnaires, you may need to think about things that you find uncomfortable. This may be upsetting for some people. There may be additional risks that are unforeseeable at this time. You will be informed of any new and significant information that may affect your willingness to continue participation. In case you experience significant distress, or anything unusual, you can contact and discuss these issues with your psychologist.
PATIENT’S RIGHTS
• You may ask questions regarding this trial, and you can expect clear and understandable answers in return.
• Participation in the study is voluntary, and you are not obliged to participate if you do not wish to do so. You may withdraw from the study at any time without jeopardising further treatment at this hospital. Your doctor may withdraw you from this trial at any time if s/he feels that continuing would involve a serious risk to you. If you decide to withdraw from this study, please leave a message on 9925 7376 for Kate Neilson, who will return your call as soon as possible.
• If any new information becomes available that may influence your decision to continue in this survey, such information will be given to you.
• Any information obtained in connection with this survey and that can identify you will remain confidential. It will only be disclosed with your permission, except as required by law. You will not be identified as an individual in any reports or subsequent publications.
• All data, including questionnaires from participants and audio-tapes of interviews will be stored safely at the Peter MacCallum Cancer Centre for 5 years after completion of the study. Access will be restricted to the Principal and Student Researchers and may be inspected for purposes of data audit by authorised persons within the institution (eg. Ethics committee).
• This study will be conducted in accordance with the National Health & Medical Research Council’s National Statement on Ethical Conduct in Research Involving Humans (June 1999), developed to protect the interests of research participants. The ethical aspects of this research project have been reviewed by the Ethics Committee of the Peter MacCallum Cancer Centre and the project has be duly approved. Ethical concerns can be discussed with Jeremy Kenner, Ethics Coordinator on (03) 9656 1699. Other concerns can be discussed with Joanne Moss, Patient Advocate, on (03) 9656 1111 pager 1097.
• Please contact your own doctor should any medical problems arise. The hospital telephone number is (03) 9656 1111. During working hours, you can also call the hospital and ask for Annabel Pollard, Senior Psychologist (03) 9656 1770.

CONSENT
• I have read and understand the Plain Language Statement, Version 7, dated 27th January 2006.
• I freely agree to participate in this project according to the conditions in the Plain Language Statement.
• I have a copy of the Plain Language Statement and consent form to keep.

I, _________________________________ agree to participate in the program to evaluate the Clinical Psychology service at the Peter MacCallum Centre.

Participants signature     Date

Signed on the researchers behalf     Date

Note: All parties signing the consent form must date their own signature.
Appendix K.  

*Interview schedule*

**Introduction to interview**

1a. Explain that the purpose of these interviews is to get more information about peoples’ experiences of the clinical psychology service.

1b. Introduce student researcher

1c. Explain that the questions start by asking about what has been going on in general over the past three months, and then about experiences with the service.

1d. Don’t have to answer all the questions, and can stop at any time.

1e. Personal responses will *not* be discussed or fed back to the treating psychologist.

1f. Ask permission to audio-tape record the interview.

**Changes over last 3 months**

2a. What changes have you noticed in yourself in the past three months?

2b. In general, what do you think has lead to these changes?

**Experience of psychology service**

3a. You have seen a psychologist on a number of occasions. What has this experience been like?

3b. What was Psychology’s role in changes over past 3 months?

3c. What has been helpful about being seeing a psychologist?

3d. What was difficult about your experience with the service/psychologist?

3e. Is there anything else that would have improved your experience of the service?

3f. Did your experience of a psychologist meet your expectations? If no, how was it different?

3g. What do you think lead you to expect…?

**Summary and close**

4a. Summarise client’s information and check summary is accurate

4b. Is there anything else important that we haven’t already talked about?

4c. Do you have any questions about the interview?