



Are patient attachment orientations mediating factors
in changes to their attitudes towards seeking
professional help to manage emotional distress?

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Thesis Overview

This thesis is presented to partially meet the requirements for the Doctorate in Clinical Psychology at the University of Liverpool. It is presented in one volume, consisting of: A general introduction; chapter one, a systematic literature review; chapter two, an empirical paper; followed by a concluding discussion section.

The general introduction aims to outline the overall rationale for the thesis, and provide a narrative linking the different parts together.

The systematic literature review summarises 25 papers published between January 1990 and May 2013, which explore cancer patients' attachment styles, and their relationship with wellbeing. The review is written with the intention of submitting it for publication to the "Patient Education and Counseling" Journal.

The empirical paper reviews data collected from cancer patients, as part of a longitudinal study. Specifically the paper explores whether the provision of an information booklet about the possible emotional impact of cancer influences patients' attitudes towards seeking professional psychological support. It further explores whether changes in these attitudes are related to patients' attachment styles. The paper is written with the intention of submitting it for publication to the 'Patient Education and Counseling' Journal.

The concluding discussion section offers: consideration of the current research findings as part of the wider existing literature; a personal reflection on the process of conducting the research; a short feedback information leaflet for participants and clinical staff; and a proposal for a possible further piece of research. The aim is for this section to bring together the different parts of the thesis.

Introduction to Thesis

Over the last few decades increased time and money has been put into raising the public awareness of cancer, specifically increasing the public's awareness of early signs and symptoms of possible cancer and how to seek help, in order to provide timely treatment, and improve survival rates (WHO, 2015).

Research organisations and charities offer repeated, emotionally provocative, advertisements via television and social media, requesting monies from the public to support investigations into the cause and development of cancers, aiming for eradication and cures within the coming decades.

Meanwhile, and possibly consequently, cancer continues to be identified with over 300,000 cases identified in the UK annually (Cancer Research UK, 2014). Cancer is the highest recorded cause of death in England and Wales (Office of National Statistics [ONS], 2015), and a leading cause of mortality across the globe (Stewart & Wild, 2014). The most recent data published by ONS reports that cancer was responsible for 29% of all deaths in England and Wales in 2014, (equating to 147,000 out of 501,424 deaths).

The "World Cancer Report" (Stewart & Wild, 2015, on behalf of the World Health Organisation [WHO]), revealed the global incidence of cancer in 2012 was 14.1 million, with 8.2 million cancer related deaths. Despite an increasing incidence of cancer over the years, and projection for it to further increase by approximately 70% over the next two decades (Stewart & Wild, 2015; Cancer Research UK, 2014), data available from both the UK and World positively suggest that more people are recovering from and surviving cancer.

Whilst research is continuing into looking for cures and ultimate eradication of cancer, what about the ongoing support and care for the increasing numbers of patients diagnosed with cancer?

The impact of cancer is widely acknowledged to be psychological and social as well as biological. However, in comparison to the statistics of incidence and mortality of cancer, the figures

and estimates of the frequency of psychological distress among people with cancer are much less coherent.

The ambiguity can be partially explained by the vagueness of what we consider 'distress', how it is measured, and expectations of what distress is 'normal' (Brennan 2001). Psychiatric diagnoses, such as those offered in the international classifications of Diseases (ICD) and Diagnostic and Statistical Manuals (DSM), have been identified in some 38% of cancer research participants (Mitchell et. al., 2011). However, as discussed by the National Cancer Institute (2015), most people with cancer do not meet the formal criteria for a 'mental health disorder'. This being so, patients do experience a range of emotional reactions to their diagnosis, all of which can be considered along a continuum. Research suggests between 20 and 50% of cancer patients experience 'distress', (Carlson & Bultz, 2003; Holland & Alici, 2010; Kendall, Glaze, Oakland, Hansen, & Parry, 2011; NCI, 2015).

Interestingly the rates of distress reported in existing cancer literature echoes that of the general population (Mental Health Foundation, 2007; Time for Change, 2015). However, research around the rates of suicide and self-harm within the cancer population, suggests cancer patients are twice as likely to take their life as the general population; with suicides more likely to occur within the first five years after diagnosis, but remaining higher for 15 years (Sharma, 2008).

Understandably, therefore, leading international cancer associations called for routine psychological screening in patients' cancer care, including the American National Comprehensive Cancer Network, in 1999, and the UK's National Institute of Health and Care Excellence [NICE] in 2004; their aim being to identify distressed patients, and offer earlier psychological support to reduce the impact on patients' quality of life.

Whilst the call for screening has taken criticism due to lack of evidence that the approach is beneficial for patients (Palmer & Coyne, 2003; Salmon, Clark, McGrath, & Fisher, 2015; Hollingworth, et al., 2013; Meijer et al., 2011), the research around the area has provided needed evidence that cancer patients with better self-reported bio-psycho-social wellbeing had better clinical outcomes

from their physical treatments, including longer life expectancy (Kroenke et al., 2006), thus providing support for professional psychological services within cancer services.

However this raises the conundrum faced generally in existing mental health support services, and that is how to provide access to psychological support to people who need it. There are questions around what are normal levels of distress in the adjustment to being diagnosed with cancer (Brennan, 2001). Do people who are identified as being 'distressed', want to access professional support (Baker-Glenn et. al., 2011); would people who do not meet distress measures' thresholds like to access support services (Merckaert et. al., 2010); and if cancer patients did choose to access support services, will there be adequate services available able to provide support to those in need? (Jacobsen, 2007; Holland & Alicim, 2010).

There are many psychological theories into help seeking behaviour, and different reasons postulated as to why some people seek support and others do not. This thesis looks at the role of cancer patients' attachment orientations in their adjustment to cancer and attitudes towards seeking psychological help. Attachment theory has previously been utilised to consider health behaviours (Ciechanowski et al., 2002).

Attachment orientations are considered as how people relate to others, and their sense of self, which are also known as levels of attachment avoidance and anxiety, respectively. Existing research looking at the influence of attachment orientations on support seeking behaviour suggests people with higher sense of self and others, thus low levels of attachment anxiety and avoidance, are more likely to perceive higher levels of available support, and access that support, in comparison to people with higher levels of attachment anxiety and avoidance, and poorer perceptions of themselves and others (Florian et al., 1995; Bachman & Bippus, 2005).

The thesis first offers a systematic review of existing literature, in Chapter 1. The review includes articles that detailed cancer patients' attachment orientations, and at least one other biological, psychological or social adjustment or wellbeing outcome measure. Its aim was to

summarise what existing relationships were known of between cancer patients' attachment orientations and adjustment and wellbeing.

The second chapter of the thesis then describes a piece of research conducted to ascertain whether attitudes towards seeking psychological support change over time when provided with an evidence based information booklet about the possible emotional impact of cancer. It also considers whether the cancer patients' attitudes, and any changes in attitudes, are related to their attachment orientations. It was hoped that conducting such a piece of research could provide insight and understanding into why people may be more open to seeking support, and thus help psychological support services consider how best to gear their support for patients to access, and challenge existing barriers to accessing the support. The research is one of few to actually systematically consider the impact of providing an information booklet to cancer patients, rather than making assumptions of benefits.

The thesis then goes on to provide a holistic extended discussion, which includes providing a brief personal reflection, an alternative summary of the results, and a research proposal for a further piece of work to extend the research further.

It is hoped that the reader experiences a flowed narrative of the research summarised and conducted here, and questions that may arise for them are answered within the text.

References

- Bachman, G. F., & Bippus, A. M. (2005). Evaluations of supportive messages provided by friends and romantic partners: An attachment theory approach. *Communication Reports*, 18, 85-94.
- Baker-Glenn, E. A., Park, B., Granger, L., Symonds, P., & Mitchell, A. J. (2011). Desire for psychological support in cancer patients with depression or distress: validation of a simple help question. *Psycho-oncology*, 20. 525-531.
- Brennan, J. (2001). Adjustment to cancer – coping or personal transition? *Psycho-oncology*, 10. 1-18.

- Cancer Research UK. (2014). <http://www.cancerresearchuk.org/health-professional/cancer-statistics>. Last accessed September 2015.
- Carlson, L. E., & Bultz, B. D. (2003). Cancer distress screening. Needs, models, and methods. *Journal of Psychosomatic Research*, 55. 403-409.
- Ciechanowski, P. S., Walker, E. A., Katon, W. J., & Russo, J. E. (2002). Attachment Theory: A Model for Health Care Utilization and Somatization. *Psychosomatic Medicine*, 64, 660-667.
- Florian, V., Mikulincer, M., & Bucholtz, I. (1995). Effects of Adult Attachment Style on the Perception and Search for Social Support. *The Journal of Psychology*. 129 (6), 665-676.
- Holland, J. C., & Alicim, Y. (2010). Management of distress in cancer patients. *The Journal of supportive oncology*, 8(1). 4-12.
- Hollingworth, W., Metcalfe, C., Mancero, S., Harris, S., Campbell, R., Biddle, L., McKell-Redwood, D., & Brennan, J. (2013). Are needs assessments cost effective in reducing distress among patients with cancer? A randomized controlled trial using the distress thermometer and problem list. *Journal of Clinical Oncology*, 31. 3631–3638.
- Jacobsen, P.B. (2007). Screening for Psychological Distress in Cancer Patients: Challenges and Opportunities. *Journal of Clinical Oncology*, 25(29). 4526-4527.
- Kendall, J., Glaze, K., Oakland, S., Hansen, J., & Parry, C. (2011). What do 1281 distress screeners tell us about cancer patients in a community cancer center? *Psycho-oncology*, 20. 594-600.
- Kroenke, C. H., Kubansky, L. D., Schernhammer, E. S., Holmes, M.D. & Kawachi, I. (2006). Social networks, social support and survival after breast cancer diagnosis. *Journal of Clinical Oncology*, 24(7). 1105-1111.
- Meijer, A., Roseman, M., Milette, K., Coyne, J. C., Stefanek, M. E., Ziegelstein, A. L., Arthurs, E., Leavens, A., Palmer, S. C., Stewart, D. E., de Jonge, P., & Thombs, B. D. (2011). Depression screening and patient outcomes in cancer: a systematic review. *PLoS One* 6, (11).
- Mental Health Foundation. (2007). The Fundamental Facts: The latest Facts and Figures on mental health. Available at <http://www.mentalhealth.org.uk/publications/fundamental-facts/>, last accessed September 2015.
- Merckaert, I., Livert, Y., Messin, S., Milani, M., Slachmuylder, J-L., & Razavi, D. (2010). Cancer patients' desire for psychological support: prevalence and implications for screening patients' psychological needs. *Psycho-oncology*, 19. 141-149.

- Mitchell, A.J., Chan, M., Bhatti, H., Halton, M., Grassi, L., Johansen, C., & Meader, N. (2011). Prevalence of depression, anxiety, and adjustment disorder in oncological, haematological, and palliative-care settings: a meta-analysis of 94 interview-based studies. *Lancet Oncology*, 12: 160–174.
- National Cancer Institute. (2015). Depression (PDQ). Available at <http://www.cancer.gov/about-cancer/coping/feelings/depression-hp-pdq>, last accessed September 2015.
- National Comprehensive Cancer Network (1999). NCCN practice guidelines for the management of psychosocial distress. *Oncology*, 13. 113-147.
- National Institute for Health and Clinical Excellence (2006). *Guidance on Improving Supportive and Palliative Care for Adults with Cancer*. London: National Institute for Health and Clinical Excellence.
- Office for National Statistics (2015) Statistics bulletin: deaths registered in England and Wales 2014. Retrieved from: <http://www.ons.gov.uk/ons/rel/vsob1/death-reg-sum-tables/2014/sb-deaths-first-release--2014.html#tab-background-notes>.
- Palmer, S. C., & Coyne, J. C. (2003). Screening for depression in medical care. Pitfalls, alternatives, and revised priorities. *Journal of Psychomatic Research*, 54, 279-287.
- Salmon, P., Clark, L., McGrath, E., & Fisher, P. (2015). Screening for psychological distress in cancer: renewing the research agenda. *Psycho-Oncology*, 24. 262-268.
- Sharma, S. P. (2008). High suicide rate among cancer patients fuels prevention discussions. *Journal of the National Cancer Institute*, 100(24). 1750-1751.
- Stewart, B. W., & Wild, C. P. (Ed's) (2014). *World Cancer Report*. Lyon, France: World Health Organisation and International Agency for Research on Cancer.
- Time for change. (2015). <http://www.time-to-change.org.uk/mental-health-statistics-facts>. Last accessed September 2015.
- World Health Organisation. (2015). Cancer: Factsheet No 297. Retrieved from: <http://www.who.int/mediacentre/factsheets/fs297/en/>.

Chapter I

Systematic Literature Review¹

Cancer patients' attachment style and its relationship with measures of adjustment: A systematic review

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¹ This review has been written for submission for publication to the Journal *Patient Education and Counseling* (See Appendix 1.A for author guidelines)

Abstract

Objective: Attachment style has been highlighted as a potential influence over cancer patients' willingness to access services, and their perception of support available. The object of this review is to systematically review and synthesise published literature relating to the relationship of cancer patients' attachment style and adjustment to cancer.

Methods: Electronic database and reference searches were conducted to identify published literature relating to the review's objective. Search terms were simply "Attachment" and "Cancer".

Results: A total of 3,831 papers were identified, with 25 papers meeting criteria and included in the review. Papers were filtered through by hand, eliminating: duplications; non experimental studies; articles not published in peer review journals; articles relating to medical (e.g. cell attachment) and non-human attachment; participant samples who were not adult cancer patients; and studies which did not use an adult attachment measure.

Conclusion: Due to heterogeneity in the study designs, and variation in attachment and wellbeing measures used, there are significant difficulties making coherent conclusive summaries of the results. The review does suggest that cancer patients with more secure attachment orientations, thus lower attachment anxiety and attachment avoidance, are less susceptible to poorer wellbeing, and perceive available support more favourably. In general the results are consistent with existing literature reviewing attachment behaviour outside of cancer settings.

Practice Implications: More research is needed to determine what individual difference may influence cancer patients' wellbeing, and the influences the individual differences have on the patients seeking/ receiving the support they may want and/or need.

1.1 Introduction

Investigations into individual differences between patients, and their impact on their health and wellbeing, has been an increasing trend in health research. Individual differences are of great interest to medical and allied health professionals, as increasing evidence has emerged that psychological and social well-being has positive relationships with patients seeking help earlier; adherence to treatment; greater satisfaction with care, and even greater health and physical recovery, as well as longer survival data, all of which are often key performance indicators for health services [1].

1.1.1 Cancer, distress, and adjustment

In their latest annual summary of causes of deaths registered in England and Wales, the Office of National Statistics (ONS) [2] reported that Cancers and Neoplasms were the largest cause of death in 2014, accounting for 29% of 501,424 deaths that year.

Guidance for the diagnosis of and treatment for cancer in the UK is offered by the National Institute of Health and Care Excellence (NICE) [3]. The guidance, along with other international guidance [4, 5], calls for regular assessments of cancer patients' psychological distress, across different specific time points across treatment/intervention pathways, a somewhat homogenous approach. However, the NICE guidance asserts that each patient should be treated as an individual with their own, needs led, care plan, giving significant emphasis to the individuality of each person.

With ambiguity around what is 'distress' [6] research has offered a range of figures for the frequency of distress in cancer, from 15% to 75% [22-25]. The National Cancer Institute (NCI) [22] reports that most cancer patients do not meet the criteria for a diagnosable mental health condition and, despite high levels of distress reported, fewer than 10% are referred for psychosocial care [23].

There is much criticism of the screening of distress in cancer patients [75], however research evaluating screening for distress has helped identify different predictors of adjustment in cancer patients. The NCI reports incorrect assumptions and 'myths', such as all cancer patients experience distress, and it is a natural part of the 'journey', are common place and influence adjustment. The NCI alongside Brennan [6] emphasise patients' bio-psycho-social differences will be crucial in aiding them in 'adjusting' to life after a cancer diagnosis, promoting well-being and increased quality of life.

The NCI [22] reports their interpretation of findings from 'distress' screening research that identify predictors of adjustment [35-37], and that the predictors fall into three areas reflecting the bio-psycho-social model [29]:

- 1) Cancer related predictors (For example, the more advanced the cancer the greater the struggle to adjust [26]; and different types of cancer also predict different levels of adjustment[27]);
- 2) Patient related predictors (For example, patients with greater social support live longer after diagnosis, in comparison to people with no close contacts [28, 36]);
- 3) Society derived predictors (such as treatments available, societal beliefs around cancer and seeking psychological support, and stigma [36, 37]).

Thus it is important to explore individual differences and their relationship with cancer patients' adjustment, to see if we are able to adapt existing services to offer the support wanted and/or needed by patients [32, 33], especially to patients who may be initially ambivalent about accessing support due to existing, longstanding, previously developed coping strategies, and fear of stigma.

Consequently this review will consider adjustment as having biological, psychological and social components. By doing this it is hoped to capture a variety of different concepts that could be

considered under the 'adjustment' terminology umbrella, and thus see whether any relationships with cancer patients' attachment styles emerge, from the existing literature.

1.1.2 Attachment

Attachment theory can offer explanations into differences between individuals. The theory suggests that our early relationships with caregivers develop 'internal working models' [7, 8] of how we perceive and regard ourselves and others. These models then influence how we manage adult relationships [9, 10, 11, 12], cope with loss and bereavements [13], and adapt and adjust to physical illness and changes in wellbeing [14].

The internal working models of ourselves and others are considered as the two dimensions of attachment anxiety and attachment avoidance [7, 8, 15, & 16]. When the dimensions are overlapped, the four quadrants created are known as secure, preoccupied, dismissing and fearful. People who have higher levels of attachment anxiety can become entangled in their emotions and feelings, resulting in self-doubt. Higher scorers on the attachment avoidance dimension are likely to display greater evasion to intimacy and trust with others [17]. The attachment categories/quadrants, are made from the combination of high/low attachment anxiety and high/low attachment avoidance, as illustrated in Figure 1.1.2A, and elaborated on further by Bowlby, and Bartholomew and colleagues [7, 8, 15, 16].

Attachment styles, and levels of attachment anxiety and avoidance, have been considered in research looking for individual differences in cancer patients' experiences. However, at the time of writing, there is no systematic synthesis of the research as to how a cancer patient's attachment style impacts his/her adjustment to cancer.

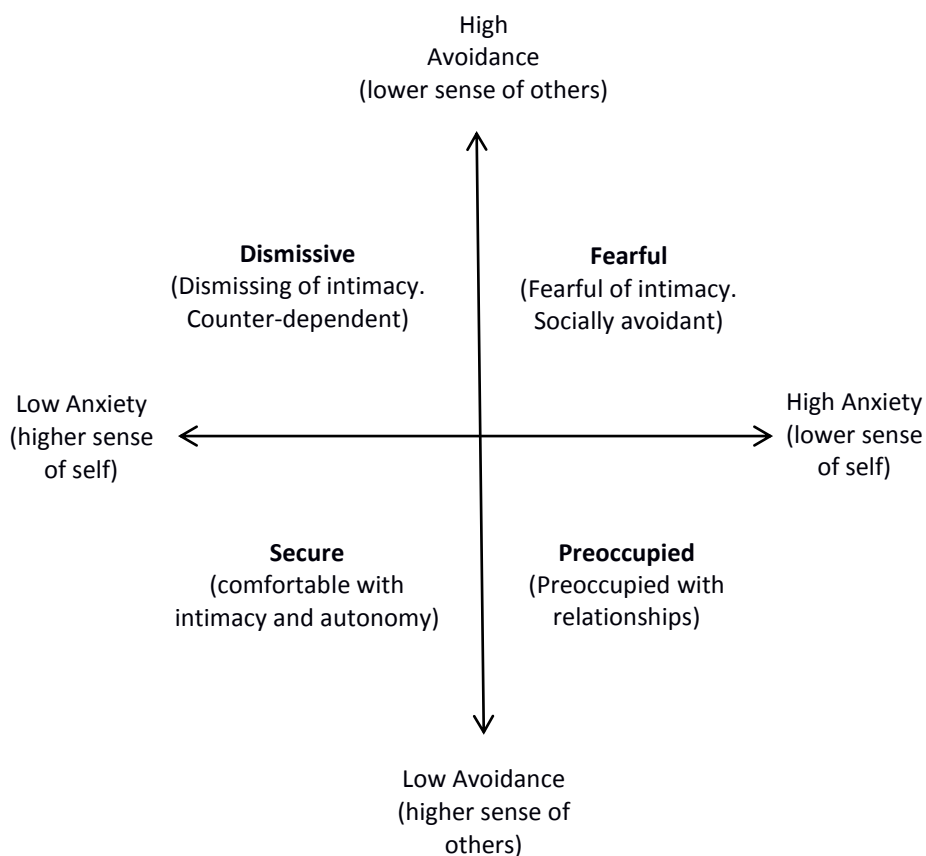


Figure 1.1.2A: Visual representation of the Model of Adult Attachment [adapted from 15,16].

1.1.3 Cancer and attachment

Attachment theory has a robust and well researched theoretical framework that can provide explanations as to why people have different strategies in managing their health [63], and seeking help and support, both when they are unsure about their physical health, but also regarding their emotional and psychological wellbeing.

Two recent articles illustrate how attachment can influence people seeking help about their physical health [18, 30]. Both found that in a sample of participants invited for routine cancer screening appointments, higher levels of attachment anxiety and attachment avoidance were related to decreased likelihood of participants attending their appointments, and increased likelihood of barriers to the screening process.

In a non-cancer sample, Vogel & Wei [31] found that attachment avoidance related to individuals dismissing their levels of distress, and being reluctant to seek help. Attachment anxiety was related to more awareness of distress and willingness to seek help. However, both attachment avoidance and anxiety were associated to perceive less social support, which related to increased distress, but more intention to seek support.

This review aims to systematically identify studies that have evaluated adult cancer patients' attachment style, alongside a self-report measure of wellbeing or adjustment. As mentioned this review has an open interpretation as to the definition of adjustment, aiming to be more inclusive than excluding of existing literature. In particular the review will aim to draw together a more coherent understanding of patterns of cancer patients' attachment in their experiences of cancer; identify gaps within the literature; and comment on practical implications for cancer services in their care and support offered to cancer patients.

1.2 Methods

This systematic review was conducted following principles outlined by guidance from the Centre for Reviews and Dissemination [20]. The author searched the following specialist databases: Medline; Science Direct; PsycINFO; CINHAL Plus; PsyARTICLES; and Academic Search Complete. The search was restricted to the terms "Attachment" and "Cancer" appearing within the title and abstract.

The following selection criteria were used to identify articles to be included in the review:

- a) published in a peer reviewed journal,
- b) published between January 1990 and May 2013,
- c) written in the English language,
- d) sampled an adult cancer population,
- e) used a measure of adult attachment.

All identified articles' abstracts were obtained, and then reviewed by the author to eliminate according those not meeting the criteria. If the abstract was ambivalent as to whether the article met the criteria, the full article was retrieved and reviewed. Copies of the full versions of the articles which met the criteria were also obtained, and references reviewed for further potential articles. Articles with no reference to attachment style; were not experimental in design; were non-English papers; and did not use cancer patients in their sample were excluded.

The articles were quality assessed, by the author, using a 16 item criteria checklist guide adapted from the 'Strengthening the Reporting of Observational Studies in Epidemiology' (STROBE) statement [21]. An adapted tool was chosen to be used due to the variations and heterogeneous nature of the articles identified for inclusion. Shadowing a quality interpretation technique detailed by Van de Kooy and colleagues [74], the articles were given a total score out of 16, and equivalent percentage of criteria achieved. Classifications of quality were set as: Low quality (<40%); Moderate quality (40-60%); and High quality when greater than 60%. All 25 articles achieved 80% of the criteria. Two general areas of weakness were identified, with 18 articles (72%) failing to address potential bias in their studies, and 19 (76%) not discussing their management of missing data (an article quality review data table is available in Appendix B).

Data were also extracted from the articles to include in summary tables (Appendix C). Information extracted from articles included: where the study was conducted; the attachment measures used; the names of all other psycho-social self-report measures used; the sample size; characteristics of the sample; the criteria for the sample; the cancer groups; the design/methodology of the studies; analysis used; and a summary of the findings; accompanied by author notes on limitations.

1.3 Results

1.3.1 Number of studies identified and included

In summary the review identified 3,831 references as potentially relevant. After review of titles and abstracts of the papers, 888 articles were removed as duplications, and 2804 articles were excluded as their content was medically related; i.e. they were regarding cell attachment in cancer, or had a non-human sample. This left 139 potentially relevant articles, 114 of which were excluded for the following reasons:

- 1) used a non-adult cancer patient sample (e.g. ≤ 18 years of age; student sample) = 39,
- 2) did not use a measure of adult attachment style = 38,
- 3) were not empirical papers = 23,
- 4) not published in peer-review journals = 14.

This left 25 peer reviewed published articles, which measured adult cancer patients' attachment style. Figure 1.3.1A shows a flow diagram of the identification process.

1.3.2 Characteristics of the included studies

All of the 25 papers utilised quantitative designs. Six were longitudinal in design [41, 40, 57, 55, 52, 49], with the remaining 19, cross-sectional. None of the studies were randomised control trials. Sixteen articles (64%) presented original data. Three of these stated they were reporting data collected as part of wider studies [38, 41, 59], however their 'wider studies' did not meet the criteria to be included within this review.

Two articles with the same lead author [50, 53] were noted to present numerically identical statistics, despite no statement that the later article is a secondary analysis of data obtained from the initial study. It is thought therefore that these articles are presenting results from the same data.

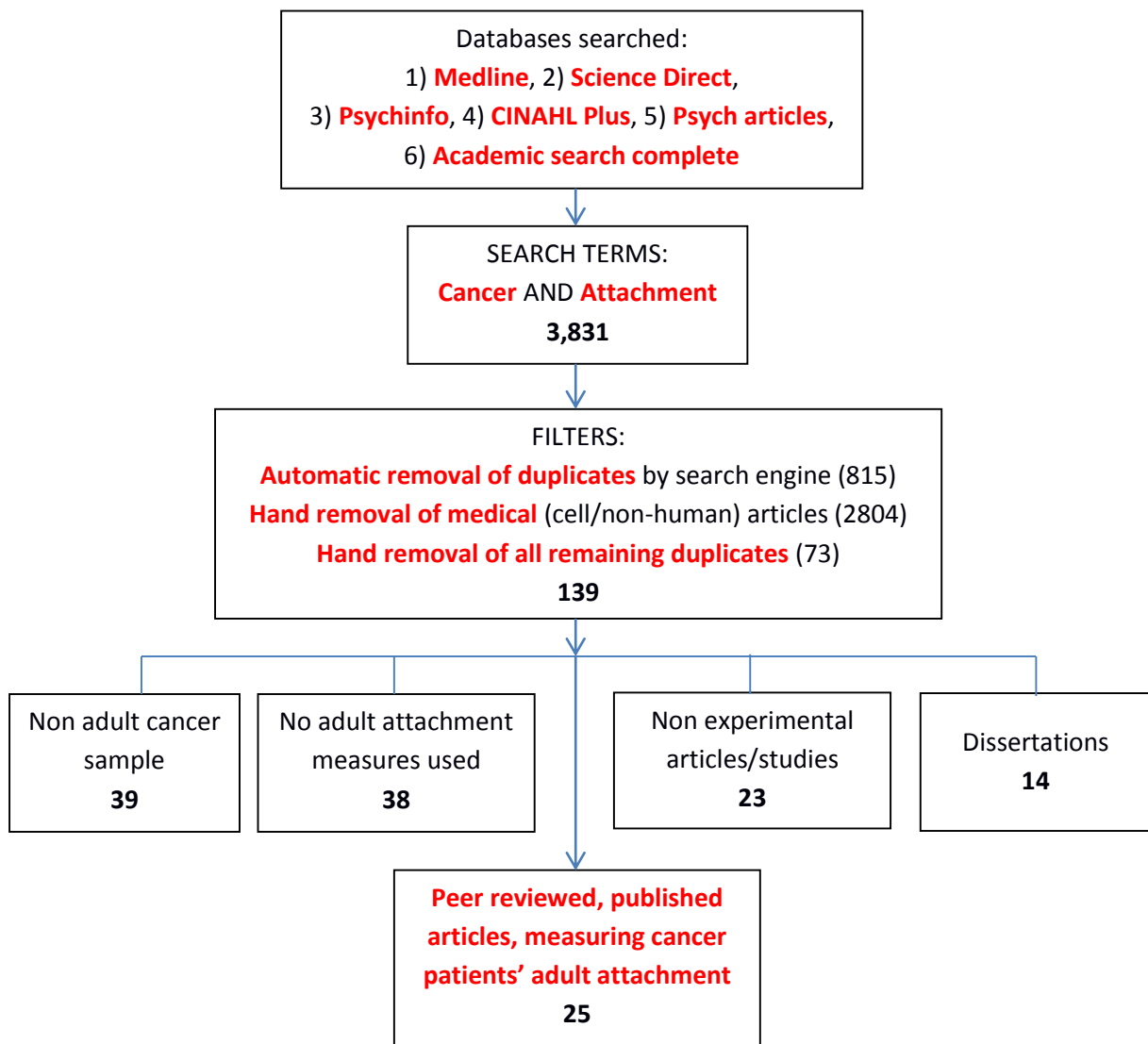


Figure 1.3.1A: Flow chart showing the process of the identification of the 25 articles reviewed.

The seven remaining articles [44, 45, 49, 51, 52, 57; 60] report data collected as part of a study investigating cancer patients' Willingness to Live (WTL). The original WTL paper [64] is not included in this review as it did not report any findings regarding attachment style.

The 25 studies were conducted across 10 countries from four continents of the world. Table 1.3.2A summarises the data regarding the location of the studies. It is important to note that one of the articles [60] has been categorised as being conducted in Canada as it was a secondary analysis of data collected for the WTL study, in Canada, however the main author is based in Israel.

Table 1.3.2A Table showing the location of the studies included in the review

Continent	Country	Number of studies	%age of studies	Studies
North America (64%)	Canada	9	36%	[38, 44, 45, 49, 51, 52, 57, 60, 62]
	USA	7	28%	[47, 50, 53, 55, 56, 59, 61]
Europe (24%)	UK	2	8%	[42, 43]
	Netherlands	1	4%	[41]
	Italy	1	4%	[39]
	Germany	1	4%	[54]
	Sweden	1	4%	[58]
Asia (8%)	Israel	1	4%	[46]
	Taiwan	1	4%	[40]
Oceania (4%)	Australia	1	4%	[48]

1.3.3 Studies' sample characteristics

Sample sizes ranged from 38 to 406. Four studies reported attachment styles from both cancer patients and their spouses [59-62]. Four studies reported on comparison groups: the two Tacón articles [50, 53] compare breast cancer patients with controls; one article compares breast cancer patients with patients with ulcers, and patients with alopecia [54]; and another article compares three groups of couples, couples with no diagnosis of cancer, couples where the wife had a breast cancer diagnosis, and couples where the husband had a colorectal cancer diagnosis.

Mean ages of cancer patients were reported by all 25 studies, and were between 45 (standard deviation [SD] = 5.8) and 66 (SD = 11.36) years of age.

Ten articles included female only cancer patients [40, 42, 43, 50, 53, 54, 55, 56, 58, 61]; of the remaining fifteen articles seven had a majority of females ranging from 55- 83% of samples [38, 39, 41, 46, 47, 60, 62], and eight articles reported majority of male participants in 57- 87% of their samples [44, 45, 48, 49, 51, 52, 57, 59].

Reporting of other demographical information of participants was inconsistent in articles. The majority of articles reported marital status, albeit with varying terminology, with only six completely omitting this data [41, 42, 43, 47, 51, 58]. In four studies, 100% of cancer patients were

married/co-habiting/in a long-term relationship, and it was these studies that reviewed both patients' and spouses' attachment orientation [59-62]. The data in the remaining 15 articles, all reported at least two thirds of the patients were married/co-habiting/in a long-term relationship, (range 67-94%).

With regards to ethnicity, the two articles conducted in the UK [42, 43] reported patient ethnicity as 99% White British. Two American articles report their samples as being 98% White [50, 53]; another identified 95% of their sample as Caucasian [56]; the patients in the Canadian study were 80% Caucasian [38]; the Australian study reported 98% Caucasian [48]; and the Israeli paper reported 71% of their patients were "native" to Israel.

Level of education and employment were reported in six and seven articles, respectively. Unemployment was recorded as low as 8% [40], and as high as 64% [39], with the other five articles reporting unemployment between 30-46% [46, 47, 50, 53, 56]. Five articles reported the percentage of patients having completed high school. This ranged between 43 and 86% [39, 40, 44, 49, 52]. One article reported that 67% of the study's cancer participants (N=54) had completed a degree.

Frequently cancer diagnoses were part of studies inclusion/exclusion criteria. Eight studies stipulated that the cancer diagnosis must have been the patients' first cancer diagnosis, and it was their primary cancer [40-43, 47, 55-56, 61]. Other diagnosis related inclusion criteria included that the cancer was advanced [38, 48]; that the cancer was a reoccurrence [62]; there were and were not metastases [45 and 46 respectively]; and time since diagnosis.

Studies also stipulated different specific time periods post discharge for inclusion into the study. Six months post diagnosis was used by two articles [50, 53], one article stipulated one year post discharge [46], and one article simply wanted participants to have completed treatments and be in remission. Only nine (36%) articles reported data about the length of time since patients received their diagnosis in their results [38, 40, 42, 47, 48, 50, 53, 57, 59]. Two articles had patients

in their sample that had been diagnosed within 2 weeks [42, 48], with one article having 72% of the sample having received their diagnosis less than two weeks previously [42]. The maximum length of time since diagnosis noted in the articles was 10 years [48], with the means reported ranging between 18 months [59] and 4.5 years [47].

Eleven of the articles had patients all with the same cancer diagnosis, Melanoma [46]; Breast cancer [40, 42, 43, 50, 53, 54, 58]; Ovarian cancer [55, 56]; and Lung cancer [59]. The seven articles using data from the Willingness To Live project [44, 45, 49, 51, 52, 57, 60] all had patients with either Lung or Gastrointestinal cancer diagnoses. One other article had patients with just two different cancer diagnoses, breast and colorectal cancer [61]. The remaining seven articles included patients who had one of a range of cancer diagnoses [35, 38, 39, 41, 48, 62].

Given the wide range of inclusion criteria and study design heterogeneity, along with participant variations, and differences in the information reported within the results of the studies, synthesis of the findings is difficult. To further add to this challenge is the wide range of different attachment and self-report adjustment/wellbeing measures used within the studies.

1.3.4 Attachment measures

Eleven different measures of adult attachment style were used. Two (8%) articles used interviewing methods of establishing attachment style [41, 61], with the remaining 23 articles (92%) using self-report questionnaires.

Eighteen (72%) of the articles interpreted patients' attachment orientations dimensionally, with the remaining seven (28%) using categorical classifications of adult attachment style.

The two interview techniques used were: Rochester Attachment Interview [61] and Attachment style interview [41]. They both utilised categorical classifications of attachment style. The remaining articles that used self-report measures and categorical classifications of attachment,

used the Relationship Scale Questionnaire (RSQ) and Relationship Questionnaire (RQ) [42]; Measure of attachment qualities [47]; Social Provisions Scale – social attachment subscale [55, 56]; the Adult Attachment Prototype Rating [54].

In the remaining articles, which report patients' attachment orientations dimensionally, 12 (48%) studies used versions of the Experiences of Close Relationship scale (ECR) [38, 40, 44, 45, 46, 49, 51, 52, 57, 59, 60,62]. One article used the Relationship Questionnaire (RQ) [48], another the Relationship Scale Questionnaire (RSQ) [39], with another article using both the RQ and RSQ, [43]. The Adult Attachment Questionnaire, was reported in two articles, [50, 53], utilised alongside "Attachment history paragraphs" within one of those articles [50]. Lekander et al. [58] used the Interview Schedule of Social Interaction –Social attachment subscale.

1.3.5 Reported attachment orientations

Within the studies using categorical attachment styles, Holwerda et al. [41] reported 85 of 130 patients in their sample (65%) were securely attached, thus 45 (35%) insecurely attached. Pegman et al. [42] report 47 of 133 (35%) patients were classified as securely attached, with the remaining 86 (65%) insecurely attached. Schmidt and colleagues [47] fail to report the patients' attachment orientations. Lutgendorf et al [55] used the same social attachment measure as Costanzo and colleagues [56]. Costanzo et al [56] note their patients were classified by having high and low social attachment, but do not provide figures as to the ratio. Lutgendorf et al [55] note that 73 (43%) were classified as having low social attachment, and consequently the remaining 95 patients (57%) were classified as high social attachment. Schmidt et al [54] report that their 54 breast cancer patients' attachment styles were distributed as follows: secure (39%); ambivalent (23%); avoidant (19%); and mixed (29%). The final categorical study [61], reports the 18 breast cancer patients' attachment orientations as: secure (33%); anxious (17%); and avoidant (50%). Their 10 colorectal patients were: secure (50%); anxious (30%); and avoidant (20%). Consequently within

the categorical attachment articles, significant variance is notable between the secure and non-secure attachment styles, thus drawing meaningful conclusions from across these articles will be challenging.

The majority of the articles reporting attachment orientation dimensionally, do so with reference to attachment avoidance (internal working model of how we see others), and attachment anxiety (internal working model of how we perceive ourselves). However, as reported above, a wide range of measures have been used within the studies, which does not aid the task of synthesising the results.

The measure used by Lekander and colleagues [58] means patients are ascribed a score between 0 and 16 on a social attachment subscale, with higher scores representing greater social attachment; they report the mean for the cancer patients as 13. There is no information within the study to establish whether this was consistent with estimations of wider population or not.

The two articles written by Tacón [50, 53] refer to attachment avoidance orientation as established by the Adult Attachment Questionnaire. The later paper [50] does not offer any means for the attachment avoidance scale, with the earlier paper [53] noting that the cancer patients attachment avoidance mean was 32.71 (SD = 9.9). Neither article comments on the other dimension (attachment ambivalence) the scale generates.

The Relationship Scale Questionnaire, used by Cicero and colleagues [39], reported their patients as having a mean of -1.61 (SD = 1.74) on attachment anxiety, and 0.08 (SD = 2.14) on attachment avoidance. Both Hunter et al [48] and Clark et al [43] who used the RQ, and both the RQ and RSQ, respectively, fail to report the mean scores. A lack of reporting of means of patients' attachment orientation is also seen in Schmidt et al [47] article.

Of the remaining articles, which used versions of the ECR, again, three [46, 49, 62] fail to report mean scores of patients' measured attachment anxiety and avoidance. The remaining nine

however do report both attachment avoidance and anxiety orientation means. Table 1.3.5A lists the articles' means and standard deviations. The levels of attachment avoidance and anxiety appear to be consistent with a community, non-cancer, normative sample [72].

Table 1.3.5A: Table listing the means and standard deviations of attachment orientations from the versions of the ECR use by each of the articles.

Article [ref]	N	Attachment Avoidance Mean (SD)	Attachment Anxiety Mean (SD)
Gauthier et al [38]	180	3.07 (0.96)	2.56 (1.09)
Hsiao et al [40]*	76	51.11 (24.44)	50.46 (23.05)
Rodin et al [44] ^o	326	3.00 (0.90)	2.40 (1.00)
Lo et al [45] ^o	342	3.10 (nr)	2.40 (nr)
Rodin et al [51] ^o	406	3.05 (0.93)	2.40 (1.01)
Lo et al [52] ^o	353/354	2.80 (1.10)	2.40 (1.20)
Ellis et al [57] ⁺	Group 1 - 217 Group 2 - 109	3.00 (1.00) 3.10 (0.80)	2.30 (1.00) 2.70 (1.10)
Porter et al [59]	127	2.17 (1.10)	2.43 (1.25)
Braun et al [60] ^o	110	3.07 (0.93)	2.38 (0.90)

* This article gave patients the ECR on five occasions. The results within the table here are from the first time point. Also note the scores have not been converted as have the other scores, and are thus much higher.

⁺ Two groups are reported here as the original article gives information on patients referred for professional psychological support (Group 2); and patients not referred for further support. nr = Not reported

^o Articles part of the Willingness To Live series of papers

1.3.6 Relationships between Attachment Orientation and Outcome Measures

The articles reviewed used a range of measures. They can be loosely clustered into three groups: Outcome measures of more physical factors; measures of personal wellbeing; and measures of relational/interpersonal factors. All studies used at least one additional measure alongside an attachment measurement tool. Ninety-six percent used more than one outcome measure, from at least two of the three groups of measures.

Outcomes measures of physical factors include level of pain [38, 59, 45, 51, 52], physical functioning [41, 51, 52], and physical health [38, 44, 48, 57, 62]. Some articles had specific physical measures, considering factors such as sleep [40], salivary cortisol [40], immune status [58], Interleukin -6 levels (IL-6) [56]. Attachment anxiety and avoidance were found to be positively correlated with sleep problems, [40], but had no relationship with salivary cortisol levels [40]. The

studies looking at Interleukin levels and Immune status found that patients with lower levels of attachment anxiety and avoidance (i.e. more securely attached attachment orientations) were more likely to, positively, have lower IL-6 levels [56] and better immune statuses, with higher numbers of white blood cells, and less percentage of lymphocytes present [58]. This is consistent with the feedback from articles measuring physical health, physical functioning, and pain, which were tended to be reported as worse when attachment anxiety and avoidance were greater. Interestingly Lutgendorf et al [55] found that patients who perceived themselves as having higher levels of social attachment had longer survival times.

The personal wellbeing measures used included measures for distress and depression. 10 articles used versions of the Beck's Depression Inventory [40, 44, 45, 49, 51, 52, 57, 59, 61, 62], with five further articles using four alternative measures [41, 42, 43, 55, 56]. Overall, data within these studies suggest that greater attachment anxiety and/or avoidance (or attachment insecurity) were associated with patients' levels of distress and depression [40, 41, 44, 45, 48, 49, 51, 52, 54, 55, 57, 59, 62]. Nine studies measured cognitive functioning [38, 44, 45, 46, 48, 49, 51, 52, 62] however no relationship data with attachment were reported, as whilst measured, cognitive functioning was not considered in any of the articles' hypotheses, and was utilised more as an inclusion/exclusion criteria. Other personal outcome measures included those looking at patients' self-esteem [49, 51, 52, 57]; levels of hopelessness [51, 52, 57, 62]; adjustment [39, 46, 47, 61]; and coping strategies, which included general strategies [47, 54], levels of hardiness [46], cognitive appraisals [46], spirituality [45, 57], and emotional control [53]. Low levels of spirituality were found to be correlated with greater attachment security [45, 47]. Greater attachment security (less attachment avoidance and anxiety) were found to be correlated with positive coping strategies, such as positive reframing and active coping [47], and in turn regression analyses showed attachment security accounted for significant level of influence over post traumatic growth, even when controlling for numerous demographic, and cancer related factors [47]. Attachment avoidance was found to be significantly correlated with emotional control [53], while Schmidt et al found that cancer patients with lower

levels of attachment anxiety and avoidance were more likely to seek social support as a coping strategy [54].

Social support, from significant others and health professionals is a main theme in the interpersonal/relational group of outcome measures used. Across the articles 20 separate measures were used that requested patients to rate the quality of relationships with significant others, including current/recent spouses, early attachment figures [43, 50], and health professionals [41, 42, 43]. The measures included: measures of trust [41]; marital satisfaction, quality and distress [41, 59, 62]; relationship context [38]; and perceived social support [39, 44, 47, 49, 52, 54, 56, 57]. Whilst the number of different measures used again makes it difficult to summarise findings, as a number of articles have considered the perception of support and interaction between patients and others, a brief overview is possible.

Perceptions of relationships with health professionals were more negative when patients were less securely attached and had higher levels of attachment anxiety and avoidance [41, 42, 43]. This includes that in comparison to more secure patients, less secure patients have less trust in their health professional [41]; less satisfaction with the care received [41]; perceived poorer working alliance [42]; less perception of support available [43]; and are more likely to perceive health professionals being 'difficult' [43].

Three articles found that both patients' attachment anxiety and avoidance were negatively correlated with amount of social support perceived [44, 48, 49]; while Cicero and colleagues [39] found that only patients' attachment anxiety was correlated with poorer levels of perceived support.

Within current significant relationships, patients' attachment anxiety has been found to correlate with their spouses own attachment anxiety and avoidance [60]; and patients reporting less social wellbeing and lower marital satisfaction [59]. Higher levels of attachment avoidance in patients was found to be associated with spouses perceiving the patient to have higher levels of pain

and worse overall wellbeing, in comparison to patients with lower attachment avoidance [59]. Spouses were more likely to offer patients a compulsive caring style when patients' attachment avoidance was higher, but less likely to use such a caring technique when the patient has more attachment anxiety [60].

When patients' reported higher attachment avoidance orientations, they also tended to report lower marital quality [59]; marital satisfaction [61]; and perceive their spouses' as more punishing [38]. Two articles report contradictory findings of the relationship between male cancer patients' attachment orientation and the impact on their wife's wellbeing. Shields et al [61] report that their data suggests that the more secure the male patient, the more distress is shown by their spouse, who reports lower mood and worse perceptions of husband's health. Meanwhile McLean et al [62] report that if a male cancer patient has greater attachment avoidance, then their wife is more likely to report distress.

1.4 Discussion and Conclusion

1.4.1. Discussion

The number of empirical studies identified to be included in this review, initially appeared relatively small. However, the heterogeneity of the methodologies of the studies, the measures used and aims and goals, revealed a wealth of data difficult to synthesise due to the variations. Articles with more consistent methodologies, and utilised similar measures, reported findings from what is understood to be the same data set (Willingness to Live studies)

The presence of attachment as a variable across the articles suggest it is considered a supportive and useful theoretical model to help health professionals and researchers understand cancer patients' experiences and adjustment to their diagnosis of cancer.

The aim of this review was to look how cancer patients' attachment orientations were related to different adjustment and wellbeing outcomes, however the wide catchment criteria meant articles focussing on the relationship between cancer patients and their spouses, and cancer patients and their health professionals were included, as well as articles looking to establish theoretical models and develop psycho-social measures.

Whilst there were four studies with longitudinal designs, there is little evidence available as to the effect of attachment on cancer patient's wellbeing over time. Indeed this is an area of research that needs to be explored further. The articles within the review had sample of patients at different time points within their cancer journey and thus attempting comparisons of data between studies would have been futile, due to bias that may occur through the different stages of adjustment the patients could have been experiencing. For example, would it be fair to compare experiences of patients recruited in Pegman et al. [42] when 72% of the sample had received their diagnosis in the previous two weeks, with patients in the study by Schmidt et al [47] had had their diagnosis for 4.5 years on average; or indeed compare the patients in Pegman's study with the patients who had end stage cancer [48]?

Existing literature on attachment orientations and help seeking behaviours, separate from cancer research, appears to show consistent findings to those summarised here [70]; for example, the perception of support available [66, 68, 71] and coping strategies utilised [67] by people with differing attachment orientations. It is also generally consistent with the means and standard deviations offered by the attachment measures used [72]. This review also provides support for the relationship between attachment orientation with physical health and wellbeing, as discussed by Maunder and colleagues [22].

Overall this review has further methodological limitations. The selection criteria used appeared to have unintentionally excluded qualitative research which may have offered some more narrative as to the rationale for some of the information offered by the studies reviewed. The pool

of articles reviewed has drawn upon a wide range of methodological designs, making synthesis of the data challenging. Whilst more methodologically robust designs such as randomised controlled trials may have been easier to draw conclusions from, it is recognised that conducting research in a clinical area, such as cancer treatment means such research designs are challenged ethically. The measurement of attachment and the reporting of the data obtained were also subject to great variation across the studies. It would be useful for further research to possibly look at reviewing and validating specific measurement tools for use within future cancer research. For example the attachment tool most commonly used in the articles reviewed in the this paper was the ECR [72], thus future studies pursuing questions around attachment may be benefitted to use the ECR as so they can utilise existing literature to support and validate their findings. An additional benefit of the ECR, is, whilst research has started to steer away from using categorical attachment orientations, the dimensions can be used to calculate these, thus offering a measure that is flexible to compare with many previous studies referring to categorical and dimensional attachment orientations.

Despite this review's limitations, another similar systematic literature review, published after this literature review was started, by Nicholls et al. [73], identified just 15 papers. Their review had more refined inclusion criteria with regards to attachment, in that it had to specifically be relationship attachments measured in the studies. Another difference was that their review also included studies which only reported cancer patients' caregiver's attachment style. In total the reviews shared nine articles, with the other six having not met the criteria for inclusion to this review as they either did not include cancer patients' attachment style, or their sample was not of an adult cancer patient. Both reviews have given similar cautious summaries of the information offered within the reviewed articles.

1.4.2 Conclusion

Whilst not many of the studies shared similarities, and the author looked at different ways to try and synthesise the data, it is difficult to draw clear conclusions. Thus the conclusions made are made tentatively and cautiously.

In summary, the articles in this review appear to most consistently report that less secure attachment orientations, i.e. People with greater attachment anxiety and attachment avoidance are more likely to struggle in their adjustment to cancer. The studies suggest they are less likely to have favourable physical/medical results, are more susceptible to higher levels of depression, and less effective coping strategies. The review also suggest that less secure patients are more likely to perceive less social support from social peers, family and professionals, and more likely to report disharmony within such relationships. There is some evidence that there are differences between the gender of patients and this reminds the author and reader that further research is recommended to look in more detail at these.

1.4.3 Practice Implications

This review suggest that the wealth of information available in existing literature about cancer patients' attachment orientations, can help build an understanding as to cancer patients' adjustment to their diagnosis and treatment. Whilst this review has focussed on diagnosed cancer patients adjustment, the understanding of health behaviours and their relationship with attachment styles may support the development of services in improving patient willingness to access support both prior to a cancer diagnosis (for example seeking help due to health concerns, and attending cancer screening appointments), and after.

Psychological theories explaining the seeking of support may also be beneficial to consider, as research is needed to establish how services can best provide patients with the support they want

and need; especially in light of suggestions that distressed patients are not accessing psychological support services, and thus services are needing to consider what can help change this.

Conflict of interest

The author would like to declare they have no conflict of interest with regard to this paper.

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1.5 References

- [1] Jacobsen, P.B. (2007). Screening for Psychological Distress in Cancer Patients: Challenges and Opportunities. *Journal of Clinical Oncology*, 25(29), 4526-4527.

- [2] Office for National Statistics (2011). Mortality Statistics: Deaths registered in England and Wales (Series DR), 2010. Available at <http://www.statistics.gov.uk/hub/index.html> last accessed on 27th May 2012.

- [3] National Institute for Health and Clinical Excellence (2006). *Guidance on Improving Supportive and Palliative Care for Adults with Cancer*. London: National Institute for Health and Clinical Excellence.

- [4] National Cancer Institute. (2001). Adjustment to cancer: Anxiety and Distress (PDQ). Available at www.cancer.gov/cancertopics, last accessed September 2015.

- [5] National Comprehensive Cancer Network (1999). NCCN practice guidelines for the management of psychosocial distress. *Oncology*, 13. 113-147.
- [6] Bowlby, J. (1969). *Attachment and loss: Vol. 1. Attachment*. New York: Basic Books.
- [7] Brennan, J. (2001). Adjustment to cancer – coping or personal transition? *Psycho-oncology*, 10. 1-18.
- [8] Bowlby, J. (1973). *Attachment and loss: Vol. 2. Separation, anxiety and anger*. New York: Basic Books.
- [9] Ainsworth, M., D. (1989). Attachments beyond infancy. *The American Psychologist*, 44(4). 709-16.
- [10] Cassidy, J., & Shaver, P. R. (2002). *Handbook of Attachment: Theory Research and Clinical Application*. New York: Guilford Press.
- [11] Hazan, C., & Shaver, P. R. (1987). Romantic love conceptualised as an attachment process. *Journal of Personality and Social Psychology*, 52(3). 511–524.
- [12] Hazan, C., & Shaver, P. R. (1990). Love and work: An attachment theoretical perspective. *Journal of Personality and Social Psychology*, 59. 270-280.
- [13] Bradley, J. M., & Cafferty, T. P. (2001). Attachment among older adults: current issues and directions for future research. *Attachment and Human Development*, 3 (2). 200-221.
- [14] Ciechanowski, P. S., Walker, E. A., Katon, W. J., & Russo, J. E. (2002). Attachment Theory: A Model for Health Care Utilization and Somatization. *Psychosomatic Medicine*, 64. 660-667.
- [15] Bartholomew, K. (1990). Avoidance of intimacy: An attachment perspective. *Journal of Social and Personal Relationships*, 7. 147-178.

- [16] Bartholomew, K., & Horowitz, L. M. (1991). Attachment Styles Among Young Adults: A Test of a Four-Category Model. *Journal of Personality and Social Psychology*, 61 (2). 226-244.
- [17] Daniel, S. (2010). Adult attachment and individual psychotherapy: a review. *Clinical Psychology Review*, 26. 968–84.
- [18] Hill, E. M., & Gick, M. L., (2015). Attachment and barriers to cervical screening. *Journal of Health Psychology*, 18 (5). 648-657.
- [19] Cherry, M. G., Fletcher, I., & O’Sullivan, H. (2013). The influence of medical students’ and doctors’ attachment style and emotional intelligence on their patient–provider communication. *Patient Education and Counseling*, 93(2). 177-187.
- [20] Centre for Reviews and Dissemination. (2009). CRD’s guidance for undertaking reviews in healthcare. York: CRD, University of York.
- [21] Von Elm, E., Altman, D. G., Egger, M., Pocock, S. J., Gøtzsche, P. C., & Vandenbroucke, J. P. (2008). The strengthening the reporting of observational studies in epidemiology (STROBE) statement: guidelines for reporting observational studies. *Journal of Clinical Epidemiology*, 61. 344-349.
- [22] Maunder, R. G., & Hunter, J. J. (2008). Attachment relationships as determinants of physical health. *Journal of the American Academy of Psychoanalysis and Dynamic Psychiatry* 36. 11–32.
- [23] Carlson, L. E., & Bultz, B. D. (2003). Cancer distress screening. Needs, models, and methods. *Journal of Psychosomatic Research*, 55. 403-409.
- [24] Holland, J. C., & Alicim, Y. (2010). Management of distress in cancer patients. *The Journal of supportive oncology*, 8(1). 4-12.
- [25] Kendall, J., Glaze, K., Oakland, S., Hansen, J., Parry, C. (2011). What do 1281 distress screeners tell us about cancer patients in a community cancer center. *Psychooncology*, 20(6). 594-600.

- [26] Iwantani, T., Matsuda, A., Kawabata, H., Miura, D., & Matsushima, E. (2012). Predictive factors for psychological distress related to diagnosis of breast cancer. *Psycho-oncology*, [e-pub ahead of print, last accessed 17th April 2012].
- [27] Zabora, J., BrintzenhofeSzoc, K., Curbow, B., Hooker, C., & Piantadosi, S. (2001). The prevalence of psychological distress by cancer site. *Psycho-oncology*, *10*(1). 19-28.
- [28] Kroenke, C. H., Kubansky, L. D., Schernhammer, E. S., Holmes, M.D. & Kawachi, I. (2006). Social networks, social support and survival after breast cancer diagnosis. *Journal of Clinical Oncology*, *24*(7). 1105-1111.
- [29] Engel, G. (1977). The need for a new medical model: a challenge for biomedicine. *Science*, *196*. 129–136.
- [30] Tuck, N. L., & Consedine, N. S. (2015). Breast cancer screening: the role of attachment. *Psychology, Health & Medicine*, *20* (4). 400-9.
- [31] Vogel, D. L. & Wei, M. (2005). Adult Attachment and Help-Seeking Intent: The Mediating Roles of Psychological Distress and Perceived Social Support. *Journal of Counseling Psychology*, *52*(3). 347-357.
- [32] Waller, A., Williams, A., Groff, S. L., Bultz, B. D., & Carlson, L. E. (2011). Screening for distress, the sixth vital sign: examining self-referral in people with cancer over a one-year period. *Psycho-oncology*, *22*(2). 388-395.
- [33] Baker-Glenn, E. A., Park, B., Granger, L., Symonds, P., & Mitchell, A. J. (2011). Desire for psychological support in cancer patients with depression or distress: validation of a simple help question. *Psycho-oncology*, *20*. 525-531.
- [34] Department of Health (2011). *Improving Outcomes: A Strategy for Cancer*. London: HMSO.

- [35] Hill, J., Holcombe, C., Clark, L., Boothby, M. R., Hincks, A., Fisher, J., Tufail, S., & Salmon, P. (2010). Predictors of onset of depression and anxiety in the year after diagnosis of breast cancer. *Psychological Medicine*, 41(7). 1429-1436.
- [36] Merckaert, I., Livert, Y., Messin, S., Milani, M., Slachmuylder, J-L., Razavi, D. (2010). Cancer patients' desire for psychological support: prevalence and implications for screening patients' psychological needs. *Psycho-oncology*, 19. 141-149.
- [37] Steginga, S. K., Campbel, A., Ferguson, M., Beeden, A., Walls, M., Cairns, W., & Dunn, J. (2008). Socio-demographic, psychosocial and attitudinal predictors of help seeking after cancer diagnosis. *Psycho-oncology*, 17. 997-1005.
- [38] Gauthier, L.R., Rodin, G., Zimmermann, C., Warr, D., Librach, S. L., Moore, M., Shepherd, F. A., & Gagliese, L. (2012). The communal coping model and cancer pain: the roles of catastrophizing and attachment style. *The Journal Of Pain*, 13 (12). 1258-68.
- [39] Cicero, V., Lo Coco, G., Gullo, S., & Lo Verso, G. (2009). The role of attachment dimensions and perceived social support in predicting adjustment to cancer. *Psycho-Oncology*, 18 (10). 1045-1052.
- [40] Hsiao, F-H., King-Jen, C., Wen-Hung, K., Chiun-Sheng, H., Yu-Fen, L., Yu-Ming, L., Guey-Mei, J., Rainbow, T. H. H., Siu-Man, N., & Cecilia L. W. C. (2012). A longitudinal study of cortisol responses, sleep problems, and psychological well-being as the predictors of changes in depressive symptoms among breast cancer survivors *Psychoneuroendocrinology*, *In press*, available on-line.
- [41] Holwerda, N., Sanderman, R., Pool, G., Hinnen, C., Langendijk, J. A., Bemelman, W. A., Hagedoorn, M., & Sprangers, M. A. G. (2013). Do patients trust their physician? The role of attachment style in the patient-physician relationship within one year after a cancer diagnosis. *Acta Oncologica*, 52 (1). 110-117.
- [42] Pegman, S., Beesley, H., Holcombe, C., Mendick, N., Salmon, P. (2011). Patients' sense of relationship with breast cancer surgeons: The relative importance of surgeon and patient

- variability and the influence of patients' attachment style. *Patient Education & Counseling*, 83 (1). 125-128.
- [43] Clark, L., Beesley, H., Holcombe, C., & Salmon, P. (2011). The influence of childhood abuse and adult attachment style on clinical relationships in breast cancer care. *General Hospital Psychiatry*, 33 (6). 579-586.
- [44] Rodin, G., Walsh, A., Zimmermann, C., Gagliese, L., Jones, J., Shepherd, F. A., Moore, M., Braun, M., Donner, A., & Mikulincer, M. (2007). The contribution of attachment security and social support to depressive symptoms in patients with metastatic cancer. *Psycho-Oncology*, 16 (12). 1080-1091.
- [45] Lo, C., Lin, J., Gagliese, L., Zimmermann, C., Mikulincer, M., & Rodin, G. (2010b). Age and depression in patients with metastatic cancer: the protective effects of attachment security and spiritual wellbeing. *Ageing & Society*, 30 (2). 325-336.
- [46] Hamama-Raz, Y. (2012). Does psychological adjustment of melanoma survivors differs between genders? *Psycho-Oncology*, 21 (3). 255-263.
- [47] Schmidt, S. D., Blank, T. O., Bellizzi, K. M., & Park, C. L. (2012). The relationship of coping strategies, social support, and attachment style with posttraumatic growth in cancer survivors. *Journal of Health Psychology*, 17 (7). 1033-1040.
- [48] Hunter, M. J., Davis, P. J., & Tunstall, J. R. (2006). The influence of attachment and emotional support in end-stage cancer. *Psycho-Oncology*, 15 (5). 431-444.
- [49] Lo, C., Walsh, A., Mikulincer, M., Gagliese, L., Zimmermann, C., & Rodin, G. (2009). Measuring attachment security in patients with advanced cancer: psychometric properties of a modified and brief Experiences in Close Relationships scale. *Psycho-Oncology*, 18 (5). 490-499.
- [50] Tacón, A. M. (2003). Attachment experiences in women with breast cancer. *Family & Community Health*, 26 (2). 147-56.

- [51] Rodin, G., Lo, C., Mikulincer, M., Donner, A., Gagliese, L., & Zimmermann, C. (2008). Pathways to distress: The multiple determinants of depression, hopelessness, and the desire for hastened death in metastatic cancer patients *Social Science & Medicine*, 68 (3), 562-569.
- [52] Lo, C., Zimmermann, C., Rydall, A., Walsh, A., Jones, J. M., Moore, M. J., Shepherd, F. A., Gagliese, L., & Rodin, G. (2010a). Longitudinal study of depressive symptoms in patients with metastatic gastrointestinal and lung cancer. *Journal Of Clinical Oncology*, 28 (18), 3084-9.
- [53] Tacón, A. M., Caldera, Y. M., & Bell, N. J. (2001). Attachment Style, Emotional Control, and Breast Cancer. *Families, Systems & Health*, 19 (3), 319.
- [54] Schmidt, S., Nachtigall, C., Wuethrich-Martone, O., & Strauss, B. (2002). Attachment and coping with chronic disease. *Journal of Psychosomatic Research*, 53 (3), 763.
- [55] Lutgendorf, S. K., De Geest, K., Bender, D., Ahmed, A., Goodheart, M. J., Dahmouh, L., Zimmerman, M. B., Penedo, F. J., Lucci, J. A. 3rd., Ganjei-Azar, P., Thaker, P. H., Mendez, L., Lubaroff, D. M., Slavich, G. M., Cole, S. W., Sood, A. K. (2012). Social influences on clinical outcomes of patients with ovarian cancer. *Journal Of Clinical Oncology*, 30 (23), 2885-90.
- [56] Costanzo, E. S., Lutgendorf, S. K., Sood, A. K., Anderson, B., Sorosky, J., & Lubaroff, D.M. (2005). Psychosocial factors and interleukin-6 among women with advanced ovarian cancer. *Cancer*, 104 (2), 305-13.
- [57] Ellis, J., Lin, J., Walsh, A., Lo, C., Shepherd, F. A., Moore, M., Li, M., Gagliese, L., Zimmermann, C., & Rodin, G. (2009). Predictors of referral for specialized psychosocial oncology care in patients with metastatic cancer: the contributions of age, distress, and marital status. *Journal Of Clinical Oncology*, 27 (5), 699-705.
- [58] Lekander, M., Fürst C. J. Rotstein, S., Blomgren, H., & Fredrikson, M. (1996). Social support and immune status during and after chemotherapy for breast cancer. *Acta Oncologica*, 35 (1), 31-7.

- [59] Porter, L. S., Keefe, F. J., Davis, D., Rumble, M., Scipio, C., & Garst, J. (2012). Attachment styles in patients with lung cancer and their spouses: associations with patient and spouse adjustment. *Supportive Care In Cancer*, 20 (10). 2459-66.
- [60] Braun, M., Hales, S., Gilad, L., Mikulicer, M., Rydall, A., & Rodin, G. (2012). Caregiving styles and attachment orientations in couples facing advanced cancer. *Psycho-Oncology*, 21 (9). 935-943.
- [61] Shields, C. G., Travis, L. A., & Rousseau, S. L. (2000). Marital attachment and adjustment in older couples coping with cancer. *Aging & Mental Health*, 4 (3). 223-233.
- [62] McLean, L., Walton, T., Matthew, A., & Jones, J. (2011). Examination of couples' attachment security in relation to depression and hopelessness in maritally distressed patients facing end-stage cancer and their spouse caregivers: a buffer or facilitator of psychosocial distress? *Supportive Care in Cancer*, 19 (10), 1539-1548.
- [63] Hunter, J. J., & Maunder, R. G. (2001). Using attachment theory to understand illness behaviour. *General Hospital Psychiatry*, 23. 177-182.
- [64] Rodin, G., Zimmermann, C., Rydall, A., Jones, J., Shepard, F. A., Moore, M., Fruh, M., Donner, A., & Gagliese, L. (2007). The desire for hastened death in patients with metastatic cancer. *Journal of Pain and Symptom Management*, 33(6). 661-675.
- [65] Chopik, W. J., Edelsrein, R. A., Fraley, R. C. (2013). From the Cradle to the grave: age differences from early childhood to adult old age. *Journal of Personality*, 82. 171-183.
- [66] Ognibene, T. C., & Collins, N. L. (1998). Adult attachment styles, perceived social support, and coping strategies. *Journal of Social and Personal Relationships*, 15. 323-345.
- [67] Fraley, R.C., & Shaver, P. (1997). Adult attachment and the suppression of unwanted thoughts. *Journal of Personality and Social Psychology*, 73. 1080-1091.
- [68] Florian, V., Mikulincer, M., & Bucholtz, I. (1995). Effects of Adult Attachment Style on the Perception and Search for Social Support. *The Journal of Psychology*. 129 (6). 665-676.

- [69] Epstein, R. M. (2006). Making communication research matter: What do patients notice, what do patients want, and what do patients need? *Patient Education and Counseling*, 60. 272-278.
- [70] Cassidy, J., & Shaver, P. R. (2002). *Handbook of Attachment: Theory Research and Clinical Application*. New York: Guilford Press.
- [71] Bachman, G. F., & Bippus, A. M. (2005). Evaluations of supportive messages provided by friends and romantic partners: An attachment theory approach. *Communication Reports*, 18. 85-94.
- [72] Brennan, K. A., Clark, C.L., & Shaver, P. R., (1998). Self-report measurement of adult attachment: an integrative overview, page 46–76. In *Attachment Theory and Close Relationships*. J. A, Simpson, & W. S. Rholes (eds.). New York: Guilford Press.
- [73] Nicholls, W., Hulbert-Williams, N., & Bramwell, R. (2014). The role of relationship attachment in psychological adjustment to cancer in patients and caregiver: a systematic review of the literature. *Psycho-oncology*, 23. 1083-1095.
- [74] Van de Kooy, K., Van Hout, H., Marwijk, H., Marten, H., Stehouwer, C., & Beekman, A. (2007). Depression and the risk of cardiovascular diseases: systematic review and meta-analysis. *International Journal of Geriatric Psychiatry*, 22. 613-626.
- [75] Palmer, S. C., & Coyne, J. C. (2003). Screening for depression in medical care: pitfalls, alternatives, and revised priorities. *Journal of Psychosomatic Research*, 54. 279–87.

Bridging Section

Having reviewed the existing literature that explores the relationship of cancer patients' attachment orientation and their adjustment to their health diagnosis, it was highlighted how literature does tentatively suggest that there is a link between cancer patients' attachment orientations and the likelihood they experience distress. Specifically patients with higher attachment anxiety and/or high attachment avoidance are more likely to struggle in their adjustment, experience depression, and negatively perceive the support available to them from both significant others, and health professionals.

One of the articles reviewed found that cancer patients who had higher attachment anxiety orientations were more likely to be referred for professional psychological support (Ellis et al., 2009). It is known that fewer cancer patients access the psychological support services available to them than the number of patients identified in distress screening studies (Baker-Glenn et al., 2011; Bultz & Holland, 2006; and Merckaert et al., 2010).

Consequently there are questions as to why this is so, could it be that patient's attachment orientations are making patients unsure about accessing the support? What are patient's perceptions of accessing professional support for wellbeing? Can those perceptions be influenced by providing patients with information about available services, and the stories of patients who have accessed them?

The following empirical paper sets out to see whether these questions can be answered.

References

- Baker-Glenn, E. A., Park, B., Granger, L., Symonds, P., & Mitchell, A. J. (2011). Desire for psychological support in cancer patients with depression or distress: validation of a simple help question. *Psycho-oncology*, 20, 525-531.
- Bultz, B. D., Holland, J. C. (2006) Emotional Distress in patients with cancer: The sixth vital sign. *Community Oncology*, 3, 311-314.

- Ellis, J., Lin, J., Walsh, A., Lo, C., Shepherd, F. A., Moore, M., Li, M., Gagliese, L., Zimmermann, C., & Rodin, G. (2009). Predictors of referral for specialized psychosocial oncology care in patients with metastatic cancer: the contributions of age, distress, and marital status. *Journal Of Clinical Oncology*, 27 (5). 699-705.
- Merckaert, I., Livert, Y., Messin, S., Milani, M., Slachmuylder, J-L., Razavi, D. (2010). Cancer patients' desire for psychological support: prevalence and implications for screening patients' psychological needs. *Psycho-oncology*, 19. 141-149.

Chapter II

Empirical Paper²

Are changes in patients' attitudes towards seeking professional psychological help mediated by attachment style?

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Abstract

Objective: To explore 1) the influence of an evidence-based information booklet about the potential emotional impact of cancer, on patients' attitudes towards seeking professional psychological help; and 2) the relationship between changes in attitudes towards help seeking and patients' attachment orientations.

Methods: Measures of well-being, attitudes towards seeking professional psychological support, and adult attachment style were completed at recruitment, and repeated a month later. Patients were either in a comparison or intervention group. The intervention was the provision of an evidence-based information booklet about the emotional impact of cancer.

Results: A mixed between and within ANOVA showed there was no significant evidence to support the hypothesis that the provision of an evidence-based information booklet would positively change patients' attitudes towards seeking professional psychological support. Further correlational analyses suggested that patients' attachment anxiety moderately negatively correlated with both help seeking propensity and indifferences to stigma at both time points. Attachment avoidance also was moderately negatively correlated to patients' psychological openness, help seeking propensity, and indifference to stigma. Changes in help seeking propensity also moderately negatively correlated with patients' attachment avoidance, however further regression analyses found there was no evidence to suggest attachment orientations could significantly predict changes within the attitude ($p > .05$).

Conclusion: This study has suggested the provision of an information booklet about the potential emotional impact of cancer does not influence cancer patients' attitudes towards seeking psychological help. There was evidence, consistent with existing literature that patients with higher levels of attachment anxiety and avoidance were more likely to be less open to accessing

professional support, have less help seeking propensity, and be more influenced by stigma.

However, no robust evidence was found that attachment orientations could predict changes in attitudes.

Practice Implications: With the uptake of professional support services by cancer patients under reflecting the estimated prevalence of emotional distress in cancer, cancer services need to consider how best to facilitate the uptake of available evidence-based psychosocial interventions. Further research is warranted, exploring how attitudes towards professional psychological support could be improved, and whether this corresponds with uptake and use of available services. Ultimately the author feels future research needs to investigate what psychosocial support is wanted by cancer patients, and then how best to integrate it into existing services in order to improve patients' overall experience and psychological wellbeing.

Key words: Cancer
 Attachment
 Attitudes
 Seeking Psychological Help

2.1 Introduction

2.1.1 Distress in cancer patients

For a long time, research has considered what factors are related to better outcomes for cancer patients. It has highlighted that some patients have better clinical outcomes than others not only because of medical and physiological differences in patients' cancer, but also because of psychosocial differences [1, 2, 3].

Subsequently there has been support for screening programmes to encourage the identification of distress and psychosocial difficulties that could intervene in a person's treatment and recovery [4, 5]. By screening, it was thought that professionals could identify distress, and then adapt and tailor patients' care plan to their wants and needs, ensuring referral for appropriate psychosocial interventions.

Research estimates 38.2% of people with cancer have a diagnosable mood disorder in accordance to ICD and DSM-IV criteria [6]. But it is widely acknowledged that distress is experienced along a continuum, and many cancer patients will not meet the criteria for a diagnosable mental health condition [7-10]. Interestingly, the majority of reported rates of patient distress in the existing cancer literature echoes that of the general population, of approximately one in four people [18]. However, it is suggested that suicidality is much higher [46].

Despite national guidelines calling for screening for distress, the evidence base for screening programmes has been criticised, and there are a number of studies reporting conflicting results about the benefits for patients. In a recent review paper, Mitchell [6] used a number of different studies to answer the pertinent question 'when are screening programmes most successful?'. With research increasingly supporting the effectiveness of a range of psychosocial interventions [11],

there is an implication that a good screening programme is one which leads all distressed patients to access to a psycho-social intervention.

However in their review of 24 articles Mitchell and colleagues [6] found only 20-30% of cancer patients with a 'positive' screen for distress received any further psychosocial intervention.

Explanations for such low uptake have been discussed by a number of researchers, and include organisational, health professional and patient factors. Critiques of organisations are that they may not have the resources for, and inadequate models of, screening programmes that do lead to interventions [12]. Potential influences of health professionals are: time limitations; their attitudes towards screening; receipt of adequate support and training; and confidence in their abilities to do the screening [6]. However, there is also the influence of the patient.

2.1.2 Patients' attitudes towards seeking professional emotional support

Whilst screening programmes have been used to identify people who are distressed, they do not necessarily consider that patients who have been identified as screening 'positive', want, would accept, or receive any further support [13, 14, 15, 16, 17].

Similar uptake discrepancies are seen in the statistics offered from primary care screening of the general population's mental health and wellbeing. A number of studies within the UK cite the prevalence of mental health difficulties/distress as one in four [6,18]. However, studies in Europe and America suggest less than a third of people who experience distress seek professional help [19, 20,21].

Why people do not access services, or report their concerns to health professionals has also been widely researched. Mitchell and colleagues [22, 23, 24], reviewed primary care screening programmes and identified five patient related factors that reduced the identification of distress: gender, ethnicity, reluctance to disclose symptoms, reluctance to seek help, and somatisation of their difficulties.

Other psycho-social reasons such as stigma and shame are also commonly cited as reasons preventing people from seeking psychological support [25; 26, 27], with one study finding over a third of a European community sample thought that seeking professional mental health support was worse than, or the same as not seeking help [20].

In order to improve services, including their visibility and credibility, research suggests services need to gain a better understanding of individuals' differences that could contribute to their decision to seek professional help or not, so services can reach out to those who may need them [19]. Community attitudes towards mental health have been shown to have changed over recent years [28, 29], with individuals' attitudes and intentions to seeking care shown to be influenced by improving their knowledge of mental illness, and its treatments [26, 30, 31]

2.1.3 Psychological theories of help seeking behaviour

A number of different psychological theories and models have been proposed to influence help seeking behaviour [31]. For example, the threats to self-esteem model [32]; attribution theory [33]; Equity theory [34], Continuity theory [35] and Social behavioural model [36].

Attributional theory suggests that individuals assign causal reasons and explanations why things occur. These are seen to be either of external causation, or internal. When help is offered, the theory suggests the recipient of the offer initially questions the motives for the offer, such as: is the offer of genuine concern for the recipient; are there possible ulterior motives; and are they obliged to offer. After these external attributions occur, people tend to look internally for reasons, for example: do they feel they warrant the help; would others access the support if they were experiencing similar; and would I usually access that support. Thus the theory would suggest that recipients are more likely to seek help if they feel they warrant the support as they are not usual like this, witness that others are offered similar support when they appear to be in a similar way. In terms of cancer patients it would suggest they are more likely to seek help if they perceive they are

experiencing distress at a level that is not consistent to prior to diagnosis and see that other patients are offered and access similar support.

The social behavioural model [95] suggests there are also different factors that influence people before accessing support. These include predisposing factors, including social structure, previous experiences of support, and beliefs and expectations. The type of support available is also considered, as well as needs and wants from accessing support. Research exploring the model has discovered a number of fixed predisposing factors that appear to influence a person accessing support. For example older people, and females, are more likely to seek support, as are unmarried, highly educated people with higher incomes [37,38]. Awareness of distress has also been found to be related to accessing support, however it is perceived need that is the best predictor of accessing support services [31].

Wacker and Roberto [31] offer comprehensive reviews of the three psychological theories and models of help seeking behaviour, not further detailed here. The social behaviour model and attribution theory offer different factors to consider what may influence help seeking behaviour, and thus pertinent to this study in wondering about clinical implications and how we can best offer patients the support they need or want.

2.1.4 Raising awareness of support services

Consequently the theories support the idea that supplying information about possible emotional responses to cancer and support services available, may help improve openness to seeking psychological help..

The idea of having an information booklet takes advantage of opportunities of implemented 'well-being' screening programmes, recommended by the NICE guidance [5], to create openings for conversations around emotions [6; 39]; it provides patients with knowledge of available services,

even if momentarily they would not consider utilising them [12]; and thus ensuring person centred, needs led care [39].

However research into the impact of booklets (or equivalent information) is sparse, and conflicting [40, 41, 42]. Studies have found patients currently feel unsatisfied with the information they are provided about the more long-term psychological, and social impacts of cancer and its treatment [37,38]. Additionally research [40, 42] has found that people newly diagnosed with breast cancer who were provided with a supportive information/workbook, had similar levels of well-being as people who had not received the workbook. On seeking feedback from participants [42] 70% who received the booklet felt emotionally supported, but suggested that they would have preferred the information at a different time, possibly later, during treatment [40, 42, 43].

Due to the influence of individual differences upon people's attitudes towards seeking professional emotional support, this article considers the role of adult attachment style on cancer patients' attitudes towards seeking help.

2.1.5 Adult attachment

Attachment styles have traditionally been thought as being to do with the relationships between a child and a parent/significant other, however Bowlby [44], emphasised throughout his work that internal models of attachment are influential "from the cradle to the grave". Bowlby [44] hypothesised that people form an internal working model, based upon experiences with significant others in early life. Attachment behaviours are triggered when the internal working model is threatened, eliciting a need to seek closeness, support and proximity with attachment figures. Examples of such occasions are: adapting to chronic illness and caregiving; coping with bereavement and loss; and times of adjustment and challenged well-being [45].

Attachment is frequently considered to have two main dimensions of anxiety and avoidance [48, 49, 50, 51, 52,]. Attachment anxiety, also perceived as a person's sense of self, is the level of

need for approval from others, and fear of rejection or abandonment; and attachment avoidance, a person's sense of others, is the level of need for self-reliance, and fear of dependence on others.

Terminology of 'secure' and 'insecure' attachment style has been utilised to categorise attachment style, according to the quadrants created by the overlay of the two dimensions. 'Secure' attachment is considered to be when people have lower levels of anxiety and avoidance (or higher sense of self and others). People categorised as having 'Insecure' attachments are when their scores fall in the other three quadrants of the overlaying dimensions.

Previous research has found that people with a 'secure' attachment style are more likely to seek support from others, and perceive higher levels of available support, in comparison to people with 'insecure' attachment styles [51, 54, 55]. This is understood as people who have a 'secure' attachment style are more likely to acknowledge their emotional needs, and feel able to trust and confide in others. Research has found that 'insecure' attachment styles inhibit seeking help [54, 51] and interfere with people using available support [57].

Whilst psychoeducational information has been developed and distributed to patients, there is a dearth of research exploring whether their distribution influences patients' attitudes towards seeking professional help, and whether this in turn is related to individual differences such as attachment styles.

As people with secure attachments are thought to already be open to and have positive attitudes towards seeking help, it is unclear how much further benefit a psychoeducational intervention, such as the provision of an information leaflet, would have upon their attitudes towards seeking professional emotional support.

Similarly, it is unclear how psychosocial interventions would influence the long standing attitudes of people with higher attachment anxiety and/or avoidance.

2.1.6 This study

This study aims to explore the effect of the provision of an evidence-based information booklet upon cancer patients' attitudes towards seeking professional support for emotional difficulties. It is anticipated that providing the information booklet will influence positive change in patients' attitudes towards seeking help. Based on the research reviewed it is anticipated that patients with higher levels of attachment anxiety and avoidance (lower sense of self and others) would have less favourable attitudes towards seeking psychological help. With regards to changes in attitudes, it is expected that people with lower levels of attachment anxiety and avoidance would show the greatest shift in attitudes.

2.2 Method

This study uses a mixed within- and between-subjects design, using data collected as part of a wider larger scale research study, designed to explore the barriers, facilitators, and effects, of the take-up and use of an information booklet about the possible emotional impact of cancer. The wider study was funded by Liverpool PCT and the Liverpool Health Inequalities Research Institute, and gained NHS ethical approval (ref. 10/H1002/62), for the recruitment of participants from six outpatient clinics: two lung patient clinics, two urology clinics, and two breast cancer clinics. This article reports on data collected between October 2011 and April 2013.

2.2.1 Participants

Routine clinic staff were asked to identify patients who met the study's inclusion criteria (Table 2.2.1A), and who were willing to be approached about the research.

Table 2.2.1A: Table showing the study's patient inclusion criteria

Study inclusion criteria
1) Participants 18+ years old
2) Received a diagnosis of breast or prostate cancer within the last year, but over 3 months previous. OR Received a diagnosis of lung cancer within the last year, but over a month previous.
3) No previous known cancer diagnoses
4) Not deemed (by clinic staff) too distressed or cognitively impaired to give informed consent

A flow diagram of the of the patient recruitment figures, with reasons for withdrawal from the study, is available in Figure 2.2.1A. The diagram shows the percentage attrition from the start of the study, with 163 (44%) of 372 eligible patients having completed questionnaires at time one and time two. Seventy five percent of participants who completed a questionnaire at time one completed a questionnaire at time two.

A summary of the participants' demographics information is available in Table 2.2.1B. This information was collected at recruitment, and is only reported for participants who completed both sets of questionnaires. Chi-squared and ANOVA analyses found no significant differences between the comparison and intervention groups' demographics (age, gender, tumour group, marital and working status). However, an ANOVA did show participants in the comparison group had had their cancer diagnosis for a significantly longer time than participants in the intervention group, ($t[156]=4.51, p<.01$) This is explained by there being less lung cancer participants in the comparison group, which as a sample population, tended to be recruited sooner after diagnosis than breast and prostate patients.

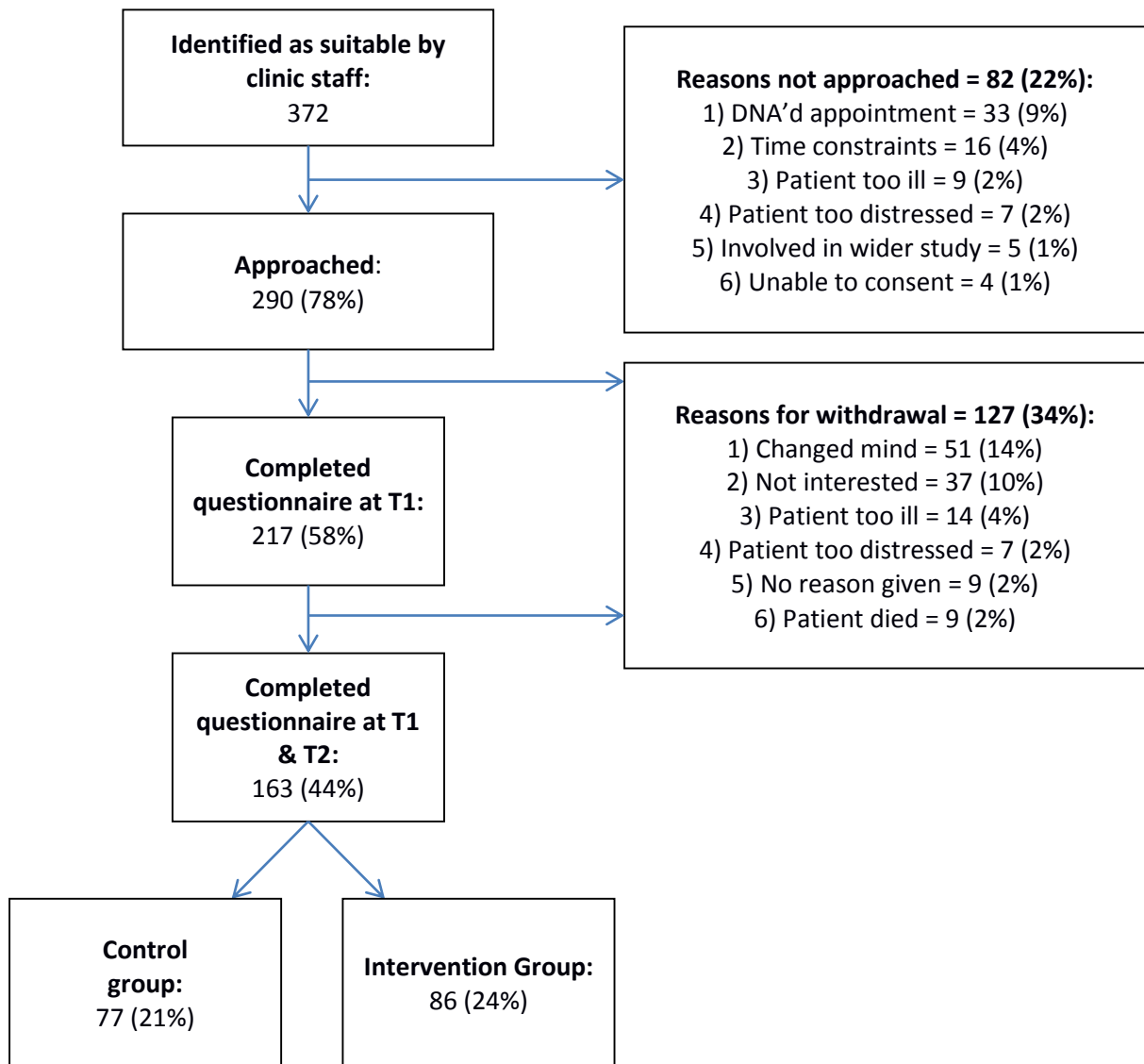


Figure 2.2.1A: A Flow diagram showing the recruitment of patients for the study

Table 2.2.1B: Table summarising the demographic and diagnostic data for all the participants who completed the study.

Demographic/Information	All (N=163)	Comparison (N=77)	Intervention (N=86)
Age (N=161)	62.61 (10.57)	62.79 (11.49)	62.47 (9.76)
Gender			
Female	92 (56%)	47 (61%)	45 (52 %)
Tumour Group			
Breast	79 (49%)	40 (52%)	39 (45%)
Lung	33 (20%)	13 (17%)	20 (23%)
Prostate	51 (31%)	24 (31%)	27 (31%)
Marital Status			
Married	115 (71%)	52 (68%)	63 (68%)
Single	24 (15%)	13 (17%)	11 (17%)
Widowed	6 (4%)	4 (5%)	2 (5%)
Missing	18 (11%)	8 (10%)	10 (10%)
Working status			
Employed	52 (32%)	25 (32%)	27 (31%)
Un-employed/Retired	91 (56%)	45 (58%)	46 (53%)
Missing	20 (12%)	7 (9%)	13 (15%)
English as first language	162 (99%)	76 (99%)	86 (100%)
Missing	1 (1%)	1 (1%)	0 (0%)
Ethnicity			
White British	159 (98%)	74 (96%)	85 (99%)
Black British	1 (1%)	0 (0%)	1 (1%)
Black Caribbean	2 (1%)	2 (1%)	0 (0%)
Missing	1 (1%)	1 (3%)	0 (0%)
Days since diagnosis (N=158)	152.10 (77.3)	192.54 (95.85)	118.24 (28.70)

N.B: data presented are: mean (standard deviation), both given to 2 decimal places; or number and percentage (%) of sample. Sample sizes vary due to missing original data.

2.2.2 Measurements

2.2.2.1 Attitudes to seeking psychological care

The inventory of attitudes toward seeking mental health services (IASMHS; ref), is a 24 item scale, with three factors: psychological openness; help-seeking propensity; and indifference to stigma. The IASMHS has been used in research concerned with the uptake and access to mental health/psychological services of different clinical populations [58, 59]. The scale is reported to have

good internal consistency reliability coefficients, with all subscales' coefficients being greater than 0.76, and the full inventory being 0.87. The test re-test reliability was also found to be high, [59, 60].

2.2.2.2 Attachment style

Two measures of attachment were used, the Relationship Scales Questionnaire (RSQ) [48], and the Relationship Questionnaire (RQ) [50]. Both tools have previously been used with cancer populations, [61, 62].

Both measures are brief, and easy to complete. The RQ consists of four paragraphs describing different styles of attachment. Participants rate, on a seven point likert scale, how each paragraph describes themselves. The RSQ comprises of 30 statements relating to different styles of attachment. There is a 5 point Likert scale for participants to rate how much they perceive the items to be a description of themselves.

The scales have good reliability and validity with reported test-retest reliabilities of over 0.65 [63], and have frequently been used together, combining their scores to create a single measurement of levels of attachment anxiety and avoidance. [64, 62; 65, 66]. These are computed by reversing the three items that needed to be reversed on the RSQ, and converting both measures' scores to z-scores by combining the scores from each measure, so there is one score for each categorical attachment style. As the anxiety and avoidance dimensions underlie the four categories of attachment, the dimensional scores are calculated as follows:

$$\text{Attachment anxiety} = (\text{fearful} + \text{preoccupied}) - (\text{secure} + \text{dismissing})$$

$$\text{Attachment avoidance} = (\text{dismissing} + \text{fearful}) - (\text{secure} + \text{preoccupied}).$$

2.2.2.3 Distress

To control for emotional distress/well-being the Hospital Anxiety and Depression Scale (HADS)[67] was used. The HADS was designed to be used within hospitals with people with physical health complaints, and is a brief measure repeatedly found to have good reliability across a number of clinical populations, [68]. It was thought pertinent to include a measure of well-being as research has found it to be related to patients' perceptions of support and support seeking behaviour [61]

2.2.2.4 Demographics

Patient's consented for demographical information to be collated from their medical records. This included, age, gender, cancer diagnosis, date of diagnosis, marital and working status, ethnicity, and first language.

2.2.3 Materials

The evidence-based information booklet, 'Should I be feeling like this? Understanding your reactions to cancer', was developed through work alongside patients and patient groups. The booklet was developed to build upon materials available in the UK, such as the leaflet 'managing the stress of cancer' [69], by addressing complex needs, and supplying information about locally available support services for people at all stages of having a cancer diagnosis, including 'pre-survivorship'. The wider study aimed to systematically evaluate the influences upon people using or not using the information, and effects upon patients.

2.2.4 Procedure

Patients who were willing to be approached were briefed by the researcher and provided with an information sheet about the study, to aid them in considering their participation (Appendix E). Those who consented to participate were given a battery of the questionnaires to complete

whilst in clinic, or at home, returnable by prepaid postage. It was explained they would be sent a second battery of questionnaires after four weeks, to complete and return.

Patients were recruited during one of two different time periods, the control period or intervention period. The main difference being, patients within the intervention phase were given or posted a copy of the information booklet on receipt of their first set of completed questionnaires. It was decided not to conduct this study as a randomised control trial for a number of reasons, including the potential difficulties controlling the difference between the two groups.

2.2.5 Data analysis

To address the presence of missing data points, a missing data analysis and imputation was conducted through SPSS version 21, which was the statistical package used for all analyses. Little's 'missing completely at random' test, suggested the missing data points were not significantly clustered. This allowed missing data points to be imputed using an expectation maximisation procedure, which computed missing data using the scores present that corresponded to the missing items' factors in the questionnaire.

A mixed between-within subjects analysis of variance was conducted to compare differences over time on the three IASMHS attitudes scores, between the intervention and control groups. The data collected were sufficient to meet power (0.8), according to an a priori power analysis calculation by GPower3 [70]. The power calculation was based upon: an estimated moderate to large effect size of 0.5; significance level of .05; six groups (control and intervention each with breast, lung and prostate subgroups); and the three attitude measures of IASMHS having internal correlation of ≥ 0.76 [60].

Further correlational and hierarchical multiple regression analyses were planned to explore whether there were any relationships between changes in patients' attitudes towards seeking professional help and patients' attachment anxiety and avoidance. Patients' levels of initial anxiety

and depression, as measured by the HADS were controlled for within the multiple regression analysis.

2.2.6 Hypotheses

Based on existing literature, the following two hypotheses were derived:

- 1) The participants who received the information booklet are expected to have more positive changes in their attitudes, as measured by the three factors on the IASMHS, than participants who did not receive the booklet.
- 2) The changes over time in attitudes, as measured by changes in the three factors on the IASMHS, will correlate with participants attachment orientations: specifically that the greater the change the lower participants' attachment anxiety and attachment avoidance.

2.3 Results

2.3.1 Changes in attitudes

In consideration of the first hypothesis, a mixed between-within subjects analysis of variance was conducted to assess the impact of the two different conditions (comparison and intervention groups), over time, in participants' scores on the three IASMHS factor scores (psychological openness, help seeking propensity and indifference to stigma).

No significant interaction between the groups and time were found, Wilks' Lambda = .981, $F(3, 159) = 1.002$, $p=.394$, partial eta squared = .019. No main effect for time was identified, Wilks' Lambda = .981, $F(3, 159) = 1.082$, $p=.358$, partial eta squared = .020. The main effect comparing the control and intervention groups was also non-significant, $F(3,159) = .981$, $p=.382$, partial eta squared = .019, suggesting no difference in the effectiveness of the two groups. Table 2.3.1A shows the means and standard deviations for each IASMHS factor at the different time points, for both the

intervention and control groups. P-values for the comparison of scores between groups are also shown.

With the exception of the intervention groups' scores on psychological openness, the general trend of the data suggests that over time participants became less psychologically open, and had slightly less help seeking propensity. Additionally, stigma appeared to increase in influence over time. As mentioned the exception is participants who received the information leaflet, as their psychological openness increased over time.

Table 2.3.1: Table showing the means and standard deviations of the three attitudes factors from the IASMHS scale, for each the control and intervention groups at both time points.

Factor of the IASMHS Measure	Control		Intervention		p-values
	T1	T2	T1	T2	
Psychological openness	17.59 (6.48)	17.23 (6.25)	18.41 (6.79)	19.12 (6.68)	.15 (ns)
Help seeking propensity	25.83 (5.27)	25.71 (4.42)	26.20 (5.28)	25.30 (5.44)	.98 (ns)
Indifference to stigma	23.17 (5.79)	22.90 (6.70)	24.56 (5.47)	23.71 (6.62)	.20 (ns)

N.B: data presented are: mean (standard deviation), both given to 2 decimal places

2.3.2 Relationship between attitudes and attachment dimensions

Correlational analyses were used to explore the second hypothesis, specifically whether there were any relationships between patients' anxiety and avoidance attachment styles and changes over time in patient's attitudes of accessing professional services in the management of emotional distress. These are shown in Table 2.3.2A.

Table 2.3.2A: Table showing the correlations between the attachment anxiety and avoidance with the scores on the factors of the IASMHS at T1 and T2, and their differences.

Factor of IASMHS	N=163	Attachment	
		Anxiety (r)	Avoidance (r)
Psychological openness	T1	-.133	-.170*
	T2	-.139	-.269**
	Difference	-.004	-.109
Help seeking propensity	T1	-.267**	-.095
	T2	-.364**	-.269**
	Difference	-.078	-.160***
Indifference to stigma	T1	-.352**	-.266**
	T2	-.336**	-.312**
	Difference	-.044	-.100

The relationships between attachment styles and the three IASMHS factors at the different time points and their changes between the time points, were investigated using Pearson product-moment correlation coefficient. Preliminary analyses were performed to ensure no violation of the assumptions of normality, linearity and homoscedasticity. The results show negative correlations suggesting higher attachment anxiety or avoidance being associated with lower psychological openness, lower help seeking propensity, and lower indifference to stigma. The significant correlations are all of modest strength.

The results suggest that levels of attachment anxiety are significantly negatively correlated with lower levels of help seeking propensity at both T1 and T2 (both $p < .01$); and negatively correlated with the indifference to stigma scores at both time points (both $p < .01$). However no significant correlation was found between attachment anxiety and level of psychological openness at either time point ($p = .09$ and $p = .076$ respectively). The changes over time in the three IASMHS attitude factors also did not significantly correlate with people's attachment anxiety (all $p > .05$).

With regards to attachment avoidance, modest significant negative correlations were found with patients' scores on psychological openness correlating at both T1 and T2 ($p = .03$, and $p < .01$ respectively). Similarly modest significant correlations at T1 and T2 were found with patients' scores on indifference to stigma, (both $p < .01$). Help seeking propensity was modestly significantly negatively correlated with attachment avoidance at T2 ($p < .01$) but not at T1 ($p = .23$). The changes in patients' scores of help seeking propensity was the only IASMHS factors' score difference, to be revealed as modestly significantly correlated with attachment avoidance ($p < .01$).

2.3.3 Attitudes and Anxiety and Depression

Correlations between scores on the HADS anxiety and depression scales and the IASMHS factors are shown in Table 2.3.3A. No significant correlational relationships were found between psychological openness and levels of anxiety and depression. Modest significant negative

correlations were found between HADS anxiety and depression scores and Indifference to Stigma, suggesting the greater a patient's anxiety/depression the more they were prevented by stigma from seeking help. Help seeking propensity was only statistically modestly negatively correlated with HADS anxiety and depression at T2. No relationship was found between the changes in the IASMHS factor scores over time, and the HADS anxiety and depression scores.

Table 2.3.3A: Table showing the correlations between the attachment anxiety and avoidance with the scores on the factors of the IASMHS at T1 and T2, and their differences.

Factor of the IASMHS Measure	HADs Anxiety			HADs Depression		
	T1	T2	Difference	T1	T2	Difference
Psychological openness	-.029	.027	.063	-.029	.081	.124
Help seeking propensity	-.143	-.199*	-.045	-.138	-.191*	-.042
Indifference to stigma	-.185*	-.213**	-.066	-.247**	-.236**	-.030

*p<.05; **p<.01; all two tailed

2.3.4 Regression analysis

Due to previous analysis only identifying a relationship between attachment avoidance and anxiety with changes over time in participants' help seeking propensity, a multiple regression analysis was used to assess the ability of the attachment avoidance and anxiety subscale to predict the amount of change that occurred in patients' help seeking propensity attitudes.

These analyses produced data that suggested at step one of the analysis, when attachment anxiety was entered as a predictor, it explained 0.7% of the variance in help seeking propensity change. When attachment avoidance was added into the model, altogether they explained 11% of the variance, and neither of the orientations were statistically significant ($p>.05$), with attachment avoidance recording a beta value of $-.147$ ($p=.072$), which is higher than that of the attachment anxiety. Thus the findings suggest that neither attachment anxiety or attachment avoidance, nor the combination of the two can predict significantly changes within patients' openness to seeking psychological support.

2.4 Conclusions

2.4.1 Discussion

It is important to consider psychological wellbeing when treating for different medical conditions as research is suggesting psycho-social wellbeing is related to physical wellbeing to a level where medical outcomes are suggested to be improved if patients report greater psychological wellbeing [71].

However, despite services and research adhering to national guidelines calling for regular screening of distress and wellbeing in cancer patients, there remains conflict about whether screening leads to cancer patients accessing support, and indeed that this is what cancer patients want [20, 22, 23].

Stigma and shame are frequently quoted reasons why the general public do not access psychological services as a whole [25 -27, 30], and thus could be an influencing factor as to why cancer patients do not access psychological services. Could services do more to change these perceptions? Research suggests what the general public know about mental health can be improved [29], has improved [20, 21], but continues to need to be improved [28],

This study looked at whether the provision of an information booklet about the emotional impact of cancer had any influence on patients' attitudes towards seeking psychological help. It was hypothesised that participants who received the booklet would record greater changes in their attitudes towards seeking psychological help. However the results of this study found that after a month there were no significant changes in cancer patients attitudes towards seeking psychological support, whether they receive a copy of the booklet or not.

Known influences, such as people's perceptions of themselves and others (also known as attachment anxiety and avoidance), were also considered in the study as possible influencing factors

on attitudes [19]. The study expected to echo existing literature by finding people with higher attachment avoidance and anxiety would have less favourable attitudes and perceptions of seeking help, and patients with lower levels of attachment anxiety and avoidance would be more likely to experience changes in their attitudes.

The results did show that people with higher attachment anxiety had significantly less propensities to seek professional support, and were more influenced by associated stigma of seeking help, than people with lower attachment anxiety. These relationships were seen to be consistent over time. Patients with higher attachment avoidance were found to be less open to seeking psychological support than patients with less avoidance; had less inclinations to seek help, and were more likely to be influenced by the stigma around help seeking.

Only changes over time in the attitude factor of help seeking propensity was found to correlate with attachment orientation. People with higher levels of attachment anxiety had worsening changes in their inclinations to seek help, thus they were less likely to consider seeking help at the later time point ($p = .41$). However, further regression analyses found attachment anxiety was not significantly reliable in predicting changes within that attitude.

These findings reflect those heavily reported in existing literature [19, 57, 64], including the cancer and attachment articles reviewed in Chapter I of this thesis volume.

With regards to the information booklet offered to the patients, the study has not found that the provision of the leaflet evokes any unintended harm. Many previous leaflets have been developed and provided without such research into the review of the potential consequences, with an assumption that the positive intentions of the provision of the booklet lead to positive outcomes. There is a dearth of literature looking at the provision of such leaflets, but what has been reported suggests patients are less than satisfied with what they have received [38, 39]. Studies have even found that workbooks and information leaflets can be seen as telling people how to think and feel

[41, 42, 43]. This is not the intention of the development of such materials, but in the context of many research findings, where should research go forward from here?

2.4.2 Conclusions

Unfortunately this piece of research has not opened up any new avenues and consideration as to what support patients would like from psychological services. It has shown that people's levels of attachment anxiety and avoidance influences their attitudes towards seeking help, however it has also found that an information booklet is not sufficient in influencing change in patient attitudes towards seeking psychological support.

2.4.2.1 Study limitations

The lack of attitudinal change could be due to the study only allowing four weeks before the collection of the second set of data. It may be that four weeks is not sufficient for attitudes to significantly change in this time, nor natural adjustment to occur [69]. This time scale was used to try and facilitate maximum recruitment into the study, with consideration given to patients' different treatment schedules, as well as time since diagnosis. Unfortunately recruitment was not sufficient to meet the number of participants needed for appropriate power to compare between the three cancer groups that the participants were recruited from. If recruitment numbers were larger then it may have been interesting to have considered differences between different treatment groups.

The experience of recruiting the participants into the study also brought to attention other fluctuating variables which are difficult to control. On a few occasions the information booklet which had been given to participants in the experimental groups were found in patient waiting areas, suggesting patients not in the experimental group may have had access to the material (and hence why the study would have been difficult to have been conducted as a Randomised Control Trial).

Another consideration was the varying attitudes and behaviour of others, such as staff, and participants' significant others. Varying attitudes of psychological wellbeing in health professional staff may influence their approach to patients, and in addition which health professionals patients may approach regarding their psychological well-being. Patients may not necessarily see their wellbeing as a separate issue that needs attending to, thus do services need to be flexible in who offers the psychological support needed by patients? With regards to significant others, their attitudes towards psychological wellbeing appeared to influence patient recruitment. Whilst some patients outright refused for the researcher to approach them, when some patients who were approached with their consent, it was noticed that occasionally significant others were influential in making decisions to participate when the topic and purpose of the research was explained further.

The researcher was curious of the reasons why people refused to be approached and considering the theory around attachment it is wondered whether there has been some uncontrollable selection bias in the recruitment, with people with higher levels of attachment anxiety and/or avoidance choosing to not allow the researcher to approach them for recruitment.

For the author the main weakness of the research is the utilisation of the quantitative methodology. To determine what support cancer patients would like, and how to improve access to such services, would it not be easier and more productive to ask cancer patients? Whilst using a qualitative design can be more time consuming,

2.4.3 Practice Implications

Research conducted following the implementation of distress screening of cancer patients has made both cancer and psychological support services aware there appears to be a huge number of people not accessing support known to be of benefit.

It is acknowledged that barriers to the uptake of available services may be down to both organisational and systemic factors as well as patient's personal factors.

The provision of information about the possible emotional impact of cancer, and support services available may not be sufficient to influence changes in patients' attitudes towards seeking psychological help, however it may be that more time is needed, and consideration needs to be given to who offers patients the information, and where the support is accessed. Can the provision of such a booklet to patients, by routine clinic staff help facilitate positive conversations about wellbeing, and thus a frontline, more present, human intervention influence attitudinal change? Psychological theory suggests that people are more likely to accept help if it is offered consistently, and they see others accessing it too. Is it time to consider evaluating changing the way psychological support is offered?

The author suggests that clinical staff, and psychologists be aware that the sole provision of an information booklet may not influence likelihood that patients seek the help/support they want or need. This does not mean that the booklet should not be handed out, but it could be used as a foothold for positive solution focussed conversations within clinic settings to review how people are managing/coping, allowing information to be shared of additional support systems available to them. Psychological therapists need to be aware that a different way of working could offer people the opportunity to access services rather than the predominant, separate psychology service to which a referral is needed to be made, and then patients then accesses separately. Being more present on the 'frontline' should enable patients to see and experience what the support is on offer, challenging stigma and negative beliefs about psychological support, not just of the patients, but their families and health care professionals also.

Additionally, maybe we could ask the patients what they want!?

Conflict of interest

The author would like to declare they have no conflict of interest with regard to this paper

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Declaration

"I confirm all patient/personal identifiers have been removed or disguised so the patient/person(s) described are not identifiable and cannot be identified through the details of the story."

2.5 References

- [1] Derogatis, L. R., Morrow, G. R., Fetting, J., Penman, D., Schmale, A. M., Henrichs, M., & Carnicke, C. L. (1983). The prevalence of psychiatric disorders in cancer patients. *JAMA*, *249*. 751-757.
- [2] Levine, P. M., Silberfarb P.M., & Lipowski Z. J. (1978). Mental disorders in cancer patients. A study of 100 psychiatric referrals. *Cancer*, *42*(3). 1385–1391.
- [3] Zabora, J. (2001) The prevalence of psychological distress by cancer site. *Psycho-Oncology* *10* (1). 19-28.
- [4] National Comprehensive Cancer Network. (1999). NCCN practice guidelines for the management of psychosocial distress. *Oncology*, *13*. 113-147.
- [5] National Institute for Health and Care Excellence. (2006). *Guidance on Improving Supportive and Palliative Care for Adults with Cancer*. London: National Institute for Health and Clinical Excellence.
- [6] Mitchell AJ, Chan M, Bhatti H, Halton M, Grassi L, Johansen C, & Meader N. (2011). Prevalence of depression, anxiety, and adjustment disorder in oncological, haematological, and palliative-care settings: a meta-analysis of 94 interview-based studies. *Lancet Oncol* *12*: 160–174.
- [7] National Cancer Institute. (2015). Adjustment to cancer: Anxiety and Distress (PDQ). Available at www.cancer.gov/cancertopics, last accessed September 2015.
- [8] Carlson, L. E., & Bultz, B. D. (2003). Cancer distress screening. Needs, models, and methods. *Journal of Psychosomatic Research*, *55*. 403-409.
- [9] Holland, J. C., & Alicim, Y. (2010). Management of distress in cancer patients. *The Journal of supportive oncology*, *8*(1). 4-12.
- [10] Kendall, J., Glaze, K., Oakland, S., Hansen, J., & Parry, C. (2011). What do 1281 distress screeners tell us about cancer patients in a community cancer center. *Psychooncology*, *20*(6). 594-600.
- [11] Meijer, A., Roseman, M., Milette, K., Coyne, J. C., Stefanek, M. E., Ziegelstein, A. L., Arthurs, E., Leavens, A., Palmer, S. C., Stewart, D. E., de Jonge, P., & Thombs, B. D. (2011). Depression screening and patient outcomes in cancer: a systematic review. *PLoS One*, *6*(11).

- [12] Curry, C., Cossich, T., Matthews, J. P., Beresford, J., & McLachlan, S. A. (2002). Uptake of psychosocial referrals in an outpatient cancer setting: Improving service accessibility via the referral process. *Supportive Care in Cancer*, 10(7). 549–555.
- [13] van Scheppingen, C., Schroevers, M. J., Smink, A., van der Linde, Y. M., Mul, V. E., Langdendijk, J. A., Coyne, J. C., Sanderman, R. (2011). Does screening for distress efficiently uncover meetable unmet needs in cancer patients. *Psycho-oncology*, 20(6). 655-663.
- [14] Carlson, L. E., Waller, A., & Mitchell, A. J. (2012). Screening for distress and unmet needs in patients with cancer: review and recommendations. *Journal of Clinical Oncology*, 30(11). 1160-1177.
- [15] Baker-Glenn, E. A., Park, B., Granger, L., Symonds, P., & Mitchell, A. J. (2011). Desire for psychological support in cancer patients with depression or distress: validation of a simple help question. *Psycho-oncology*, 20. 525-531.
- [16] Merckaert, I., Livert, Y., Messin, S., Milani, M., Slachmuylder, J-L., Razavi, D. (2010). Cancer patients' desire for psychological support: prevalence and implications for screening patients' psychological needs. *Psycho-oncology*, 19. 141-149.
- [17] Salmon, P., Clark, L., McGrath, E., & Fisher, P. (2015) Screening for psychological distress in cancer: renewing the research agenda. *Psycho-Oncology*, 24. 262-268.
- [18] Time for change (2015) <http://www.time-to-change.org.uk/mental-health-statistics-facts>. Last accessed September 2015.
- [19] Vogel, D. L., & Wei, M. (2005). Adult attachment and help-seeking intent: The mediating roles of psychological distress and perceived social support. *Journal of Counseling Psychology*, 52, 347-357.
- [20] ten Have, M., de Graaf, R., Ormel, J., Vilagut, G., Kovess, V., Alonso, J., & ESEMeD/MHEDEA 2000 Investigators (2010). Are attitudes towards mental health help-seeking associated with service use? Results from the European Study of Epidemiology of Mental Disorders. *Social Psychiatry and Psychiatric Epidemiology*, 45(2). 153-163.
- [21] Alonso, J., & ESEMeD/MHEDEA 2000 Investigators. (2004). Use of mental health services in Europe: results from the European Study of Epidemiology of Mental Disorders project. *Acta Psychiatrica Scandinavica*, 109(s104). 47-54.

- [22] Mitchell, A. J., Rao, S., & Vaze, A. (2011). International comparison of clinicians' ability to identify depression in primary care: meta-analysis and meta-regression of predictors. *Br J Gen Pract* 61: 583.
- [23] Mitchell, A. J., Vahabzadeh, A., & Magruder, K. (2011). Screening for distress and depression in cancer settings: 10 lessons from 40 years of primary-care research. *Psychooncology*, 20(6). 572-584
- [24] Mitchell, A. J., Rao, S., & Vaze, R. (2011). Can general practitioners identify people with distress and mild depression? A meta-analysis of clinical accuracy. *Journal of affective Disorders*, 130. 1-2.
- [25] Schomerus, G., & Angermeyer, M. C. (2008). Stigma and its impact on help-seeking for mental disorders: what do we know? *Epidemiologia e Psichiatria Sociale*, 17(1). 31-37.
- [26] Rusch, N., Todd, A. R., Bodenhausen, G. V., Olschewski, M., & Corrigan, P. W. (2010). Automatically activated shame reactions and perceived legitimacy of discrimination: A longitudinal study among people with mental illness. *Journal of Behavior Therapy and Experimental Psychiatry*, 41(1). 60-63.
- [27] Sirey, J., Bruce, M., Alexopoulos, G., Perlick, D., Friedman, S., & Myers, B. (2001). Stigma as a barrier to recovery; perceived stigma and patient-related severity of illness as predictors of antidepressant drug adherence. *Psychiatric Services*, 52. 1615–1620.
- [28] Jorm, A.F., Barney, L.J., Christensen, H., & Highet N.J. (2006). Research on mental health literacy: What we know and what we still need to know. *Australian and New Zealand Journal of Psychiatry*, 40(1). 3-5.
- [29] Jorm, A. F. (2000) Mental Health Literacy. Public Knowledge and belief about mental disorders. *British Journal Psychiatry*, 177. 396-401.
- [30] Rusch, N., Evans-Lacko, S. E., Henderson, C., Flach, C., & Thornicroft, G. (2011). Knowledge and attitudes as predictors of intentions to seek help for and disclose a mental illness. *Psychiatric Services*, 62(6). 675-678.
- [31] Wacker, R. R., & Roberto, K. A. (2007) *Community Resources for Older Adults: Programs and Services in an Era of Change*. London: Sage Publishing.
- [32] Fisher, J.D., Nadler, A., & DePaulo, B.M. (1983). *New directions in helping: Vol. 1. Recipient reactions to aid*. New York: Academic Press.

- [33] Kelley, H. H. (1967). Attribution theory in social psychology. In D. Levine (ed.), *Nebraska Symposium on Motivation* (Volume 15, pp. 192-238). Lincoln: University of Nebraska Press.
- [34] Walster, E., Berscheid, E., & Walster, G. W. (1973). New directions in equity research. *Journal of Personality and Social Psychology*, 25, 151-176.
- [35] Atchley, R. C. (1989) A continuity theory of normal aging. *The gerontologist*, 29(2). 183-190.
- [36] Andersen, R. M. (1995) Revisiting the Behavioural Model and Access to Medical Care: Does It Matter? *Journal of Health and Social Behaviour*, 36. 1-10.
- [37] Ruiz-Moral, R., Rodriguez, P. E., de Torres, P. L. A., de la Torre, J. (2006) Physician-patient communication: a study on the observed behaviours of speciality physicians and the ways patients perceive them. *Patient Education and Counselling*, 64. 242-248.
- [38] Mallinger, J. B., Griggs, J. J., & Shields, C. G. (2005) Patient-centred care and breast cancer survivors' satisfaction with information. *Patient Education and Counselling*, 57(3). 342-349.
- [39] Kvale, K. (2007). Do cancer patients always want to talk about difficult emotions? A qualitative study of cancer inpatients communication needs. *European Journal of Oncology Nursing*, 11(4). 320-327.
- [40] Beatty, L., Oxlad, M., Koczwara, B., & Wade, T. D. (2010). A randomised pilot of a self-help workbook intervention for breast cancer survivors. *Supportive Care in Cancer: Official Journal of the Multinational Association of Supportive Care in Cancer*, 18 (12), 1597-1603.
- [41] Beatty, L., J., Koczwara, B., Rice, J., & Wade, T.D. (2010). A randomised controlled trial to evaluate the effects of a self-help workbook intervention on distress, coping and quality of life after breast cancer diagnosis. *The Medical Journal of Australia*. 6;193 (5 Suppl):S68-73.
- [42] Angell, K.L., Kreshka, M.A., McCoy, R., Donnelly, P., Turner-Cobb, J.M., Graddy, K., Kraemer, H.C., & Koopman, C. (2003). Psychosocial intervention for rural women with breast cancer: The Sierra-Stanford Partnership. *Journal of General Internal Medicine*, 18. 499-507.
- [43] Baker, P., Beesley, H., Dinwoodie, R., Fletcher, I., Ablett, J., Holcombe, C., & Salmon, P. (2012). 'You're putting thoughts into my head': a qualitative study of the readiness of patients with breast, lung or prostate cancer to address emotional needs through the first 18 months after diagnosis. *Psycho-oncology*, 22(6). 1402-1410.
- [44] Bowlby J. (1969) *Attachment and loss: Vol. 1. Attachment*. New York: Basic Books.

- [45] Bradley, J. M., & Cafferty, T. P. (2001). Attachment among older adults: current issues and directions for future research. *Attachment and Human Development*, 3 (2), 200-221.
- [46] Sharma, S. P. (2008). High suicide rate among cancer patients fuels prevention discussions. *Journal of the National Cancer Institute*, 100(24). 1750-1751.
- [47] Mental Health Foundation, (2007). The Fundamental Facts: The latest Facts and Figures on mental health. Available at <http://www.mentalhealth.org.uk/publications/fundamental-facts/>, last accessed September 2015.
- [48] Griffin, D., & Bartholomew, K. (1994). Models of the self and other: Fundamental dimensions underlying measures of adult attachment. *Journal of Personality and Social Psychology*, 67, 430-445.
- [49] Bartholomew, K. (1990). Avoidance of intimacy: An attachment perspective. *Journal of Social and Personal Relationships*, 7, 147-178.
- [50] Bartholomew, K., & Horowitz, L. M. (1991). Attachment Styles Among Young Adults: A Test of a Four-Category Model. *Journal of Personality and Social Psychology*. 61 (2), 226-244.
- [51] Hazan, C., & Shaver, P.R. (1987). Romantic love conceptualised as an attachment process. *Journal of Personality and Social Psychology*, 52(3). 511–524.
- [52] Hazan, C., & Shaver, P.R. (1990). Love and work: An attachment theoretical perspective. *Journal of Personality and Social Psychology*, 59. 270-280.
- [53] Brennan, K.A., Clark, C.L., & Shaver, P.R. (1998). Self-report measurement of adult attachment: an integrative overview. In *Attachment Theory and close Relationships*, J.A Simpson, W. S., Rholes (eds.), Guilford Press: New York.
- [54] Florian, V., Mikulincer, M., & Bucholtz, I. (1995). Effects of Adult Attachment Style on the Perception and Search for Social Support. *The Journal of Psychology*. 129 (6), 665-676.
- [55] Bachman, G. F., & Bippus, A. M. (2005). Evaluations of supportive messages provided by friends and romantic partners: An attachment theory approach. *Communication Reports*, 18, 85-94.
- [56] Bachman, G. F., & Bippus, A. M. (2005). Evaluations of supportive messages provided by friends and romantic partners: An attachment theory approach. *Communication Reports*, 18, 85-94.

- [57] Coble, H. M., Gantt, D. L., & Mallinckrodt, B. (1996). Attachment, social competency and the capacity to use social support. In G.R. Pierce, B. R. Sarason, & I. G. Sarason, (Eds) *Handbook of social support and family*. New York: Plenum.
- [58] Munson, M. R., Floersch, J. E., Townsend, L. (2009). Attitudes toward Mental Health Services and Illness Perceptions among adolescents with mood disorders. *Journal of Children and Adolescent Social Work, 26*(5). 447-466.
- [59] Mackenzie, C. S., Gekoski, W. L., Knox, V. J. (2006). Age Gender and the underutilisation of mental health services: the influence of help seeking attitudes. *Aging and Mental Health, 10* (6), 547-82.
- [60] Mackenzie, C. S., Knox, V. J., Gekoski, W. L., Macaulay, H. L. (2004). An Adaptation and Extension of the Attitudes Toward Seeking Professional Psychological Help Scale. *Journal of Applied Social Psychology, 34* (11), 2410-33.
- [61] Clark, L., Beesley, H., Holcombe, C., & Salmon, P. (2011). The influence of childhood abuse and adult attachment style on clinical relationships in breast cancer care. *General Hospital Psychiatry, 33* (6), 579-586.
- [62] Pegman, S., Beesley, H., Holcombe, C., Mendick, N., Salmon, P. (2011). Patients' sense of relationship with breast cancer surgeons: The relative importance of surgeon and patient variability and the influence of patients' attachment style. *Patient Education & Counseling, 83* (1), 125-128.
- [63] Fraley, R.C., & Shaver, P. (1997). Adult attachment and the suppression of unwanted thoughts. *Journal of Personality and Social Psychology, 73*, 1080-1091.
- [64] Ognibene, T. C., & Collins, N. L. (1998). Adult attachment styles, perceived social support, and coping strategies. *Journal of Social and Personal Relationships, 15*, 323-345.
- [65] Ciechanowski, P. S., Katon, W. J., Russo, J. E., & Walker, E. A. (2001). The patient provider relationship: attachment theory and adherence to treatment in diabetes. *American Journal of Psychiatry, 158*, 29–35.
- [66] Ciechanowski, P. S., Walker, E. A., Katon, W. J., & Russo, J. E. (2002) Attachment Theory: A Model for Health Care Utilization and Somatization. *Psychosomatic Medicine, 64*, 660-667.
- [67] Zigmond, A. S., & Snaith, R. P. (1983). The hospital anxiety and depression scale. *Acta Psychiatrica Scandinavica, 67*(6), 361-370.

- [68] Snaith, R. P. (2003). The Hospital Anxiety and Depression Scale. *Health and Quality of Life Outcomes*, 1: 29.
- [69] Brennan, J. (2001). Adjustment to cancer – coping or personal transition? *Psycho-oncology*, 10. 1-18.
- [70] G Power3 - Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, 39, 175-191.
- [71] Kroenke, C. H., Kubansky, L. D., Schernhammer, E. S., Holmes, M.D. & Kawachi, I. (2006). Social networks, social support and survival after breast cancer diagnosis. *Journal of Clinical Oncology*, 24(7), 1105-1111.

Concluding discussion

This section aims to bring together the preceding sections of the thesis. It shall do this by providing a general overview of the work done within an expanded discussion on its relevance for theory, research and practice. It will also provide an alternative summary of the findings of the empirical study written for the clinical staff who had been involved in the process of recruitment of patients for the empirical study. The rationale for this alternative summary will also be detailed.

A personal reflection section is also included. The author felt this would add to the thesis as a way of capturing and presenting their passion and enthusiasm for conducting clinically relevant and meaningful research, alongside reflecting on how they had to manage challenges, both personal and professional in nature, in order to bring the research together.

Finally the section will contain a brief research proposal that could follow-on from this thesis.

Personal reflection

From the inception of the idea for this thesis, I was faced continually with triggers for reflection. Along with millions of other people in the world my life has been touched by cancer, with family and friends having been diagnosed and treated, some having recovered, but also some having died. Understandably this played a role in motivating me to conduct research with cancer patients to explore just how cancer services could improve psychological support offered to cancer patients, but I was mindful of my own experiences and how they may be recalled by working within hospital cancer settings, and recruiting patients for the study.

Two further massive motivators for me to conduct my research within a health setting were: my passion to overcome stigma and barriers to psychology; and my keenness to promote development of services from within, using practice based evidence and a 'bottom up' approach to service development.

Despite my enthusiasm I became aware of many anxieties when recruiting patients. I had concerns that, despite patients already having agreed to being approached to hear discuss the study further, by approaching patients I may have been a bother to them. By utilising supervision, and peer support I was able to express just how conflicted I was feeling, and reflect on actually how welcoming many of the patients had been to having distraction from the process of their appointments which often included significant waits due to appointments being behind time, or patients were receiving treatment/chemotherapy.

However, this brought about another challenge I experienced, which made me conflicted about the nature of my research, and its usefulness. The study was quantitative in nature, but so many patients that were approached offered much more information that was not possible to capture within the questionnaires they completed. Subsequently, I struggled with how I felt the research dismissed this information. However, within the process of completing the thesis I was able

to use those frustrations in considering how I would have used that information, and thus developed the research proposal ideas that is presented later in this extended discussion.

As is usual in life, the process of completing the clinical psychology doctorate did not go as smoothly as I had hoped, blighted by challenging personal adversities, that made me repeatedly stop and consider my goals and wants in life. An internal conflicting dichotomy of wanting to sort out personal circumstances and just carrying on, caught me up occasionally, and I let it consume me to a point past forgetting about the usefulness of accessing support, to finding myself in a place where I was fearful of asking, guilty for having let it go on too long. Consequently I became the kind of person that I am continually mindful of when I discuss making psychological support accessible to those who need it, but struggle to ask. Fortunately, I have broken from the shackles that chained me back, and I am now completing my thesis and thus the doctorate. The process having further fuelling my commitment to challenging stigma around psychology, and promoting compassionate mindful selves.

The process of the thesis as part of the doctorate has helped me develop a greater awareness of who I am, and my own coping styles and strategies. It has enabled me to reflect on the influence of my own beliefs, attitudes and behaviours on myself and others, and ultimately has influenced who I am today. Someone more hopeful, clear about the next steps, and a true advocate of the simple mantra of treating others as how I would like to be treated myself.

Alternative summary for clinical staff

The following pages show a two sided leaflet, summarising the empirical paper reported in Chapter 2 of this thesis. The summary has been written for feedback to staff who were involved in the process of recruiting the patients for the empirical paper, and staff who work in the cancer services where the research was conducted.

The leaflet is written with readability, and briefness in mind, and thus is void of as much jargon as possible to aid understanding. The author provided contact details for the staff if they had any questions, comments or suggestions regarding the research, or they wanted to know any further details.

It is intended to share copies of the full article following the empirical papers submission for publication.

Availability of a Patient Information Booklet for Cancer Patients about the possible Emotional Impact of Cancer.

As you may be aware for over a year there has been a research study being conducted looking at cancer patients' thoughts of an information booklet about the possible emotional Impact of cancer. The booklet was developed by former patients, and includes some of their experiences about the support services they accessed when seeking support for managing their adjustment to life with cancer. This leaflet aims to outline some of the research that has preceded the release of the booklet, the researches' findings, and clinical implications.

Rationale

It is widely acknowledged that each patient who walks through the clinic doors are unique individuals, with unique experiences, wants and needs. You will be aware that many patients unknowingly may hold some ideas about cancer and their physical wellbeing that may not be consistent with the information we know as professionals, and thus we offer support, advice, and reassurance to correct those beliefs. Over time, with improvements in treatments available to treat different cancers, and development in understand cancer medically, patients are much more aware of what is realistic, and that cancer is no longer a "death warrant". However for many the diagnosis of cancer provokes varying levels of distress.

Psychological support, similar to cancer, is faced with the challenge of overcoming stigma, false beliefs, and barriers preventing people seeking help. The booklet "Should I be feeling like this? Understanding your reactions to cancer" was produced alongside ex-patients in hope to provide current patients with information of what others' had experienced, details of locally available support services, and ultimately offer alternative considerations about accessing psychological support.

Instead of making the booklet available to all cancer patients immediately, it was decided to trial the information booklet, in order to get feedback from patients, and monitor whether its provision had any impact on patients attitudes to seek psychological support.

Methodology

Consequently the research study was set up to recruit patients into one of two groups, a group who received the booklet, and a comparison group who did not receive the booklet. Patients were given detailed information about the study by staff within clinics, and if they were interested in taking part the research team approached the patient and briefed them further about what participation involved. If patients consented to take part, we asked them to complete some questionnaires about how they were feeling on the day, their attitudes towards seeking psychological support, and how they felt about themselves and others. We asked patients to complete the measures again a month later. This allowed us to collect data to compare whether there had been any changes in attitudes towards seeking psychological help in those who received the booklet, with any "natural" change that may have occurred in the comparison group.

Hypotheses

The data collected allowed us to look at how patients perceived others and themselves, and whether this related to their attitudes towards seeking support. It was anticipated that patients with lower perceptions of others, (which is also known as attachment avoidance), and lower sense of self, (which is known as attachment anxiety), were more likely to be less open to seeking support, have lower levels of help seeking propensity, and be more influenced by stigma around seeking support. It was unclear from existing research that if there were any changes in patient's attitudes toward psychological support, how they would relate to patients attachment anxiety and avoidance orientations, and thus this study aimed to explore this.

Results

Patients who received the information booklet and patients who did not, scored similarly on their attitudes towards seeking psychological help. Patients' attitudes did not change over time, and there were no significant differences noted between the two groups.

No significant relationships were found in relation to cancer patients' attachment anxiety and avoidance (sense of self and others) with attitudes towards seeking psychological support.

Discussion and Conclusions

The study found no evidence that the provision of the information booklet "Should I be feeling like this? Understanding your reactions to cancer" to cancer patients, had any influence on their attitudes towards seeking psychological support.

It is wondered whether the single month period of time between repeating the measures was sufficient enough to allow time for any changes in attitudes. Additionally questions around whether the provision of information in a booklet is adequate enough to facilitate change, and whether a more "physical presence" of psychology/support services campaign may be more beneficial to facilitate changes in attitudes, and overcome stigma to accessing services. This would be congruent with the psychological theory of attribution, which postulates people may be more likely to access support if they see others also accessing the support and that the support is consistently available. This could then lead them away from considering accessing support as negative, and due to their own personal inadequacy, to being encouraged as it is acceptable to seek help to manage the adjustment process.

Practice implications

It is important to remain vigilant of cancer patient's psychological wellbeing and management, due to the known negative impact it can have on their quality of life. However professional psychological support services, available for patients, remain underutilised, and challenged by stigma. Meanwhile the booklet is now freely available to give to patients. Further research is recommended into exploring what support cancer patients want, and what they feel cancer services can do to promote access to support services.

Thank you for your time, xxxxxxx

This leaflet is written with a focus on readability, if you have any questions about the research, would like to know any further details, have any comments or recommendations, then please do not hesitate to contact me on xxxxxxx.xxxxxx@liverpool.ac.uk

Research proposal

What support do cancer patients want?

Due to one of the perceived limitations of the empirical paper reported in Chapter two of this thesis, it is proposed for a further piece of research to be conducted to ask and explore, qualitatively, what psychological support cancer patients would like to receive.

A brief literature search using the sentence “What psychological support do cancer patients want?” only produces nine relevant research articles, seven of which ask the question “what do cancer patients want?” but use quantitative methodologies to answer it, with patients completing self-report measures. A further more detailed literature review would be useful to ascertain any more relevant, or similar articles that may be useful to consult to gauge the need for such a study. Whilst it is understood quantitative approaches are less time consuming, it is proposed by conducting the analysis qualitatively it will allow more narrative to be collected around reasons why patients may or may not seek/access help.

If a grounded theory qualitative design was utilised, either individual research interviews, or focus groups could be used to collect data, and purposive sampling would mean recruitment can continue until theoretical saturation of data had been achieved, and thus the data gives rise to the conclusions and theory, rather than it fitting with existing empirical research, with the authors mindful of having to repeatedly review and move between data already received and questions, to confirm findings, or see if a change of direction is required. The initial research question would have to be devoid of as many assumptions as possible, and avoid direction (Strauss & Corbin, 1990), thus possibly change to “How do cancer patients adjust to their diagnosis?”, but it is expected through the process of the analysis for the question to change/develop.

Semi-structured, flexible interview schedules could be utilised to facilitate the interviews or focus groups. Benefits of running focus groups are that more cancer patients may be included in giving their thoughts on the research, and discussing adjustment in groups.

Other qualitative approaches may be useful if considering whether patients at different time points in their cancer journeys would like different types of support; or if patients in remission, have any thoughts on what could have been done differently to make support more accessible/better for them. Mixed designs could even be considered, for example to explore whether patients' attachment anxiety or avoidance orientations have any relationship with the support they would like.

References

Strauss, A.L. and Corbin, J. (1998) *Basics of Qualitative Research: Grounded Theory Procedures and Techniques*, 2nd edn. London: Sage.

Appendices

- Appendix A. Author guidelines for journal Patient Education and Counselling.
- Appendix B Systematic Literature Review Chapter I – Data Table of the Quality Review Process.
- Appendix C Systematic Literature Review Chapter I – Summary Tables of data extracted from articles reviewed.
- Appendix D Empirical Study Chapter II - Copy of letter of agreement for research from Liverpool Heart and Chest Hospitals NHS Trust and Email confirmation that no research passport was needed from Royal Liverpool and Broadgreen University Hospitals NHS Trust, and email confirmation of University of Liverpool.
- Appendix E Empirical Study Chapter II - Example Participant Information Sheet.
- Appendix F Empirical Study Chapter II - Example Participant Consent Form.

Appendix C

Paper	Variables (Measure)	Measure(s) of attachment style	Sample N	Sample Characteristics	Sample criteria	Cancer Diagnosis	Methodology	Analysis	Findings	Limitations
Holwerda, N. et al. (2013) Amsterdam & Groningen, Netherlands	Trust (WFPTS-Sh) Satisfaction (PSQ-Sh) Distress (HADS) Physical Functioning (KPS) Comorbidity	Attachment style interview (categorical)	130 (part of wider study)	Age 59 (9.35sd) Female 70%	30-75yrs First cancer Expected survival >1yr Fluent Dutch	Breast, Gastrointestinal, cervical or prostatic	Longitudinal Mixed design	T-tests Chi-Square ANOVA Mediational boot strapping (AA & Sat; AA & Distress)	Insecure had less trust & satisfaction with physician, & greater distress than secure, 3&9 months post diagnosis. Distress & trust static over time, no diffs in changes. Insecure reported more comorbidity and had poorer physical status. Trust correlated with morbidity Trust mediated AA & Sat, not AA & distress	Low response rate, although high compliance when did complete T1. ? burden of questionnaires in the study Influence of being asked to participate by own Dr? Maybe more trust in Dr means more likely to participate (sample bias) Possible social desirability Shortened questionnaires Only had small effect sizes Generally trust and satisfaction were high, despite sig differences
Braun, M. et al. (2012) Toronto, Canada	Demographics Caregiving (CGQ; CBS-D)	ECR (dimensional)	110 (part of Will To Live (WTL) study Rodin et al. 2007b)	Patient Info: Age 61.7 (10.2sd) Female 23.1% Spouse Info: Age 59.8 (10.6sd) Female 76.9%	Caregiver of Patient with Diagnosis stage IV GI cancer; stage IIIa, IIIb, IV Lung cancer, who is in the WTL Rodin et al (2007b) study	Gastrointestinal Lung	Cross-sectional mixed design	Hierarchical Regression	Patients' AAnx & AAvo correlate Carers' AAnx & AAvo correlates Patients' AAnx correlates with Carers AAnx & AAvo. Patients AAvo not related to Carers Attachment. Caregiving styles – proximity and sensitive negatively correlate with Carers AAvo. Controlling positively related to carer AAvo & AAnx. Compulsive caregiving +ve related with demand, Carers AAnx, & Patients AAvo & negatively with Patients AAnx	Focus on caregivers patterns of caregiving, no info on Patients caregiving style. Influence of gender in participating? Cross-sectional so no causality
Gauthier, L. R. et al. (2012). Ontario, Canada	Demographics Cognitive Functioning (SOMC) Pain Catastrophising (PCS) Relational Context (MDPI-CGR): perceived; solicitous; distracting. Physical Health (KPS; CCI)	ECR (dimensional)	191 (part of a wider study)	Age 56.8 (11.7sd) Female 55% Caucasian 80% Married/Partnered 67% Mean 24 months since diagnosis Ave 10.5 months pain duration	18 yrs+ Cancer pain Fluent English SOMC ≥20 “advanced cancer”	Gastrointestinal Gynaecology Genitourinary Lung Breast	Cross-sectional mixed design	Bivariate Correlations Multivariate regression	Support for Communal Coping Model. AAnx & AAvo positively related with pain catastrophising AAvo negatively related perceived solicitous responses, correlation & regression ; negatively related with distracting responses . AAnx positively related with punishing responses. AAnx and relation of SO (spouse), moderates relationship between pain, catastrophising, and punishing responses	Need further research to support data Cross-sectional design, Sample bias- better physical health in those returning questionnaire. Thus generalisable to people with better physical health No inter-rater reliability on KPS Self-report data
Hamama, R. (2012) Israel	Demographics Adjustment/ Wellbeing (MHI) Adaptation (AQ) Cognitive Appraisal (CAH) Hardiness (HS)	ECR (dimensional)	300 (182 F; 118 M)	Age 48.8 (9.2sd) Native Israel 71% Married 81% ≥3 children 91% Unemployed 30%	25-60yrs No other chronic illness Hebrew speaking No metastases >1yr since discharge, no recurrences	Melanoma	Cross-sectional between	MANOVA		Cross-sectional design Generalisability - Small effect size Sample bias – 25% didn't want to take part Restriction to psych adjustment, not functioning ?generalizability to other cancers
Hsiao, F-H. et al (2012) Taiwan	Sleep (MOS-Sleep) Depression (BDI-II) Meaning in life (MLQ) Salivary cortisol	ECR-R (dimensional)	76	Age 50.8 (7.8sd) Female 100% Cohabiting 67% High school grad 86% Unemployed 8% Since surgery 5.36yrs (2.92) Since treatment ceased 4.8y(2.7)	First cancer No adrenal functioning disorders having completed all treatments. 18-65yrs	Breast	Longitudinal Mixed design	ANOVA Slope analysis Correlations Hierarchical regression	AAvo and AAnx positively correlated with depression, and sleep problems AAnx positively correlated to searching for meaning in life AAvo negatively correlate presences of meaning in life No correlation with cortisol After regression – high levels AAnx predicting depression at baseline, but not over time.	Sample – less metastases -depression not severe - delay since diag/treatment - therefore no generalizable Chinese population only Missing data – although this was low

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Paper	Variables (Measure)	Measure(s) of attachment style	Sample N	Sample Characteristics	Sample criteria	Cancer Diagnosis	Methodology	Analysis	Findings	Limitations
Lutgendorf, S. K. et al. (2012) USA	Social Support/Isolation (SPS) – reliable alliance Depression (SCID-I) Demographics	'Social attachment' Social Provisions Scale – Attachment subscale (categorical)	168	Age 59 (12.7) Female 100% White 96% Married/Living 66%	18+yrs First, and primary diagnosis No non-epithelial malignant tumours/ immune altering comorbidities No steroid medication in last 4months >1yr since surgery	Ovarian	Longitudinal mixed design	T-tests Chi Square Univariate Regression	High social attachment related to longer survival time (59.1% vs 37.8%); and lower likelihood of death. Predictive of survival in past and present depression models. Remain significant predictor across time.	Don't know who primary confident is of patients, or if needs are being met Correlational findings - ? causal model Generally social attachment scores were high
Porter, L. S. et al. (2012). North Carolina, USA	Quality of Life(FACT) Pain (BPI) Depression (BDI-II) Anxiety (STAI) Marital Quality (QMI) Self-efficacy (SSES) Caregiver mood (POMS-B) Care giver strain (CSI)	ECR (dimensional)	127 (part of wider study Porter et al (2011))	Patient Info: Age 65.4 (9.3sd) Female 38% White 91% Ave 18.4 months since diagnosis Spouse Info: Age 62.8 (10.5sd)	Diagnosis early stage lung cancer No other cancers in last 5 yrs Fluent English Spouse also willing to participate	Lung	Cross-sectional mixed design	T Tests Chi Square Correlation ANOVA Regression	AAnx negatively correlates with age AAnx higher in people having chemo Patients' High AAvo relates to lower marital quality; QoL, functional and social; higher depression and anxiety Patients' High AAAnx related to higher anxiety; and low social well-being Spouse AAvo related to patient pain and functional well-being. Spouse AAAnx related to patients marital quality Patients with high AAvo spouse report more pain, lower functional well-being Patients with high AAAnx report lower marital satisfaction Spouse high AAvo report lower marital quality and high levels/strain, anger & dep. High AAAnx, high anxiety. Secure &Sp better adjust than if both insecure. When partner has different AA then adjustment between secure and insecure or towards insecure scores.	Sample bias – older, white, and educated. Little evidence attachment related to demographics or disease Correlational study – need longitudinal research Self-report measures
Clark, L. et al (2011) Liverpool, UK	Childhood abuse Clinical relationships (PPS; DDPRQ-10) Prognosis (NPI) Emotional distress (GHQ) Parental Care (PBI) Demographics	RQ RSQ (dimensional)	100	Age 57.6(10sd) 100% Female White/British 99% 72% wide local excision	-18 yrs+ -Undergoing surgery -First cancer -Deemed too distressed or impaired to give consent	Breast	Cross-sectional within groups	Correlations Mediational analysis	High AAAnx & AAvo related to abuse and perceived support, and AAAnx mediated effect of abuse on perceived support. High Anx & Avo predict surgeon perceived difficulty, but abuse mediated this.	Reporting errors of abuse Self-report measures Modest sample size ? construct of attachment and reliability of measures Modified measures ? Influence of surgeon Exclusion criteria- first cancer, & clinician perception of distress
Pegman, S. et al. (2011) Liverpool, UK	Working Alliance (WAI) Depression (HADS)	RQ RSQ (categorical)	133	Age 58.9 (10.9sd) Female 100% White British 99% ≤2 wks for Diagnoses 72%	18 yrs+ Undergoing surgery First cancer	Primary Breast Cancer	Cross-sectional mixed design	Mixed regressions Random factor = Surgeon IV=AA category	Goal alliance, and Total working alliance greater in securely attached in comparison to insecurely. Surgeon accounted for 9% Variance in WA AA accounted 5%	WAI developed for MH not physical patients Psychometric limitations Small sample to compare between Insecure group or surgeons Influence of patient characteristics/demographics on relationship?

Appendix C

Paper	Variables (Measure)	Measure(s) of attachment style	Sample N	Sample Characteristics	Sample criteria	Cancer Diagnosis	Methodology	Analysis	Findings	Limitations
Schmidt, S. D. et al. (2011) Connecticut, USA	Coping strategies (COPE) Social support (MOS-SSS) Posttraumatic growth (PTGI) Demographics Medical Info	Measure of Attachment Qualities: Avoidance (A); Ambivalence-worry(AW); Ambivalence Merger (AM); Security (categorical) ECR-R (dimensional)	54	Age 52.8 (10.5sd) Female 74% Caucasian 96% Married 76% 4yr degree+ 67% ≥3 children 32% Unemployed 32% Time since diagnosis (4.5yrs)	18+yrs Completed treatment, in remission, no relapses# No current psychiatric diagnosis Good general health	Breast 46% Prostate 19% Other 35%	Cross-sectional within	Correlations ANOVA Hierarchical Regression	Secure Attachment correlated with PTG; and active, positive reframing, religion coping strategies. Regression found Secure accounted for 8% of variance, but mediated by positive reframing, and religion	Sample size Sample bias: recruitment; demographics Generalizability Cross-sectional design Self-report measures
Lo, C. et al. (2010a). Toronto, Canada	Demographics Cognitive Functioning (SOMC) Depression (BDI-II) Spirituality (FACIT-Sp) Pain (BPI-SF)	ECR (dimensional)	342 (part of WTL study Rodin et al. 2007b)	Age 61 (21-88) Female 43% Married/Partnered 70%	18+ yrs Fluent English SOMC ≥20 Have metastases	Metastatic Cancer: Stage III or IV Lung Stage IV Gastrointestinal	Cross-sectional mixed design	Path analysis – ordinary least squares regression Mediational boot strapping (age-AAnx/Sp-dep)	Age is inversely related with depression, Attachment Anxiety & Spirituality, are mediating factors. AA & S account for 56% depression	Cross-sectional design Sample not generalisable (metastatic patients only; limited people under 40 yrs; recruitment bias; English speaking only; exclusion of patients with cognitive impairments) Cultural explanations of differences between age groups
Lo, C. et al. (2010b) Toronto Canada	Cognitive Functioning (SOMC) Physical burden (MSAS) Physical functioning (KPS) Pain (BPI) Self-esteem (RSES) Spiritual well-being (FACIT-Sp) Social support (MOS-SSS) Hopelessness (BHS) Depression (BDI-II)	ECR (dimensional)	365 (part of WTL study Rodin et al. 2007b)	Baseline demographics: Age 62 (11sd) Female 41% Married 72% High School+ 63%	18+yrs Fluent English Diag stage IV GI cancer; stage IIIa, IIIb, IV Lung cancer No carcinoid/ neuroendocrine carcinoma >20 SOMC	Gastrointestinal Lung	Longitudinal mixed design	Regression Repeated measures ANOVA	High AAAnx greater risk for depression	Biased sample – cognitively intact - Fluent English only – needed to be willing to participate in longitudinal assessments – number refusing participation No info about trajectory before study
Cicero, V. et al. (2009) Palermo, Italy	Perceived social support (MSPSS) Adjustment to cancer (MAC): Fighting spirit [FS]; Help/Hopelessness [H]; Stoic acceptance/fatalism [F]; Anxious Preoccupation [AP]	RSQ (dimensional)	96	Age 60.5 (10.46) Female 83% Married 67% High school dip 43% Unemployed 64%	No pre-existing psychiatric symptoms or neurological disorders	Breast Colorectal Other	Cross-sectional within groups	Correlations Bivariate T-test Hierarchical regression	AAAnx negatively correlates with perceived support from all three groups. AAAnx positively correlates with adjustments style H and AP. AAAnx negative a look in that with FS but mediated by perceptions of support from friends	Sample bias - Sample size; Exclusion criteria; Heterogeneity of group Strategies influenced by stage of disease and type of cancer Female dominated sample (women report more distress than men) Measures – both MAC and RSQ avoid low internal consistency Other aspects of support – size of social groups etc. Other variables – stressful life events, or comorbidity
Ellis, J. et al. (2009). Toronto, Canada	Demographics Social support (MOS-SSS) Depression (BDI-II) Hopelessness (BHS) Self-esteem (RSES) Spiritual well-being (FACIT-Sp) Physical Health (MSAS; KPS)	ECR (dimensional)	326 (part of WTL study Rodin et al. 2007b)	Baseline demographics: Age 62 (11sd) Female 43% Married 68% ≤1yr diagnosis 52%	18+yrs Fluent English Diagnosis stage IV GI cancer; stage IIIa, IIIb, IV Lung cancer >20 SOMC	Gastrointestinal Lung	Longitudinal mixed design	Univariate chi square Correlations T-Tests ANOVA MANOVA Stepwise log regression	People with higher AAAnx more likely referred for specialised psychosocial oncology care	Retrospective study Sample bias, and therefore generalisability Selective recruitment , Exclusion criteria - Unknown timing between distress screening and referral Under representation of some groups for analysis.
Lo, C. et al. (2009). Toronto Canada	Cognitive Functioning (SOMC) Self-esteem (RSES) Perceived social support (MOS-SSS) Depression (BDI-II)	ECR (dimensional)	309 (part of WTL study Rodin et al. 2007b)	Baseline demographics: Age 60.7 (11.3sd) Female 41% Married 73% High School+ 67%	18+yrs Fluent English Diagnosis stage IV GI cancer; stage IIIa, IIIb, IV Lung cancer No carcinoid/ neuroendocrine carcinoma >20 SOMC	Lung Gastrointestinal	Longitudinal Mixed design	Confirmatory Factor Analysis	AAAnx & AAvo correlate with each other T1 AAAnx & AAvo negatively correlate with SE T2 AAvo negatively correlate with SE T1&T2 AAAn x &AAvo negatively correlate with social support T1&T2 AAAnx & AAvo positively correlate with depression	Imbalance of positive and negative items Is a secondary analysis Selection of some items on small differences with unselected items

Paper	Variables (Measure)	Measure(s) of attachment style	Sample N	Sample Characteristics	Sample criteria	Cancer Diagnosis	Methodology	Analysis	Findings	Limitations
McLean, L. M. et al. (2009) Toronto, Canada	Physical Health (KPS) Marital Distress (RDAS) Cognitive Functioning (SOMC) Depression (BDI-II) Hopelessness (BHS)	ECR (dimensional)	49	Patients Info: Age 49.7 (11.53sd) Female 61% Reoccurrence 48% Spouse info: Age 49.3 (11.75sd) Female 39%	18+yrs Metastatic/recurrent cancer Spouse willing to participate Relationship ≥ 1yr Fluent English Marital distress ≥ 20 SOMC	Breast Head & Neck Blood Gynecological CNS Gastrointestinal Genito-urinary Lung Melanoma	Cross-sectional mixed design	ANCOVA	Female carers marital distress increases as male Pt AAvo increases AAvo for both couples Depression was dependent on AAnx and AAvo	Sample size, limited power in looking at group differences. And limits generalizability. Cross-sectional design
Rodin, G. et al. (2009) Toronto Canada	Cognitive Functioning (SOMC) Self-esteem (RESE) Physical burden (MSAS) Pain (BPI) Physical functioning (KPS) Depression (BDI-II) Hopelessness (BHS) Desire hastened death (SAHD)	ECR (dimensional)	406	Age 61.5 (11.02sd) Female 42%	18+yrs Fluent English Diagnosis stage IV GI cancer; stage IIIa, IIIb, IV Lung cancer No carcinoid/neuroendocrine carcinoma >20 SOMC	Lung Gastrointestinal	Cross-sectional	Structural equation modelling	More AAnx greater risk for depression, which itself relates to hastened death	Causality – cross-sectional design ?longitudinal effects Measurement precision Generalisability
Rodin, G. et al (2007a) Toronto, Canada	Perceived social support (MOS-SSS): Subscales - Global(G); Emotional/Informational(EI); Tangible(T); Affectionate (A); Positive Social (PS) Depression (BDI-II) Cognitive Functioning (SOMC) Physical burden (MSAS) Physical Health (KPS)	ECR (dimensional)	326	Age 61.8 (10.7sd) 43% Female Married 68% High school+ 64%	18+yrs Fluent English SOMC ≥ 20 No carcinoid/neuroendocrine carcinoma	Lung Gastrointestinal	Cross-sectional mixed design	Linear regression	AAnx & AAvo positively correlated with BDI-II AAvo correlates with BDI-II despite burden AAnx correlates with BDI-II and interacts on burden. AAnx & AAvo associated with social support (Higher A, Lower sup) Effect of AAvo mediated by all support domains. AAnx partially mediated by support domains.	Cross-sectional design High levels of social support Social desirability Sample bias-1014pts to 326, <third.
Hunter, M. J. et al. (2006) Brisbane Australia	Emotional support BSD Negative Affect (PANAS-X-GDS) Physical Health (KPS) Stressful Life Events (SLEL) Socio-Economic Status (IRSED) Cognitive Functioning (MMSE)	RQ (dimensional)	67	Age 66 (11.36sd) Female 13% Caucasian 98% Married 94% Diagnosis bet 2wks-10yrs; mean 26months	18+yrs End-stage cancer Married/living with partner Can consent Score 17+ on MMSE	Digestive organs Urinary organs Respiratory Melanoma Head & Neck Breast Blood & Nymph Brain/CNS Bone Ovarian	Cross-sectional within	Path analysis	AAnx positive correlations with negative affect. No correlations with gender. <i>Trend</i> that males report more AAnx. AAnx & AAvo had direct effect on emotional support. AAnx and AAvo relationship with negative effect is mediated by emotional support	Cross-sectional design Sample bias- participation rate low (21%) predominately male sample – inconsistent with other research - ?influence of female spouses
Costanzo, E. S., et al. (2005) Iowa USA	Quality of Life (FACT) Mood (POMS-SF) Depression (CES-D) Social support (SPS) Interleukin-6 (IL-6) Medical Info Demographics	'Social attachment' Social Provisions Scale – Attachment subscale (categorical)	61	Age 60 Female 100% Caucasian 95% Married 70% Unemployed 46%	18+yrs First, and primary diagnosis of cancer No stromal or germ cell tumours No corticosteroid medication Other Immune system influencing conditions		Cross-sectional mixed design	Logarithmic transformation ANCOVA Pearson correlation Linear Regression	High social attachment related to lower IL-6	Cross-sectional Unknown about clinical implications

Appendix C

Paper	Variables (Measure)	Measure(s) of attachment style	Sample N	Sample Characteristics	Sample criteria	Cancer Diagnosis	Methodology	Analysis	Findings	Limitations
Tacon, A. M. (2003) Texas, USA	Demographics Medical Info Closeness to parents (CPS)	Adult Attachment Questionnaire (AAQ) Attachment history paragraphs (dimensional)	104 (52 patients; 52 control) Repeat Tacon, et al. (2001)	Cancer group only: Age 45 (5.8sd) White 98% Married 83% Unemployed 35% Diagnosis >8yr ago 23%	>6 mo from diagnosis Post treatment Asymptomatic & cancer free	Breast Control	Cross-sectional Mixed design	Chi-Square ANOVA	Low AAvo corr high closeness to mother Early insecure attachment correlates with AAvo. (more insecure history, higher AAvo) More insecure history reported in cancer group AAvo higher in cancer group	Cross-sectional, relational not causal Avoidance could be explained as coping strategy not attachment pattern Sample bias & generalisability - size -heterogeneity - self-selected - demographics - multiple recruitment sites, ?motivation of control group, influence of survivorship/time since diagnosis.
Schmidt, S. et al. (2002) Germany	Coping Strategies (BCM) Social support (SSQ-Sh) Health status (NHP)	Adult Attachment Prototype Rating (AAPR) (categorical)	54 (other groups: 52 ulcers 44 alopecia)	Cancer group only Age 52 (13.3sd) Female 100%	No/low comorbidity TNM <3 Primary diagnosis	Breast	Cross-sectional mixed design	CANOVA MANOVA	Similar attachment distribution to ulcer group; Alopecia more ambivalence & mixed Less AAvo in the group compared to men in ulcer group,(but not sig) AA related to coping strategies Low AAvo/AAnx seek social support Ambivalent have negative emotional coping AAvo positively correlates with emotional control AAvo higher in cancer group	Cross-sectional, no causal relationships Generalizability of sample attachment as a concept and possible overlap with coping
Tacon, A. M. et al. (2001) Texas, USA	Emotional control (CECS)	Adult Attachment Questionnaire (AAQ) (dimensional)	104 (52 patients; 52 control)	Cancer group only: Age 45 (5.8sd) Female 100% White 98% Married 83% Unemployed 35% Diagnosis>8yr ago 23%	>6 mo from diagnosis Post treatment Asymptomatic & cancer free	Breast Control	Cross-sectional mixed design	Chi-square ANOVA	AAvo positively correlates with emotional control AAvo higher in cancer group	Cross-sectional. Avoidance could be coping strategy not 'attachment' Sample bias – size - heterogeneity - self-selected – demographics – multiple recruitment sites. ? motivation of control group, influence of family history, lack of knowledge of life stressors
Shields, C. G. et al. (2000) New York, USA	Adjustment (DAS) Depression (BDI) General Health (SF36-GH)	Rochester Attachment Interview - RAI Rochester Attachment Coding System – RACS (categorical)	40 couples 10 colorectal 18 22 Control	Breast group: Age 58.6(7.6sd) Female 100% Husband 62.1 (8.5sd) Colorectal: Age 61.2 (10.6sd) Female 0% Wife 59.1 (10.6)	First diagnosis of Cancer, with No metastases, having chemo/radiotherapy both 50yrs+ Spouse willing to participate No dementia Control couples – no long term health problems &no dementia	Breast Colorectal Control	Cross-sectional mixed design	ANCOVA	Husbands marital satisfaction influenced by their and wife's attachment Wife's marital satisfaction influenced by husbands attachment. – secure husband = greater marital satisfaction; avoidant husband = less marital satisfaction. If husband and wife secure, then marital satisfaction high for man, regardless of cancer In cancer group then greater association of avoidance and low marital satisfaction If husband secure, & has cancer, wives report more depression, & lower perception of health	Sample bias – small, older sample, minimal psychological distress Cross-sectional study limitations. Not generalizable, need to explore differences between genders/roles
Lekander, M. et al (1996) Sweden	Social support (ISSI) Immune Status	'social attachment' ISSI subscales – availability & adequacy (dimensional)	38	Age 63 Female 100%	None	Breast	Cross-sectional mixed design	Regression ANOVA	After treatment group - Perception of attachment positively correlates with white blood cells and percentage granulocytes. Negatively correlated with the percentage lymphocytes	Can't say causal underpinnings

Appendix C

AAx – Attachment Anxiety	COPE	Brief Cope Inventory
AAvo - Attachment Avoidance	GDS-PANAS-X	General Dimension Scale of Negative Affect – Positive and Negative Affect Schedule
BDI	SLEL	Stressful Life Events List
BDI-II	SES	Index of Relative Socio-Economic Disadvantage
FACIT-Sp	MMSE	Mini Mental State Examination
SOMC	AHP	Attachment history Paragraphs
WFPTS-Sh	CPS	Closeness to parents scale
PSQ-Sh	BHS	Becks Hopelessness Scale
KPS	SAHD	Schedule of Attitudes Toward Hastened Death
BPI	CECS	Courtauld Emotional Control Scale
ECR	BCM	Bernese Coping Modes
ECR-R	SSQ-Sh	Social Support Questionnaire- short form
ECR-M36	NHP	Nottingham Health Profile
ECR-M16	SPS	Social Provisions Scale
PCs	SCID-I	Structured Clinical Interview for DSM-IV
CCI	FACT	Functional Assessment of Cancer Therapy version 2 – physical & functional wellbeing subscales
MDPI-CGR	POMS-SF	Profile of mood states – short form – Anxiety, depression and fatigue subscales
RQ	CES-D	Centre of Epidemiological Studies Depression scale
RSQ	ISSI	Interview Schedule for Social Interaction
MSPSS	STAI	State Trait Anxiety Inventory
MAC	QMI	Quality of Marriage Index
PPS	SSES	Standard Self Efficacy Scale
DDPRQ-10	CGQ	Caregiving Questionnaire
NPI	CBS	Caregiving Burden Scale – Demand Subscale
GHQ	DAS	Dyadic Adjustment Scale
PTGI	SF36-GH	Short Form Health Survey 36 - Global Health subscale
PBI	HADS	Hospital Anxiety and Depression Scale
MSAS		
MOS-SSS		
MHI		
AQ		
CAH		
HS		
BSD		

Appendix B

Quality Review area	Gauthier, 2012	Cicero, 2012	Fei-Hsiu, 2012	Holwerda, 2012	Pegman, 2011	Clark, 2011	Rodin, 2007	Lo, et.al. 2010	Hamama-Raz, et.al. 2012	Schmidt, 2012	Hunter, 2008	Lo, et.al. 2008	Tacón, 2008	Rodin, 2008	Lo, et.al. 2010	Tacón, 2008	Schmidt, 2008	Lutgendorf et.al. 2012	Costanzo, et.al. 2005	Ellis, et.al. 2009	Lekander, et.al. 1996	Porter, et.al. 2012	Braun, et.al. 2012	Shields, 2008	McLean, et.al. 2011	TOTAL	
Objectives:																											
1) Aims, Objectives and hypotheses are stated	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	25
Methods:																											
2) Study design is mentioned	✗	✗	✓	✓	✗	✗	✗	✗	✗	✓	✗	✓	✗	✓	✓	✗	✓	✗	✗	✗	✗	✗	✗	✗	✗	✗	7
3) Sampling method/recruitment described inc why N size	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	25
4) Eligibility criteria for sample	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	24
5) Demographics reported for cancer group	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	25
6) Variables	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	25
7) Measurements	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	25
8) Bias	✗	✗	✓	✓	✗	✗	✓	✗	✗	✗	✗	✗	✗	✗	✗	✗	✓	✗	✓	✗	✓	✗	✗	✗	✗	✓	7
9) Statistical methods	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	25
Results:																											
10) Missing data – inc retention	✓	✗	✗	✗	✗	✗	✓	✗	✗	✗	✓	✓	✗	✗	✓	✗	✗	✗	✗	✓	✗	✗	✗	✗	✗	✗	6
11) Outcome variables reported	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	25
12) Give results and precision (if applicable)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	25
13) Report other analyses	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	25
Discussion:																											
14) Summary of results linking to objectives	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	25
15) Limitations discussed	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	25
16) Generalisability	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	25
TOTAL	14	13	15	15	13	13	15	13	13	14	13	15	13	14	15	13	15	13	14	14	14	13	13	13	14	344	