

A Systematic Review:

**Why do Occupational Therapists in the NHS
use Anxiety Management in palliative care and
how do they use it in a generic community role
with older palliative people?**

Acknowledgements

To Sue Bennington (for supporting my reference to get on this course), Dad (project manager), Guy, Mum, Heather Stewart (tutor), Sara Fisher (course leader), Judith Wilcock (mentor) and everyone at work – thank you. I couldn't have got here without your support.

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Glossary of terms

AIDS – Acquired immune deficiency syndrome

BJOT – British Journal of Occupational Therapy

CASP – Critical Appraisal Skills Programme

CBT – Cognitive Behavioural Therapy

COT – College of Occupational Therapists

CQC – Care Quality Commission

HADS – Hospital Anxiety and Depression Scale

HIV - Human Immunodeficiency Virus

HOPE - HIV/AIDS, Oncology, Palliative Care and Education

IF – Impact Factor

MBSR – Mindfulness Based Stress Reduction

MDT – Multi-Disciplinary Team

NCAT – National Cancer Action Team

NHS – National Health Service

NICE – National Institute for Clinical Health Excellence

OT – Occupational Therapy, Occupational Therapist

PICO – Problem, Intervention, Comparison, Outcome

PMR – Progressive Muscle Relaxation

RCT – Randomised Controlled Trial

VAS – Visual Analogue Scale

WHO – World Health Organisation

Abstract

Introduction:

Anxiety management is a complex intervention delivered by generic community NHS Occupational Therapists (OTs) working with older palliative clients (Creek, 2003., Cooper, 2007., College of Occupational Therapists and HOPE, 2004., National Cancer Action Team, 2009). Evidence supports managing anxiety as a core rehabilitation goal in palliative care as this can contribute to improved quality of life, independence, safety, and rehabilitation potential (Cooper, 2007., National Institute for Clinical Health Excellence, 2011a., National Institute for Clinical Health Excellence, 2011b., World Health Organisation, 2012., World Health Organisation, 2011). However, disparity occurs in practice on understandings and application of anxiety management. Despite this, there are currently no systematic reviews specific to anxiety management and this role.

Method:

A systematic literature review of anxiety management was undertaken for this population. Combinations of the following terms were used; 'anxiety', 'anxiety management', 'stress', 'stress management', 'occupational therap*', 'older people', 'palliative' and 'community'. Strict inclusion and exclusion criteria were applied. Critical appraisal tools were used to critique the literature (CASP, 2011). Key evidence was critiqued on quality following the hierarchy of evidence guidelines (Appendix 4). A critical review of the literature was conducted and issues synthesised to create themes (Aveyard, 2010).

Results:

Why anxiety management is used by OTs with this population is clear, but how community OTs use it in the current NHS is not. Disparity was evident in the language of anxiety management in the literature. Lack of consensus occurred on the content, measurement of outcomes and efficacy of anxiety management. A salient issue is the potential impact of this on commissioning of services in the current economic climate (Department of Health, 2010a).

Recommendations:

Further research is needed into how anxiety management is used in this role, and how the language of anxiety impacts on OT intervention.

Introduction

Introduction

It is well established in the literature that anxiety is a major problem for older palliative clients (World Health Organisation, 2011., National Institute for Clinical Health Excellence, 2011b). Anxiety is one of the top five symptoms that can reduce rehabilitation potential by eroding quality of life (National Institute for Clinical Health Excellence, 2004), and the causes in this population have been widely documented (Table 1).

Table 1. Causes of anxiety in palliative clients (Cooper, 2007)

- Change of role
- Loss of independence/ role/ routine/ function
- Body image changes (lymphoedema, hair falling out)
- Symptoms (nausea, pain, breathlessness, lack of sleep)
- Diagnosis/prognosis
- Treatment (chemotherapy, radiotherapy, procedures)
- Unfinished business
- General issues (family, money, poor health).
- Fear of death (place of death, cause of death, effect on others)

Consensus in the literature indicates improving quality of life is a fundamental goal in palliative rehabilitation (World Health Organisation, 2011). Reducing anxiety reduces psychological distress therefore needs to be addressed at the point of care to reduce the risk of serious and debilitating complications as it can reduce safety, function, and independence (Cooper, 2007., Department of Health, 2008., College of Occupational Therapists, 2011). Motivation and capacity to engage in rehabilitation are reduced with anxiety, thus addressing anxiety early within palliative rehabilitation is an important part of Occupational Therapy (OT) intervention (Ewer-Smith, 2010., College of Occupational Therapists, 2011).

Not every client reports or has a diagnosis of anxiety, but older people are statistically more likely to experience it (The Kings Funds, 2008). Despite one document reporting anxiety as an “uncommon issue” (Department of Health, 2001), subsequent documents refute this. Anxiety is the second most common mental health condition in the UK (National Institute for Clinical Health Excellence, 2011b., The Kings Fund, 2008). The World Health Organisation (2002 p.16) highlighted older people are “assumed to be anxious” indicating a large undiagnosed need. As the number of older people is expected to increase significantly over the next decade, there is potential for more NHS clients to identify anxiety as a barrier to achieving meaningful goals in palliative rehabilitation (World Health Organisation, 2011). In the author’s experience anxiety is a common issue in practice, hence managing anxiety for this population could be considered fundamental in the community OT role (College of Occupational Therapists and HOPE, 2004., Cooper, 2007).

As community care is strongly advocated in the NHS, interventions delivered in clients’ homes, such as anxiety management, support this agenda (Department of Health, 2008., Department of Health, 2010a). Creek (2003) argued OTs have a complex role, which is clear for community OTs who have wide remits in practice. From experience, this becomes more challenging when navigating current health and social care systems with functional problems that include physical and mental needs. Cognitive dissonance exists in practice, however, on whether OTs should use anxiety management in this role. In this author’s experience, questions are asked by health professionals and clients, such as what is anxiety management and why is it used - a common misunderstanding of the OT role is of an equipment provider only (Creek, 2007). Anxiety management was historically used in mental health, but guidance supports this intervention use by OTs in palliative rehabilitation (College of Occupational Therapists, 2011., College of Occupational Therapists and HOPE,

2004., National Cancer Action Team, 2009). However there has been little discussion on how it is used in generic community OT.

There are no systematic reviews or theses specific to this area of practice following preliminary literature searches. Previous systematic reviews focused on anxiety and physical health conditions, but none on this practice area (Clucas et al., 2011., Windle et al., 2008). Clucas et al. (2011) demonstrated a robust review of interventions for anxiety in people with HIV, but excluded OT interventions. Windle et al. (2008) provided an extensive review of interventions to promote mental wellbeing in older people but excluded palliative clients. Recent guidance for OT excluded anxiety management (National Institute of Clinical Health Excellence, 2008). A plethora of recent reviews exist on mindfulness based stress reduction (MBSR), but these are not specific to anxiety management by OT. Clarity on the quality of evidence on anxiety management for this population is needed given imminent NHS commissioning challenges and increased demand for evidence-based practice (Department of Health, 2010a., College of Occupational Therapists, 2010, Caldwell et al., 2011). Research from the OT's perspective is needed to support practice (Department of Health, 2012), hence the following research question was developed:

Why do Occupational Therapists in the NHS use anxiety management in palliative care, and how do they use it in a generic community OT role with older palliative people?

This question was structured using the Problem, Intervention, Comparison, Outcome (PICO) format (Aveyard, 2010) and supports current OT research priorities (Table 2).

Table 2. Research priorities from COT in palliative care
(College of Occupational Therapists, 2007 p.17)

- Evaluation of relaxation and other occupational therapy interventions for stress management
- An evaluation of OT interventions with patients experiencing breathlessness
- The range of settings within which OTs are employed
- What services/interventions are provided in the different environments
- Effectiveness of interventions
- The need for nationally-shared standards, protocols and guidelines in HIV/AIDS, palliative care and oncology

The intention of this systematic review is to meet the following aims and objectives:

AIM:

To systematically review primary evidence on anxiety management delivered by OTs working in a community role with older palliative people in the NHS.

OBJECTIVES:

1. To critically evaluate primary research with this population following strict inclusion and exclusion criteria.
2. To understand why OTs undertake anxiety management in this role.
3. To understand how OTs deliver anxiety management in this role.
4. Identify further research potential in this area.
5. To present findings in a journal style format consistent with the British Journal of Occupational Therapy (BJOT).

Method

Method

The structure of this review was created from the BJOT guidelines on publishing journal articles, as outlined in Appendix 1 (Barnett, 2010). A systematic literature review of primary research was chosen to consolidate the existing evidence base within this population (Appendix 2). This design was realistic to achieve within the timeframe of this module, whilst working full time (Aveyard, 2010). Confidentiality was maintained throughout by excluding employer details and focusing on an objective literature review. Consent was obtained from the author's university to complete this study. The literature review was completed using the following online databases (see Table 3 and 4).

Table 3. Online databases

Ingenta	<i>British Journal of Occupational Therapy</i> <i>Canadian Journal of Occupational Therapy</i>	
Ebsco	<i>Academic search complete</i> <i>Amed</i> <i>Eric International</i> <i>Cinhal</i> <i>Psycharticles</i>	<i>Psychinfo</i> <i>Race relations</i> <i>abstracts</i> <i>SocIndex</i>
Ovid	<i>Proquest Legacy nursing and Allied Health</i> <i>Source</i>	
NHS Evidence		
Scopus		
Web of Knowledge		
<i>NB: EMBASE was excluded as it primarily examines pharmacological interventions, whereas this systematic review was investigating the non-pharmacological interventions.</i>		

Table 4. Online databases and websites

<i>Anxiety UK</i>
<i>Centre for Evidence Based Medicine</i>
<i>Clinical Knowledge Summaries</i>
<i>Cochrane</i>
<i>College of Occupational Therapists</i>
<i>Department of Health</i>
<i>Ethos</i>
<i>Google (and Google Scholar)</i>
<i>Map of Medicine</i>
<i>Mind</i>
<i>National Institute of Clinical Excellence</i>
<i>National Cancer Action Team</i>
<i>OT Seeker</i>
<i>Patient UK</i>
<i>System for Information on Grey Literature in Europe</i>
<i>The Kings Fund</i>

Existing systematic reviews were used to inform the initial literature review and add weight to the discussion. Search terms were created from the initial literature review (see Table 5).

Table 5. Search terms

Anxiety	Stress	Older people	Palliative
Anxiety management	Stress management	Occupational therap*	Community

As OT guidance (College of Occupational Therapists, 2004., College of Occupational Therapists, 2011) stated anxiety management is used with this population but Table 2 identified stress management, the research question focused on anxiety management, and ‘stress management’ was included in the search terms. Interventions that were not core skills were excluded, hence MBSR was excluded due to the quantity of current systematic reviews and it not being standard practice within anxiety management according to key texts (Cooper, 2007., Keable, 1997). Reference lists of key evidence were searched and clinical specialists consulted. The hierarchy of evidence was used to assess research quality (Appendix 4).

Evidence from all levels was used due to the relevance to practice, and illustrate quality issues of research (Aveyard, 2010). ‘Grey literature’ was used to add depth to the discussion and to reduce ‘publication bias’ (Aveyard, 2010).

Table 6 defines inclusion and exclusion criteria used and Appendix 2 states the search strategy within each database. Key articles chosen from search results are listed in Appendix 3. Critical appraisal of the literature (quality and clinical content) was completed using CASP tools for quantitative and qualitative evidence (Appendix 4).

Table 6. Inclusion and exclusion criteria for this systematic review

<i>Selection criteria</i>	<i>Inclusion</i>	<i>Exclusion</i>
Population	Older people (over 65 years old). Palliative. Community client. Anxiety. Stress. NHS.	<ul style="list-style-type: none"> ● Dental anxiety ● Antenatal/postnatal anxiety ● Post Traumatic Stress Disorder ● Post surgery/acute/ in hospital following procedure ● Carers anxiety ● Severe and enduring mental health
Intervention	Anxiety management. Stress management. Non-pharmacological standard interventions used by community OTs as part of role in palliative care with anxiety management	<ul style="list-style-type: none"> ● Cognitive Behavioural Therapy ● Exercise ● Hypnosis/ hypnotherapy ● Neuro-linguistic programming ● Mindfulness ● Complementary therapies ● Pharmacological interventions ● Pet therapy ● Dental anxiety management ● T'ai Chi ● Extended scope OT interventions ● Mindfulness-Based Stress Reduction (MBSR).
Comparison	Not compared to another intervention	<ul style="list-style-type: none"> ● N/A
Outcome	Reduced anxiety. Increased quality of life. Client achieved meaningful goal.	<ul style="list-style-type: none"> ● N/A
Publication type	Primary research Full text Written in English 1998 – 2011,	<ul style="list-style-type: none"> ● Before 1998.

Results were categorised following the hierarchy of evidence (Sackett et al., 2003., Appendix 4). Guidance in Aveyard (2010) and Bowling (2009) was used to critically appraise the audits and expert opinion as there was no formal audit critique tool. Impact Factor (IF) was used to assess the quality of journals the articles were published in (Reuters, 2012). Results are explained in the next section. Information was extracted into themes and synthesised in the discussion section.

Results

Results

Twenty two primary research papers (n = 22) were relevant (Table 7, Appendix 3). No articles included all of the search terms or completely addressed the research question. Other higher quality systematic reviews, e.g. Cochrane, may have only included randomised control trials (RCTs), however few RCTs exist of direct relevance to this area hence a wide spectrum of evidence quality was included (Higgins and Green, 2011). Due to the mixed methodologies in these articles and complexity of anxiety management, it was not possible to combine results to produce a meta-study (Aveyard, 2010). However critique and analysis on quality of evidence is offered.

Five RCTs were identified (n = 5), of which one (the most relevant) was incomplete due to issues surrounding recruitment (Harrison-Paul and Drummond 2006). One paper was quantitative (n = 1) (Schleinich et al., 2008). Seven were qualitative research (n = 7) (Halkett et al., 2010., Keesing and Rosewax, 2011., Kealey and McIntyre, 2005., Meeson, 1998b., Mok et al., 2010., Murata and Morita, 2006., Norweg et al., 2008). Seven were audits (n = 7) (Cooper and Littlechild, 2004., Hoy et al., 2008., Meeson, 1998a., Miller and Hopkinson, 2008., Prior, 1998a., Prior, 1998b., Rosier et al., 1998). One paper was a survey (n = 1) (Vockins, 2004). One paper (n = 1) was expert opinion and was included due to the quantity of times it was cited (Ewer-Smith and Patterson, 2002). The quality of articles was moderate on the hierarchy of evidence, with the majority being qualitative in nature. Most journals were of low quality as had a low IF (Reuters, 2012). This is consistent with Rodger et al. (2006) who reported OT journals have a low IF.

Table 7. Classification of intervention and components of key articles

Quality of research	Authors	Type of intervention	Components
RCT	<i>Bredin et al. (1999)</i>	Breathlessness management	Assessment, triggers, advice, exploration of the meaning of breathlessness in relation to anxiety, breathing techniques, progressive muscle relaxation and distraction exercises, goal setting
	<i>Harrison-Paul and Drummond (2006)</i>	Anxiety management	Breathing exercises, systematic relaxation, guided imagery. Part of overall OT role.
	<i>Kitchiner et al. (2009)</i>	Anxiety management	Psycho-educational approach. CBT model, activity scheduling, goal planning, applied relaxation techniques
	<i>Schofield and Payne (2003)</i>	Snoezelen	Fibre-optic spray with colour change, oil slide projector, music, reduced lighting, private environment
	<i>Sloman (2002)</i>	Relaxation	Progressive muscle relaxation, guided imagery (taped instructions), discuss feelings, homework
Quantitative	<i>Schleinich et al. (2008)</i>	Anxiety and stress management	Canadian Model of Occupational Performance
Qualitative	<i>Halkett et al. (2010)</i>	Stress management and relaxation training	Part of overall palliative OT role
	<i>Keesing and Rosewax (2011)</i>	Anxiety management	Symptom control, relaxation. Part of overall palliative OT role
	<i>Kealey and McIntyre (2005)</i>	Stress management	Part of overall palliative community OT role
	<i>Meeson (1998b)</i>	Anxiety management	Cognitive/behavioural frame of reference
	<i>Mok et al. (2010)</i>	Management of psycho-existential suffering	Address meaningful activities and relationships
	<i>Murata and Morita (2006)</i>	Relief of psycho-existential suffering	Support, discussion and education on issues around loss of relationships, autonomy and temporality
	<i>Norweg et al. (2008)</i>	Breathlessness management	Part of joint rehabilitation with physiotherapy. Breathing techniques specific to functional activities, cognitive behavioural intervention, breathing pattern retraining, energy conservation
Audit	<i>Cooper & Littlechild (2004)</i>	Anxiety management	Part of overall palliative OT role. Symptom control. Canadian Model of Occupational Performance
	<i>Hoy, Twigg and Pearson (2008)</i>	Stress management	Part of overall palliative community OT role
	<i>Meeson (1998a)</i>	Anxiety management	Main intervention used by mental health OT
	<i>Miller and Hopkinson (2008)</i>	Relaxation management	Relaxation techniques (induction script, progressive muscular relaxation, passive neuromuscular relaxation, autosuggestion, guided and unguided visualisation)
	<i>Prior (1998a b)</i>	Anxiety management	Education, progressive relaxation, breathing techniques, cognitive aspects of anxiety, problem solving
	<i>Rosier et al. (1998)</i>	Anxiety management	Extensive list – see article. Primarily education of symptoms, triggers, goal setting, relaxation (guided imagery, progressive muscular relaxation), homework, music
Survey	<i>Vockins (2004)</i>	Relaxation, anxiety and breathlessness management	Relaxation techniques, breathing exercises, education of symptoms (anxiety, stress, breathlessness). Part of overall palliative OT role
Expert opinion	<i>Ewer-Smith and Patterson (2002).</i>	Relaxation (anxiety and stress management)	Part of overall palliative OT role

The quality of these results is consistent when considering the core philosophical underpinnings of OT. OTs seek to explore the client's perspective through their experience and understanding of their world, and their interaction with it (Creek, 2003). They assess function and explore meaningful activities completed during a client's routine (Creek, 2003). This flexible process contributes to individualised care as allows for changes in function, health, relationships and environment (Creek, 2003). Hence, it could be argued OTs have a subjectivist epistemology and use of qualitative research gives high quality information as is most relevant to OT practice (Crotty, 2011). This is consistent with most articles which utilised qualitative methodology. Bowling (2009 p.149) argued qualitative research could also be viewed from a relativist stance and stated "reality is a social construct unique to each person...a synthesis of knowledge is not possible".

One perspective is it is difficult to quantitatively measure and capture outcomes of anxiety management due to it being complex (Creek, 2003). Arguably it cannot be seen from an ontological perspective as it requires consciousness to perceive the emotion of anxiety and is not an innate object (Crotty, 2011). Measuring anxiety reduction alone may not accurately capture the full benefits of anxiety management and could be considered a reductionist approach. Table 8 illustrates the lack of statistically significant studies on anxiety management. Bredin et al. (1999) had the most statistically significant reduction in anxiety and perceived breathlessness, but this was not defined as anxiety management merely a component used within it. Measurement of the client experience and perception of reduced anxiety is central to the OT role and subjectivist stance, yet few studies did this despite using multiple outcome measures (Table 8).

Table 8. Outcomes regarding the management of anxiety

Quality of research	Authors	Outcome measure	Components measured related to anxiety	Statistical significance
RCT	<i>Bredin et al. (1999)</i>	Visual Analogue Scale (VAS) (breathlessness)	<ul style="list-style-type: none"> Distress caused by breathlessness Breathlessness at worst 	P value = 0.09
		Hospital Anxiety and Depression Scale (HADS) (not exclusive list)	<ul style="list-style-type: none"> Anxiety 	P value = 0.14 P value = 0.08 All statistically significant reduction of anxiety
	<i>Harrison-Paul and Drummond (2006)</i>	General Health Questionnaire SF-36	<ul style="list-style-type: none"> Mood Quality of life 	<i>No statistical significance due to dropouts</i>
	<i>Kitchiner et al. (2009)</i>	General Health Questionnaire – 28 anxiety/insomnia subscore Fear questionnaire	<ul style="list-style-type: none"> Anxiety Fear 	Neither anxiety management nor stress control intervention were statistically significant
	<i>Schofield and Payne (2003)</i>	HADS	<ul style="list-style-type: none"> Anxiety 	P value = 0.02 Reduced anxiety noted, but not statistically significant
	<i>Sloman (2002)</i>	HADS Functional Living Index – Cancer Scale	<ul style="list-style-type: none"> Anxiety Quality of life 	P value = 0.057 (not statistically significant) P value = 0.01 (statistically significant)
Quantitative	<i>Schleinich et al. (2008)</i>	VAS	7. Therapist teach me ways to reduce my stress and anxiety 27. Therapists suggests to my friends and family ways to manage their stress and anxiety	Both were top 5 th out of 42 goals in palliative rehabilitation.

Table 8. Outcomes regarding the management of anxiety (continued)

Quality of research	Authors	Outcomes	Components related to anxiety	Statistical significance
Qualitative	<i>Halkett et al. (2010)</i>	OT-defined own job role	Stress management, relaxation training, reduce anxiety	n/a
	<i>Keesing and Rosewax (2011)</i>	Carers and OT identified palliative clients occupational needs	Symptom control, anxiety management, relaxation, Occupational deprivation as cause of anxiety	n/a
	<i>Kealey and McIntyre (2005)</i>	Patients and carers opinions on community OT	Stress, fear, worried about the future, stress management, anxiety, emotional support	n/a
	<i>Meeson (1998b)</i>	Themes of interviewed mental health OT. Client achieving own goals to reduce anxiety around specific functional activity.	Anxiety management, stress	n/a
	<i>Mok et al. (2010)</i>	Reduction of distress, increase in quality of life, taking part in meaningful activities and relationships.	Psycho-existential distress, quality of life	n/a
	<i>Murata and Morita (2006)</i>	Reduction of distress, increase in quality of life, minimise loss of relationships, autonomy and temporality.	Psycho-existential distress, quality of life, death anxiety	n/a
	<i>Norweg et al. (2008)</i>	Increased perceived control, reduce anxiety, breathlessness and stress.	Anxiety, stress, breathlessness	n/a
Audit	<i>Cooper & Littlechild (2004)</i>	OT reported interventions with palliative clients. Increase symptom control of anxiety and breathlessness	Anxiety, breathlessness, symptom control	n/a
	<i>Hoy, Twigg and Pearson (2008)</i>	OT home visit content. Maintain quality of life, manage symptoms,	Psychosocial support, quality of life, stress management	n/a
	<i>Meeson (1998a)</i>	OT identified anxiety management as the main intervention. Relaxation	“Stress management became anxiety management” p.9	n/a
	<i>Miller and Hopkinson (2008)</i>	Management of anxiety, decrease tension, increase occupational performance. VAS (Tension). Quality of life.	Relaxation, tension (included “pain, breathlessness, anxiety and feelings of helplessness” p490).	n/a
	<i>Prior (1998a b)</i>	Statistically significant reduction of anxiety (HADS).	Anxiety, Fear, stress	P value = 0.039 (anxiety reduction using HADS)
	<i>Rosier et al. (2008)</i>	Manage anxiety through relaxation techniques, reduce anxiety symptoms	Anxiety	n/a
Survey	<i>Vockins (2004)</i>	Increase control over symptoms (anxiety, stress, breathlessness), reduce anxiety, and positively impact on function.	Relaxation training/ breathlessness management, anxiety management	n/a
Expert opinion	<i>Ewer-Smit h and Patterson (2002).</i>	VAS “Assess impact of anxiety and stress on an individual’s function”.	Tension, anxiety, stress, function	n/a

The research environment varied from outpatient clinics to hospices. Only one study was conducted in the client's home, but was not specific to the community OT role (n = 1) (Harrison-Paul and Drummond, 2006). As nine (n = 9) studies were from other countries, only eleven studies were NHS-based (n = 11), of which five (n=5) had authors from the same hospital (Cooper and Littlechild, 2004, Ewer-Smith and Patterson, 2002, Harrison-Paul and Drummond, 2006, Miller and Hopkinson, 2008, Vockins, 2004). The results may have been due to local phenomena, yet no article discussed this. Anxiety management could be more effective at specialist cancer centres where OTs have more integrated roles within the team than community OTs who are not based in palliative teams. If efficacy is related to integration, then imminent changes within the NHS from the integration agenda could positively affect the efficacy of anxiety management in the generic OT role (Department of Health, 2010a). No study looked at the current community OT role with mixed caseload and use of anxiety management. Anxiety management was discussed as part of a larger rehabilitation programme for palliative clients, hence efficacy of just anxiety management was difficult to assess. Searches specific to stress management and this population were included, but most papers discussed work-related stress or 'burnout' issues of nursing staff, not client stress. Hence few studies on stress management met the inclusion criteria.

A cluster of articles was identified in 1998 on anxiety management, but all reported its use in mental health only (n = 5) (Meeson, 1998a, Meeson, 1998b, Prior, 1998a, Prior 1998b, Rosier et al., 1998). These were included as they formed a basis of clinical information on the skills used. A second cluster of articles was identified on symptom management through reduction of anxiety e.g. breathlessness management (n = 2) (Norweg et al., 2008, Bredin et al., 1999). The RCT by Bredin et al. (1999) is considered high quality, as appears in a peer-reviewed journal with a high IF. This article is repeatedly cited by OT to justify breathlessness management and managing anxiety to reduce breathlessness in

palliative clients. However there is no mention of OT in the article, nor whether the clients had OT during the study. A paucity of literature on psychological distress was discovered hence a third cluster of articles was identified on psycho-existential suffering and anxiety to reflect current issues (n = 2). A fourth cluster of articles was identified on the general OT role in palliative care (n = 9).

Sample size varied greatly between studies. Only two RCTs used Cohen's calculation to identify optimum statistically significant sample size (Harrison-Paul and Drummond, 2006., Sloman, 2002., Bowling, 2009). Validity is questionable as none illustrated sample size for the follow-up and all RCTs only pursued follow-ups to maximum of six months. Sackett et al. (2003) recommends a longer follow-up but this conflicts with the limited lifespan of the palliative population. In the qualitative studies, small sample sizes were used consistent with research recommendations regarding data analysis (Sackett et al., 2003). All qualitative studies recognised limitations of generalising the information obtained from these small samples. In the audits, large sample sizes were used, but again it was difficult to generalise the results from purposive sampling (Bowling, 2009). Blinding was not consistently adhered to in RCTs, and whether the researcher, interviewer and blinder were the same person was not clear.

Aveyard (2010 p.108) stated themes and analysis are 'subjective' and linked to the skill of the researcher in qualitative research. Data was not generalisable, but rich in quality and important to reflect on to improve practice (Aveyard, 2010). Quality of the expert opinion articles was challenging to assess. Aveyard (2010) postured "validity can only be speculated" in expert opinion, which arguably applies to text books without robust research methodology studies (Cooper, 2007., Keable, 1997). It is important to consider how despite the lowest quality evidence on hierarchy of evidence, this is high as from practice and directly applicable. They do mention briefly contraindications, which were not considered in

most studies. Despite being of most relevant to practice, is of low quality on the hierarchy of evidence. From these results, the following themes were generated from synthesis of the literature following guidance in Aveyard (2010); symptom control, cause and effect of anxiety, language of anxiety and the community OT role in the NHS. Some answers to the research question lie in the following critical appraisal of the quality of the literature.

Discussion

Discussion

Why do we use anxiety management?

Moderate quality evidence supports use of anxiety management by OTs with this population to improve quality of life as part of overall OT intervention (College of Occupational Therapists, 2004., College of Occupational Therapists, 2011., Cooper, 2007., National Cancer Action Team, 2009., Harrison-Paul and Drummond, 2006., Ewer-Smith and Patterson, 2002., Schofield and Payne, 2003). If clients present anxiety that affects function and meaningful activity there is a non-negotiable duty of care for OTs to assess levels of anxiety, identify appropriate services that provide anxiety management to meet their needs, and create a consensual treatment plan (College of Occupational Therapists, 2010). This aims to manage psychological distress (World Health Organisation, 2011). This is not emphasised enough in the articles, despite holistic assessment of need and consideration of clients long term needs being a Care Quality Commission (CQC) requirement (CQC, 2012). Delivering anxiety management, by community OT, potentially provides cost effective intervention (Curtis, 2011), but studies did not address this. Ewer-Smith and Patterson (2002) stated relaxation was cost effective, but none of the studies considered reference costs despite emphasis on NHS savings (Curtis, 2011., Department of Health, 2010a).

Symptom control

Moderate evidence supports anxiety management as one intervention by OT for most distress-related symptoms in palliative clients (College of Occupational Therapists and HOPE, 2004., Cooper and Littlechild, 2004). Strong evidence supports managing anxiety to reduce breathlessness (Bredin et al., 1999). Moderate quality evidence and expert OT opinion supports relaxation, a skill within anxiety management, to reduce and/or manage

tension, anxiety and stress (Ewer-Smith and Patterson, 2002., Cooper, 2007., Keable, 1997). Anxiety management was used to address functional issues causing anxiety (Hoy et al., 2008., Halkett et al., 2010., Keesing and Rosenwax, 2011). Anxiety management was used by mental health OTs and reported as a successful intervention in reducing anxiety (Meeson, 1998a., Meeson, 1998b., Prior, 1998a., Prior, 1998b). This is consistent with current expert opinion in text books and is not new information (Keable, 1997., Cooper, 2007., Powell, 2000). It has been used in the NHS in specialist areas such as hospices, but there is little information specific to the generic community NHS OT role (Cooper, 2007). Although not specifically anxiety management, Murata et al. (2006) and Mok et al. (2010) illustrated OTs manage psycho-existential distress through addressing meaningful goals with the multidisciplinary team. Guidance on long term conditions advocates anxiety management by OTs, which is pertinent as OTs work with clients who may progress into the palliative spectrum (Department of Health, 2005., National Institute for Clinical Health Excellence, 2011b., MS Society 2009). In practice this means anxiety management is a valuable intervention with potential for use with most of a community OT's clients.

Cause and effect of anxiety

The causes of anxiety in palliative clients are extensively documented, but in practice remain relative to the individual (Table 1). This subjectivist viewpoint is supported in the literature as interactions between anxiety and commonly reported physical symptoms such as breathlessness, fatigue and pain frequently occur, but were recorded with regards to perceived outcomes and are better understood from the client's perspective (Cooper, 2007., Creek, 2003). The qualitative studies in Table 8 provided better depth of information on this despite producing less generalisable results and being lower quality on the hierarchy of evidence (Bowling, 2009). OTs provide individualised care directly proportional to need which is essential as the cause of anxiety and effect on meaningful activity for one's client cannot be

assumed (Creek, 2003., Cooper, 2007). There is strong evidence to support symptoms such as breathlessness, which are exacerbated by anxiety, and vice versa, as a cause of decreased physical function and therefore pertinent to this role (College of Occupational Therapists and HOPE, 2004). Decreased function can increase demand on health and social services through arguably preventable episodes of care, such as admission to hospital. As admission can be costly, it is understandable why reducing anxiety is a goal within the NHS (Department of Health, 2010b).

NHS community OT role in anxiety management

Moderate evidence supports the use of anxiety management in the OT role with palliative clients, but few studies addressed its use in the generic community OT role. Most studies report the palliative OT role was misunderstood, especially with regards to only being an equipment provider (Cooper, 2007). There is evidence that other professionals, such as nurses, deliver components of it, including relaxation and breathlessness management (Bredin et al., 1999). However fundamental differences occur in the perspective of the profession delivering it. Consensus indicates OTs deliver anxiety management which involves the specialist skill of graded activity (activity analysis), which is not a skill shared by the wider palliative care team (Creek, 2003). Community OTs assess palliative clients who may not be diagnosed with anxiety, but experience disturbances in function and meaningful activities due to anxiety related issues. This information can contribute toward an accurate diagnosis by a doctor. There is little evidence supporting this 'real world' scenario as most studies only address clients who had a diagnosis of anxiety. In practice this can be problematic as services have strict remits, yet no clear guidance exists for OTs with regards to how one accepts referrals or prioritises anxiety management for this population within a caseload.

A weakness with the argument for OTs using anxiety management is that high quality evidence advocates Cognitive Behavioural Therapy (CBT) as one of the most effective non-pharmacological treatments for all levels of anxiety (National Institute for Clinical Health Excellence, 2011a). One argument is physical OTs do not address mental health issues as this is for mental health services, however this is an extremist argument and common fallacy. There was no evidence to support this weak argument in the articles. Non-pharmacological interventions to manage low to moderate level anxiety are not a skill specific to mental health OTs except for CBT (National Institute for Clinical Health Excellence, 2011a., National Institute for Clinical Health Excellence, 2011b, Galfin, 2011). A physical OT can identify if mental health services are required following assessment of the level of anxiety and how it affects meaningful activities and function. Community OTs are a valuable asset as they can facilitate a client's transition to mental health services if required, but this was not included in the articles.

Language of anxiety management

Fundamentally the use of anxiety management, stress management and management of anxiety can lead to confusion thus reducing quality of studies. There are a wide range of interventions an OT can provide to manage anxiety in this population, but anxiety management can be considered a specific intervention (Cooper, 2007., Keable, 1997). Stress management could be considered a separate intervention, as both share similar skills in the literature (McVey, 1997). CBT is not the only intervention to address low to moderate anxiety, but NICE (2011a) did not address the potential of OT interventions in a physical service on anxiety and wellbeing. This is possibly due to the lack of research done in this area. OTs provide a range of interventions in practice which have positive impact on anxiety as they directly address meaningful activities (Cooper, 2007). These were not all discussed in the articles but can include equipment provision, adaptations, and general interventions

(Cooper, 2007). None of the papers discussed Extended Scope Practice in relation to anxiety management, therefore anxiety management could fall within the standard OT remit as it appears consistently in OT guidance (College of Occupational Therapists and HOPE, 2004., College of Occupational Therapists, 2009., College of Occupational Therapists, 2011., NCAT, 2012). Interventions such as MBSR could be considered part of managing anxiety, but were not discussed in the context of anxiety management and were excluded from the literature search. There was no comparison study of anxiety management with other interventions.

The articles supported the perspective that physical OTs do not currently deliver CBT, but do utilise a cognitive behavioural framework to inform anxiety management (Keable, 1997., Cooper, 2007., Norweg et al., 2008). Guidance states anxiety management is used by OTs with palliative clients, but does not include CBT or stress management (NCAT, 2009., College of Occupational Therapists, 2011). Neither define in depth what anxiety management is or how it is used. Anxiety management is defined in expert texts at length, but not consistently in research by OT (Cooper, 2007., Keable, 1997). Breitbart et al. (2003) argued all relaxation techniques, including breathing and progressive muscle relaxation are cognitive-behavioural techniques. Hence, guidance is required on the scope of anxiety management, the management of anxiety, stress management and extended scope remit for this population.

How do generic community OTs use anxiety management with older palliative clients?

None of the studies outlined how anxiety management is used with this population in this role, hence none fully answer the research question. This is surprising given guidelines advocating its use, potential to save money, and transferability to benefit clients with long term conditions on an OT's caseload (College of Occupational Therapists, 2004., College of Occupational Therapists, 2011., NCAT, 2009). The literature in this review is discussed in a similar format. Themes are discussed within the framework of the OT process for this section: referral, information gather, assessment, goals, intervention, outcomes and discharge (Creek, 2003., College of Occupational Therapists, 2010). This format was used to increase transferability of research to practice.

Referral

Prioritisation of a referral for anxiety management within a client's case and within an OT's caseload is challenging in practice. Clinical priorities change, especially with fast progressing conditions as seen in palliative care (Cooper, 2007). This requires the therapist to cope with rapid change, some unscheduled reassessment of need and poor functional outcomes (College of Occupational Therapists, 2011). Arguably due to complex needs, the OT requires higher level skills in prioritising a referral for anxiety management within a client's treatment, and caseload. None of the studies addressed this point despite referral information being essential to inform the process of prioritisation (Creek, 2003).

Information gather

OTs require accurate information to prioritise level of need, access appropriate services and ensure quality care (Health Professions Council, 2008., College of Occupational Therapists, 2010). Regular contact with the multidisciplinary team is essential to obtain accurate medical information (National Institute for Clinical Health Excellence, 2011b).

Some of the studies obtained the clients previous medical history, of which the some were based in mental health (Kitchner et al., 2009). Few studies considered contraindications of anxiety management which may have been identified through information gathering (Creek, 2003). Clarity on prognosis stage is imperative as this can affect frequency of OT reviews and content of OT home visits. Despite this being recognised as good practice, no studies addressed information gathering prior to anxiety management.

It could be argued none of the clients in the studies were at the same stage in their condition which reflects practice. All clients in the studies had different diagnoses, but were predominately cancer. None took into account the client's actual functional ability to participate in research as clients were excluded from most studies if bed-bound. Carers were used in Keesing and Rosenwax (2011) to gather information but Alexander (2003) stated gathering information from carers instead of clients adds bias to the data in palliative psychosocial research, especially with clients in metastatic stages.

Prognosis does not directly translate to a specific functional level hence functional assessment would have improved the quality of evidence (Cooper, 2007., Creek, 2003). True comparative analysis of the articles was impossible (Bowling, 2009). Alexander (2003) stated prognosis stage affects the rigour of palliative psychosocial research and recommended a longitudinal approach. It could be assumed that diagnosis and prognosis are variables which could affect the efficacy of anxiety management, so information gathering is essential to establish appropriateness of intervention.

Language capture was more accurate by studies with a subjectivist epistemology as these explored the client experience (Bowling, 2009). Additionally, a constructivist stance might consider anxiety as a social construct (Crotty, 2011). This was evident in recent evidence which highlighted disparity in understanding and use of anxiety in older people

from other societies and cultures (PRIAE, 2010). Language is a fundamental component in information gathering as not all clients define anxiety in the same way. The studies used a wide pool of language related to anxiety including 'fear', 'scared of' and 'anxious', but this was not an exhaustive list. Galfin (2011) identified 'rumination' and 'worry', which were not used in the studies. The information gathered affects how an OT formulates a treatment plan and can be a barrier to intervention (Creek, 2003). Research is needed to explore how clients, carers, family, OTs and professionals define and understand anxiety, stress, anxiety management, stress management and management of anxiety in different cultures in the UK.

Assessment

Assessment of initial level of anxiety was addressed by most studies. However there was no consensus on the recommended assessment tool for the OT to use with this population. Assessment of anxiety is needed to identify what service the client requires. However, service remits were not discussed in the studies. Strong evidence supports anxiety not being assessed in isolation given the close association with depression and psycho-existential distress in the wider literature, hence assessment using the Hospital Anxiety and Depression Scale (HADS) could be clinically justified (Thekkumpurath et al., 2008., Faul et al., 2010, Murata et al., 2006., Mok et al., 2010., National Institute for Clinical Health Excellence, 2011b). Most quantitative studies assessed or screened anxiety using the HADS in addition to other measures (Table 8). However, this does not provide an all-encompassing picture of the cause and effect of anxiety on an individual. As increased anxiety is associated with occupational deprivation and reduced meaningful activity, holistic assessment on general physical functioning is essential for a comprehensive overview of need (Cooper, 2007., Creek, 2003). However, anxiety was assessed using inconsistent terminology making comparison of studies difficult (Table 8). Few assessed clients on their definition of anxiety as discussed. The language used to assess a client's anxiety may affect the services

they access therefore inclusion of client terminology in assessment is essential. However, none of the studies considered this point. None assessed client's perception of anxiety cause. Few studies discussed the effect of anxiety on function (physical and mental) et v.v. Murata et al. (2006) and Mok et al. (2010) referred to a timeline or 'temporarily' in psycho-existential issues which resonates with the core OT philosophy of doing, being and becoming (Wilcock, 1999). This bigger picture is particularly relevant to OTs as assessment of meaningful issues is central to intervention, yet few studies acknowledged this (Creek, 2003).

Assessment on prognosis stage is required as anxiety management might be contraindicated, yet none of the studies addressed this point (Keable, 1997., Cooper, 2007). Strong evidence supports the importance of adhering to contraindications in the wider literature, yet few studies considered the importance of them, nor impact on results (Health Professions Council, 2008., College of Occupational Therapists, 2010., Beauchamp and Childress, 2001). Those that referred to contraindications lacked references to support this information were of lower quality on the hierarchy of evidence (Ewer-Smith and Patterson, 2002). If an intervention were contraindicated for a client, it could be a clear reason for them to be excluded from the study at the assessment stage.

Goals

Goals in palliative care are focused on improving quality of life, yet few papers identified the client's goals first (World Health Organisation, 2002., Alexander, 2003). Schleimich (2008) identified a small population of palliative clients whose own goals included reducing anxiety. In practice, goals could be affected by how the client and OT defines and understands anxiety. The goal of managing anxiety could be considered different to reducing anxiety. Clients may use certain language with certain activities. Davis (1998) discussed how different parts of the brain are involved in fear and anxiety, therefore

perception of the problem may affect the goal set. Flexibility is required in OT to accommodate how clients define goals. None of the studies addressed this despite it being fundamental to create meaningful goals. Thus, research on the language used in goal setting is required.

Intervention

Disparity occurred in the language of anxiety management and centred around the understanding of stress as a trigger of anxiety, or anxiety as a trigger of stress. Anxiety management is supported as current terminology (Ewer-Smith, 2002., Harrison-Paul and Drummond, 2006). Meeson (1998a) reclassified OT's diary definition of 'stress management' to 'anxiety management', and acknowledged disparity in definition and understanding of general intervention by OTs a limitation of their research which remains a problem in studies (1998b). Lowes (2009) reported the OT role in hospital palliative care included stress management and relaxation, not anxiety management. Five articles (n = 5) referred to 'stress management' as the OT role, yet indicated they used the same techniques as anxiety management (Schlenich et al., 2008., Halkett et al., 2010., Kealey and McIntyre, 2005., Hoy et al., 2008., Ewer-Smith and Patterson, 2002). McVey (1997) wrote a chapter on stress management for this population, but in a later edition of the same book the chapter was renamed 'anxiety management' and stress became a small feature (Cooper, 2007).

These are not new debates and have been explored extensively in the wider literature. It does however make it difficult to communicate the intervention as it can be observed from many epistemological stances. It could be fair to say anxiety and stress exist in a co-dependent relationship, but that OT intervention is to address the impact upon function and quality of life (Cooper, 2007). There is potential that anxiety management, and the management of anxiety mean different things in different contexts, for different conditions,

and have different efficacy, but this argument is not addressed in depth in the current literature.

Moderate evidence supported relaxation as the predominant skill used within anxiety management, but the wide variety of techniques made comparison difficult. Strong evidence supports relaxation techniques to decrease anxiety which exacerbates breathlessness (Bredin et al., 1999). Schofield and Payne (2003) reported weak evidence that Snoezelen was an intervention by OT to decrease anxiety as despite being an RCT, the reduction in anxiety was not statistically significant. Sloman (2002) provided strong evidence to support the use of relaxation and guided imagery to decrease anxiety in palliative clients, but this was delivered by nurses and not in the context of anxiety management. Expert opinion supported tension addressed by a wide range of relaxation techniques (Ewer-Smith, 2002). Few focused anxiety management on a functional problem at home as dealt with in the community OT role.

Most articles used anxiety management as part of a larger rehabilitation programme in palliative care (Cooper and Littlechild, 2004., Harrison-Paul and Drummond, 2006). General intervention such as education, equipment, adaptations and strategies to manage anxiety within graded activity can make a large difference in practice, but were not discussed at length as part of anxiety management in these studies (Cooper, 2007). There was no consensus on whether anxiety management is a group or 1:1 intervention.

There is difficulty in applying the literature to the research question due to the research environment not being the same as in practice (Bowling, 2009). The ideal environment for community OTs to provide intervention is in clients' homes, as evidence supports this being the preferred place of care (Department of Health, 2008). However, most were conducted in an outpatient clinic (Harrison-Paul and Drummond, 2006). Not all clients

can travel to an outpatient clinic due to symptoms, functional difficulties and practicalities of accessing transport in practice. Studies lacked clarity on whether it was NHS, private or charity environment. Studies that were performed in client's home environment did not clarify if distractions were present, and how the level of confidentiality was maintained (Harrison-Paul and Drummond, 2006). The outpatient environment could be considered a more controlled environment as can use a private room. More research is required in clients' homes to reflect practice.

Outcomes of anxiety management:

Disparity occurred between the language of intervention and outcome therefore reducing the quality and rigour of studies (Bowling, 2009). Alexander (2003) argued outcome measures are not always used in palliative research as they are not functionally specific or sensitive enough. The language used in outcomes was not defined by the client first thus increasing potential for contamination of verbal content (Bowling, 2009). Most articles measured anxiety but did not discuss outcomes in the context of specific functional problems or meaningful activity in the clients' home environment as in practice (Creek, 2003). As all articles excluded non-English speaking clients, research did not reflect the diverse community population where a translator might be required.

No all-encompassing outcome measure was identified in the articles for use following anxiety management with this population (Creek, 2003). Statistically significant reduction of anxiety in RCTs was small (Table 8) but studies noted improvements in quality of life (Sloman, 2002., Schofield and Payne, 2003). Pearson et al. (2007) advised OTs on home visits to measure quality of life with this population in their systematic review. Despite this, few studies measured quality of life as an outcome (Table 8).

Prognosis stage affected the quality of outcomes (Alexander, 2003). ‘Dropouts’ were more unwell as were admitted to hospital or died. The unpredictability of participants being able to complete studies is well documented, yet few studies appreciated this (Alexander, 2003., Sackett et al., 2003., Bowling, 2009., Pearson, 2007). RCTs could have used ‘sensitivity analysis’ to explore dropouts remaining in the study (Bowling, 2009). Few RCTs used a power calculation for sample size, thus it was difficult to calculate the statistical significance of dropouts, and support the hypothesis that the intervention was less effective on clients who were more unwell (Bowling, 2009). The likelihood of clients dying in this population is high, therefore would expect a larger sample to be recruited (Bowling, 2009). Quality could have been improved and ‘dropouts’ reduced by assessing the client at home and researching the impact of prognosis stage on outcomes.

There was no consensus on the efficacy of anxiety management for this population. This is primarily connected to the complexity of this OT role and intervention, and significant methodological differences between studies (Creek, 2003). Clinician skill level and competency delivering the intervention could affect efficacy, however it was not possible to compare competency between studies (Bowling, 2009). It was not clear if clients were aware of their prognosis, therefore this relationship with efficacy was not explored. Research comparing the efficacy of anxiety management and management of anxiety for this population by OT may benefit practice.

Discharge

Ethical issues present when considering what point an OT discharges the client following anxiety management. One study used data from discharged clients (Kealey and McIntyre, 2005). Arguably most palliative clients have on-going needs and require monitoring in order to provide a timely response (Department of Health, 2005., College of Occupational Therapists, 2011). Discharge occurs in practice if the client declines or dies

(Creek, 2003). More research is required due to the complexity of the construct of anxiety management, this populations needs and the generic community OT role (Creek, 2003).

Implications

Implications

Implications of the review for OT

This review highlighted the need to invest in further research on the efficacy and language of anxiety management in this role. It was not possible to answer the whole research question due to the limited studies specific to this role. These results must be interpreted with caution due to excess contextual variables in studies and methodology types thus resulting in variable quality.

Methodological limitations of the review

It was beyond the scope of this study to achieve the quality of a Cochrane level systematic review. Limited resources and research experience of the author directly affected the quantity of information reviewed (Aveyard, 2010). A large research budget would have been required to access all articles as many were not available as full text. Search terms could have been expanded to reach data saturation (Bowling, 2009). A consistent method to critique all articles was not possible due to the tools currently available and variety of research methodologies, thus affecting the rigour of this review (Aveyard, 2010., CASP, 2011).

Gaps in the literature

Language of anxiety management was a key theme but a lack of research exists on the definition and understanding of anxiety by clients, OTs and professionals. Current use of anxiety management in this role is not clear from the literature. Formal protocols for the use and content of anxiety management in the generic community OT role in the NHS with this population are needed to assist clinicians. Gaps also exist on the efficacy of anxiety

management in this role. The efficacy of anxiety management compared to other interventions which manage anxiety is not clear.

Recommendations for further work

PhD-level research to explore the language of anxiety management in the community OT role from client and OT perspectives may influence practice. Research on the efficacy of anxiety management specific to the community OT role, efficacy of components within anxiety management may provide evidence for further scope of this role.

Conclusion

Conclusion

Anxiety management is a complex intervention in palliative rehabilitation delivered by community OTs for older palliative clients (Creek, 2003., Cooper, 2007). Moderate evidence supports why OTs should use anxiety management in palliative rehabilitation. However, a lack of high quality evidence exists on how OTs apply it in a generic community OT role in the current NHS. Relaxation was the primary skill used within anxiety management, although evidence on efficacy varies. Strong evidence supports use of the HADS to obtain the initial level of anxiety during assessment (National Institute for Clinical Health Excellence, 2011b). However this needs to be complemented by general physical functional assessment in the client's home and goal setting due to the extent of physical issues and risk of psycho-existential distress (Department of Health, 2008). Measuring quality of life could be considered a more appropriate outcome than reduction of anxiety or functional improvement following anxiety management (Pearson et al., 2007). Clarity is required on the recommended quantity and content of sessions for this role. Further research is required on the language used in anxiety management, and efficacy of the intervention with this population.

Key messages

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Key findings

- Moderate evidence supports anxiety management for palliative clients.
- Disparity occurs in definitions and understandings of anxiety management.
- Further research required into anxiety management in the generic community
NHS OT role.

What the study has added

- Systematic literature review
- Discussion on how anxiety management is used in this role.
- Reflection on language used in anxiety management

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Appendices

Appendix 1 – BJOT Author’s Guidelines for Journal Articles

British Journal of Occupational Therapists Author’s Guidelines for journal articles (Barnett, 2010) pages 1-2.

“2. Critical reviews

Critical reviews will address practice, conceptual, theoretical, methodological or ethical issues relevant to occupational therapy. They will:

- (a) Describe and summarise the literature within a particular area
- (b) Synthesise and evaluate this literature, based on a critical appraisal of the quality of the work described
- (c) Distil the most important elements to propose theory or make recommendations for action.

Manuscript format

Abstract (200 words): A succinct, structured summary of the study using the headings: introduction, method, results/findings and conclusion. The abstract should not contain abbreviations or references.

Introduction: An explanation of the area or topic, the rationale for conducting the review and the relevance for occupational therapy.

Method: The approach taken to search the literature, the databases searched, the search parameters and key terms used, the inclusion and exclusion criteria used to identify key articles, and the criteria used to critically appraise the articles and how key information was extracted.

Results/findings: Presentation of the main evidence and a summary of its quality.

Discussion and implications: An outline of the implications of the review for occupational therapy; highlight the methodological limitations of the review, identify any gaps in the literature and make recommendations.

Conclusion: A clear summary of the main points of the paper.

Key messages will be printed in highlighted boxes within the article:

- (i) *Key findings* – a summary statement of two or three key findings. These should not exceed 30 words in total (that is, 10-15 words each).
- (ii) *What the study has added* – a statement of how the study has contributed to the relevant field. This should not exceed 30 words in total.

The maximum word count for a critical review is 5,000 words.”

NB: for the purpose of this dissertation, UCLAN guidelines stated word count is 6000 words maximum, not including references or abstract.

Appendix 2 – Search strategy

The BJOT literature search December 2011. Access to the journal was via College of Occupational Therapists membership into the Ingenta database.

Keywords	Limit	Number of hits	Action	Included	Excluded
Anxiety	In 'topic'	23	Read	5	18
Anxiety management	In 'topic'	11	Read	5	6
Older people	In 'topic'	56	Narrow to topic area	0	0
Palliative	In 'topic'	4	Read articles.	1	2
Occupational therapy	In 'topic'			0	0
Community	In 'topic'	162	narrow	0	0
Anxiety management AND occupational therap*	In 'topic'		“occupational therapy” search is redundant in an OT journal as all are OT based.	0	0
Anxiety AND occupational therap*	In 'topic'	23	Same as “anxiety” search at start	5	18
Anxiety AND occupational therap* AND palliative	In 'topic'	0	Search “anxiety management”	0	0
Anxiety management AND palliative	In 'topic'	0	Redo with just OT	0	0
Anxiety management AND occupational therap*	In 'topic'	8	Read	4	4
Anxiety management AND occupational therap* AND palliative	In 'topic'	0	Commence stress management search	0	0
Stress management	In 'topic'	7		0	7
Total paper included repeats				21	55
Repeats				15	24
Total excluding repeats				6	31

The Canadian Journal of Occupational Therapy literature search December 2011. Access to the journal was via the College of Occupational Therapists membership into the Ingenta database.

Keywords	Limit	Number of hits	Action	Included	Excluded
Anxiety	'all of above words'	2	Read – orthopaedic and ABI, not palliative	0	2
Anxiety management	'all of above words'	0	Check if phrased differently in other countries	0	0
Older people	'all of above words'	118	Narrow (combine with other search words)	0	118
Palliative	'all of above words'	1	Read	0	1
Occupational therap*	'all of above words'	2249	Redundant search – all articles are on OT in this journal.	0	0
Community	'all of above words'	111	Narrow	0	0
Anxiety AND occupational therap*	'all of above words'	2	Read	0	2
Anxiety AND occupational therap* AND palliative	'all of above words'	0		0	0
Anxiety management AND palliative	'all of above words'	0		0	0
Anxiety management AND occupational therap*	'all of above words'	0		0	0
Anxiety management AND occupational therapy AND palliative	'all of above words'	0		0	0
Community AND occupational therap*	'all of above words'	113	Narrow	0	0
Community AND occupational therap* AND palliative	'all of above words'	2256	Narrow	0	0
Community AND occupational therap* AND palliative AND anxiety	'all of above words'	0		0	0
Community AND occupational therap* AND palliative AND anxiety management	'all of above words'	0	Redundant as previous search = 0	0	0
Stress management	'all of above words'	2		0	2
Stress management AND palliative	'all of above words'	16	Read – stop searching if no further inclusions	0	16
Total paper included repeats				0	141
Repeats				0	5
Total (excluding repeats)				0	136

Cinhal literature search December 2011.

Keywords	Limit	Number of hits	Action	Included	Excluded
Anxiety	1998 – 2011, full text	20302916	Narrow	0	0
Anxiety management	1998 – 2011, full text	1309	Narrow	0	0
Older people	1998 – 2011, full text	126865	Narrow	0	0
Palliative	1998 – 2011, full text	144628	Narrow	0	0
Occupational Therap*	1998 – 2011, full text	64840	Narrow	0	0
Community	1998 – 2011, full text	1651442	Narrow	0	0
Anxiety AND occupational therap*	1998 – 2011, full text	790	Narrow	0	0
Anxiety AND occupational AND palliative	1998 – 2011, full text	41	Read and narrow	2	39
Anxiety AND Palliative AND occupational therap*	1998 – 2011, full text	15	Read	4	11
Anxiety management AND palliative	1998 – 2011, full text	63	Read and narrow	2	61
Anxiety management AND occupational therap*	1998 – 2011, full text	19	Read and narrow	9	10
Anxiety management AND palliative AND occupational	1998 – 2011, full text	11	Read and narrow	1	10
Anxiety management AND palliative AND occupational therap*	1998 – 2011, full text	3	Read	0	3
Community AND occupational therap*	1998 – 2011, full text	7788	Narrow	0	0
Community AND occupational therap* AND palliative	1998 – 2011, full text	44	Read	0	44
Community AND occupational therap* AND palliative AND anxiety	1998 – 2011, full text	5	Read	4),	1
Stress management	1998 – 2011, full text	23557	narrow	0	0
Stress management AND palliative	1998 – 2011, full text	87	read	4	83
Stress management AND palliative AND occupational	1998 – 2011, full text	16	read	0	16
Stress management AND palliative AND occupational therap*	1998 – 2011, full text	2	read	0	2
Stress management AND palliative AND occupational therap* AND community AND older people	1998 – 2011, full text	0	Stop	0	0
Total (including repeats)				26	280
Repeats				2	2

Total (excluding repeats)				24	278
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Also searched in Cinhal:

Key author COOPER, J. To check if any higher quality research done

Keywords	Limit	Number of hits	Action	Included	Excluded
Palliative AND Cooper, J (author)	1998 – 2011, full text	34	Read and narrow	Cooper and Litchild (2004),	Medical/pharmacological management of anxiety, job share in education, audit, inter-professional team work,

Included: Ebsco platform from UCLAN was used to access the following databases: Academic Search Complete, AMED – The Allied and Complementary Medicine Database, Cinahl Plus with Full Text, E-Journals, E-Book collection, Eric, Humanities International Complete, Medline, Medline with Full Text, PsycArticles, PsycINFO, Race Relations Abstracts, SocINDEX with Full Text.

Excluded: Business Source Premier, Computers and Applied Sciences Complete, Criminal Justice Abstracts with Full Text, Dentistry and Oral Sciences Source, Environment Complete, Film and Television Literature Index with Full Text, Historical Abstracts, Hospitality and Tourism complete, Inspec, MLA directory of Periodicals, MLA International Bibliography, RILM Abstracts of Music Literature, SPORTDiscus with Full Text, AP NewsMonitor Collection.

OVID literature search December 2011

Keywords	Limit	Number of hits	Action	Included	Excluded
Anxiety	1998 – 2011, full text	609483	Narrow		
Anxiety management	1998 – 2011, full text	2107	Narrow		
Older people	1998 – 2011, full text	170334	Narrow		
Palliative	1998 – 2011, full text	212717	Narrow		
Occupational Therap*	1998 – 2011, full text	76459	Narrow		
Community	1998 – 2011, full text	1745504	Narrow		
Anxiety AND occupational therap*	1998 – 2011, full text	6630	Narrow		
Anxiety AND occupational AND palliative	1998 – 2011, full text	1737	Narrow		
Anxiety AND Palliative AND occupational therap*	1998 – 2011, full text	483	Narrow		
Anxiety management AND palliative	1998 – 2011, full text	90	Narrow		
Anxiety management AND occupational therap*	1998 – 2011, full text	30	Read	1	29
Anxiety management AND palliative AND occupational	1998 – 2011, full text	24	Read	0	24
Anxiety management AND palliative AND occupational therap*	1998 – 2011, full text	8	Read	0	8
Community AND occupational therap*	1998 – 2011, full text	19474	Narrow		
Community AND occupational therap* AND palliative	1998 – 2011, full text	1193	Narrow		
Community AND occupational therap* AND palliative AND anxiety	1998 – 2011, full text	564	Narrow		
Community AND occupational therap* AND palliative AND anxiety management	1998 – 2011, full text	9	Read	0	9
Stress management	1998 – 2011, full text	22494	Narrow		
Stress management AND palliative	1998 – 2011, full text	774	Narrow		
Stress management AND palliative AND occupational	1998 – 2011, full text	285	Narrow		
Stress management AND palliative AND occupational therap*	1998 – 2011, full text	104	Narrow – limit to “abstract and/ or title only”	2	101
Stress management AND palliative AND occupational therap* AND community AND older people	1998 – 2011, full text	17	Read	0	17
Total (including repeats)				3	158
Repeats				0	17
Total (excluding repeats)				3	141

Proquest literature search December 2011

Keywords	Limit	Number of hits	Action	Included	Excluded
Anxiety	In 'All fields and text'	82860	Narrow search	0	0
Anxiety management	In 'All fields and text'	34237	Narrow search	0	0
Older people	In 'All fields and text'	27326	Narrow search	0	0
Palliative	In 'All fields and text'	25986	Narrow search	0	0
Occupational therap*	In 'All fields and text'	35629	Narrow search	0	0
Community	In 'All fields and text'	491822	Narrow search	0	0
Anxiety AND occupational therap*	In 'All fields and text'	6491	Narrow search	0	0
Anxiety AND occupational AND palliative	In 'All fields and text'	748	Narrow search	0	0
Anxiety AND palliative AND occupational therap*	In 'All fields and text'	675	Narrow search	0	0
Anxiety management AND palliative	In 'All fields and text'	3251	Narrow search	0	0
Anxiety management AND palliative AND occupational	In 'All fields and text'	586	Narrow search	0	0
Anxiety management AND occupational therap*	In 'All fields and text'	4556	Narrow search	0	0
Anxiety management AND palliative AND occupational therap*	In 'All fields and text'	591	Narrow search	0	0
Anxiety management AND palliative AND occupational therap* AND older people AND community	In 'All fields and text'	345	Narrow search – limit search terms to title and/or abstract only	0	0
Community AND occupational therap*	In 'All fields and text'	17588	Narrow search	0	0
Community AND occupational therap* AND palliative	In 'All fields and text'	1147	Narrow search	0	0
Community AND occupational therap* AND palliative AND anxiety	In 'All fields and text'	519	Narrow search – title and abstract only =, redo search with “anxiety management” also.	0	0
Community AND occupational therap* AND palliative AND anxiety management	In 'All fields and text'	254	Narrow search – title only (=0), abstract only (=0). Redo search with stress management included.	0	0
Stress AND occupational therap*	In 'All fields and text'	9451	Narrow search	0	0

Keywords	Limit	Number of hits	Action	Included	Excluded
Stress management	In 'All fields and text'	64525	Narrow	0	0
Stress AND occupational therap* AND palliative	In 'All fields and text'	735	Narrow search	0	0
Stress management AND palliative	In 'All fields and text'	3221	Narrow search	0	0
Stress management AND palliative AND occupational therap*	In 'All fields and text'	648	Narrow search	0	0
Stress management AND palliative AND occupational therap* AND community AND older people	In 'All fields and text'	393	Narrow search – limit search terms to title only (=0), abstract only (=0), AND anxiety management (=247), AND anxiety management AND peer reviewed (=140), AND anxiety management AND peer reviewed (=137) – read.	1	136
<i>Total paper included excluding repeats</i>				<i>1</i>	<i>136</i>
<i>Repeats</i>				<i>0</i>	<i>0</i>
<i>Total papers included</i>				<i>1</i>	<i>136</i>

SCOPUS literature search December 2011.

Keywords	Limit	Number of hits	Action	Included	Excluded
Anxiety	Article title, abstract, keywords	123015	Narrow	0	0
Anxiety management	Article title, abstract, keywords	10625	Narrow	0	0
Older people	Article title, abstract, keywords	39014	Narrow	0	0
Palliative	Article title, abstract, keywords	48394	Narrow	0	0
Occupational therapy	Article title, abstract, keywords	16152	Narrow	0	0
Anxiety management AND occupational therap*	Article title, abstract, keywords	526	Narrow	0	0
Anxiety AND occupational therap*	Article title, abstract, keywords	3563	Narrow	0	0
Anxiety AND occupational therap* AND palliative	Article title, abstract, keywords	153	Narrow – search with anxiety management	0	0
Anxiety management AND palliative	Article title, abstract, keywords	380	Narrow.	0	0
Anxiety management AND occupational therap*	Article title, abstract, keywords	569	Narrow	0	0
Anxiety management AND occupational therap* AND palliative	In 'topic'	44	Read	1	43
<i>Total papers including repeats</i>				<i>1</i>	<i>43</i>
<i>Repeats</i>				<i>0</i>	<i>0</i>
<i>Total papers excluding repeats</i>				<i>1</i>	<i>43</i>

Web of Knowledge literature search December 2011

Keywords	Limit	Number of hits	Action	Included	Excluded
Anxiety	In 'topic'	372,279	Narrow search	0	0
Anxiety management	In 'topic'	665	Narrow search	0	0
Older people	In 'topic'	101,253	Narrow search	0	0
Palliative	In 'topic'	102,484	Narrow search	0	0
Occupational therap*	In 'topic'	95,831	Narrow search	0	0
Community	In 'topic'	1329205	Narrow	0	0
Anxiety AND occupational therap*	In 'topic'	1329	Narrow to clinical field	0	0
Anxiety AND occupational AND palliative	In 'topic'	12	Read and select	1	11
Anxiety AND palliative AND occupational therap*	In 'topic'	11	Read and select	2	11
Anxiety management AND palliative	In 'topic'	4	Read	2	
Anxiety management AND palliative AND occupational	In 'topic'	4	Read	2	
Anxiety management AND occupational therap*	In 'topic'	158	Narrow to clinical field palliative	0	0
Anxiety management AND palliative AND occupational therap*	In 'topic'	4	Read	2	2
Community AND occupational therap*	In 'topic'	4221	Narrow	0	0
Community AND occupational therap* AND palliative	In 'topic'	8	Read	1	7
Community AND occupational therap* AND palliative AND anxiety	In 'topic'	0	Use previous search	0	0
Stress management AND palliative	In 'topic'	225	Narrow	0	0
Stress management AND palliative AND occupational therap*	In 'topic'	5	Read	0	5
Stress AND occupational therap*	In 'topic'	9516	Narrow	0	0
Stress AND occupational therap* AND palliative	In 'topic'	16	Read	2	14
Total paper included repeats				12	50
Repeats				7	7
Total papers excluding repeats				5	43

NHS Evidence literature search December 2011.

Keywords	Limit	Number of hits	Action	Included	Excluded
Anxiety		21528	Narrow		
Anxiety management		10959	Narrow		
Older people		55396	Narrow		
Palliative		9346	Narrow		
Occupational therap*		10360	Narrow		
Community		80732	Narrow		
Anxiety AND occupational therap*		3442	Narrow		
Anxiety AND occupational AND palliative		885	Narrow		
Anxiety AND palliative AND occupational therap*		855	Narrow		
Anxiety management AND palliative		1507	Narrow		
Anxiety management AND palliative AND occupational		857	Narrow		
Anxiety management AND occupational therap*		3173	Narrow		
Anxiety management AND palliative AND occupational therap*		828	Narrow		
Anxiety management AND palliative AND occupational therap* AND older people AND community		749	Read	0	749
Community AND occupational therap*		7636	Narrow		
Community AND occupational therap* AND palliative		1452	Narrow		
Community AND occupational therap* AND palliative AND anxiety		800	Narrow		
Stress management AND palliative		3355	Narrow		
Stress management AND palliative AND occupational therap*		817	Narrow		
Stress management AND palliative AND occupational therap* AND community AND older people		733	Narrow	0	733
Stress AND occupational therap*		3632	Narrow		
Stress AND occupational therap* AND palliative		837	Narrow		
Total paper included repeats				0	1482
Repeats				0	733
Total papers excluding repeats				0	749
NB: Large quantity of guidance was in NHS Evidence, but not key articles. Guidance was used in the discussion section, but no specific articles were identified through this database.					

Appendix 3 – Key articles

Randomised Control Trials (RCT) (n = 5)

<i>Author</i>	<i>Method and intervention</i>	<i>Subjects</i>	<i>Outcome measure</i>	<i>Statistics</i>	<i>Strengths</i>	<i>Limitations</i>	<i>Conclusion</i>
Bredin et al. (1999).	Multicentre (6 hospitals) RCT Breathlessness management in outpatient clinic v. best supportive care. Delivered by Nurse (UK) (Macmillan research practitioner)	119 clients with lung cancer (with poor prognosis). 16 died. 27 withdrew/refused. Small sample size, but multicentre. Independent randomization.	Visual Analogue Scale (VAS) (distress due to breathlessness, breathlessness at best and worst). WHO performance status scale. HADS. Rotterdam symptom checklist.	No confidence interval (CI) reported. P value is used. Statistically significant improvement ($p < 0.05$) in VAS breathlessness at worst (0.14), HADS (0.08), Follow up at 1, 4 and 8 weeks. No intention to treat analysis.	Journal has highest impact factor rating. High quality evidence. Repeatedly cited as key article in OT literature supporting OT interventions for breathlessness and anxiety management. Obtains follow up data in appropriate time frame for the population.	Does not consider if clients received OT also. Difficult to standardise best supportive care. Different nurses delivered the intervention Dose effect/placebo not explored. Does not consider anxiety and breathlessness relative to specific functional activity e.g. climbing stairs P values can be considered weaker than CI (Sackett et al., 2003) page233. No follow up after 8 weeks (Sackett et al., 2003) advocate longer follow up to increase validity. No power calculation for sample size (e.g. Cohens). Accessibility of study reduced as clients seen in outpatient clinic, not at home when at worst (see withdrew numbers).	Breathlessness management improved 5 of the 11 items assessed. Reducing anxiety reduces breathlessness.

<i>Author</i>	<i>Method and intervention</i>	<i>Subjects</i>	<i>Outcome measure</i>	<i>Statistics</i>	<i>Strengths</i>	<i>Limitations</i>	<i>Conclusion</i>
Harrison-Paul and Drummond (2006).	RCT OT programme, 7 sessions (listed on p.131) including anxiety management. Delivered by OT (UK)	Cohen's typology used to calculate 26 participants per group required (total 52 participants needed). Recruited 36 – 16 refused, therefore 20 recruited, 1 withdrew (=19 left). 1 died after 2 sessions therefore total 18 participants. "Computer generated telephone randomisation" p.131. Randomization after initial OT contact.	SF-36 (QOL). EADL.	No CI nor P value. Did not produce results to statistically analyse as final sample size not significant enough.	Robust methodology and decision making. Admitted limitations of the study, and reasons why unable to publish data obtained (not statistically significant).	Clients were assessed and interviewed prior to the study (p.131 – base line assessments). This information could have been used to 'cherry pick' participants and place into 'randomised' groups. Better to randomise first then obtain basic assessments. Could have triangulated RCT info with qualitative 'patient stories'. Contraindications were not discussed relative to anxiety management. Follow up difficult (6 – 12 weeks) half participants had died or declined. Problems with recruitment despite seeing clients in own homes.	Anxiety management considered as intervention within a treatment programme suitable for an RCT. Example of patient goals to reduce anxiety (p.132).
Kitchiner et al. (2009).	CBT "Stress control", anxiety management v. waiting list (groups). OT UK delivered anxiety management (in a	Not palliative, not older people. 73 adults in secondary care (MH). (25 SC, 24 AM, 24 WL).	GHQ-28 anxiety subscale post treatment and at 1 month follow up. BDI.	Intention to treat analysis used.	RCT. Follow up at 1, 3 and 6 months. CI 95%. "All individuals recruited were	Lack of longer follow up therefore reduced validity (Sackett et al., 2003). Cross over of Anxiety Management and Stress Control interventions.	More research required – recommends use of anxiety management in primary care, not secondary. However population was not

<i>Author</i>	<i>Method and intervention</i>	<i>Subjects</i>	<i>Outcome measure</i>	<i>Statistics</i>	<i>Strengths</i>	<i>Limitations</i>	<i>Conclusion</i>
	<p>psychiatric day hospital).</p> <p>Mental health nurses delivered CBT (delivered in nursing teaching room).</p>	<p>2 hours a week for 6 weeks.</p> <p>Formally diagnosed as having anxiety (categorised into types of diagnosis).</p> <p>Used scripts from Powell handbook on anxiety.</p>	Life and social adjustments scale.		asked to refrain from entering into other treatment although systematic checks were not performed which could have affected results." P.314.	<p>Not clear if other OT interventions running in parallel to this study being used.</p> <p>"Extensive experience of nurses" v OTs – implies skill level difference.</p> <p>Interventions delivered in different environments</p> <p>Lack of blinding - potential for bias with brown envelope randomisation technique – not clear who placed computer print out into brown envelopes.</p> <p>Skill level difference of nurse v. OT may have affected efficacy of intervention.</p>	palliative and used mental health OTs.
Schofield and Payne (2003).	<p>RCT</p> <p>Semi-structured interviews (for the experimental group only).</p> <p>Snoezelen v. control quiet room for 1 hour (same length of time).</p> <p>Only 2 sessions.</p> <p>Same time of day.</p>	<p>Hospice day centre palliative clients.</p> <p>26 patients (18 male, 9 female).</p> <p>Not medicated for anxiety.</p> <p>No evidence of psychosis.</p> <p>Cognitively able to understand and</p>	<p>HADS.</p> <p>EORTC-C30.</p>	<p>Intention to treat analysis used (SPSS version 10).</p> <p>Student t test.</p> <p>Chi squared test.</p> <p>Mann-Whitney U.</p> <p>Interview manuscripts coded</p>	<p>Few RCT's in OT palliative</p> <p>Made distinction between borderline and diagnosed anxiety.</p> <p>Acknowledge some limitations – couldn't control if client was to take medication to improve anxiety (e.g. as a side effect of another drug).</p>	<p>Validity questionable.</p> <p>Difficult to standardise to home setting for client.</p> <p>In one hospice, not in clients own homes.</p> <p>Impact of diagnosis on treatment efficacy (not clear if client was aware of prognosis).</p> <p>Randomisation 'brown envelopes' not discussed e.g. who created them.</p> <p>No acknowledgement that patients could sit and talk to each other about their experience as attending the</p>	<p>Small decrease in anxiety, no effect on quality of life.</p> <p>Snoezelen promotes relaxation.</p>

<i>Author</i>	<i>Method and intervention</i>	<i>Subjects</i>	<i>Outcome measure</i>	<i>Statistics</i>	<i>Strengths</i>	<i>Limitations</i>	<i>Conclusion</i>
	<p>Clients assessed before and after staying in the room.</p> <p>Delivered by OT - Australia</p>	<p>complete questionnaire.</p> <p>HADS score 8 or greater (50% of original sample 45 patients, 26 met this criteria).</p> <p>Hypothesised snoezelen of benefit to borderline and diagnosed anxiety.</p> <p>6 months</p> <p>Variety of diagnosis.</p> <p>Randomisation – brown envelopes</p>			<p>“Research was blind to randomization” p.129.</p>	<p>hospice for other things – could tell other staff/patients – potentially contaminated data.</p> <p>Interviews only given to clients in experimental group, not control.</p> <p>Lack of info on confidentiality during thematic analysis/coding.</p> <p>Unable to follow up longer than 6 months as funding restrictions, and client population.</p> <p>No power calculation.</p> <p>No reference to quantity of sessions and effect (dose effect).</p> <p>Experimental group had higher EORTC-C30 score (statistically significant)</p>	
Sloman (2002)	<p>Structured as RCT but not called this.</p> <p>Author – nursing.</p> <p>Nurse (Australia)</p> <p>Progressive muscle relaxation, guided</p>	56 clients with advanced cancer.	HADS, Functional Living Index – Cancer scale.	<p>Used Cohen’s calculation for sample size</p> <p>No statistically significant decrease in anxiety.</p> <p>P = <0.01 significant</p>	<p>Nurses visited clients in own homes.</p> <p>Linked decrease in anxiety with decreased emotional distress.</p>	<p>Lacked standardisation between script/ taped relaxation.</p> <p>Lacked contraindications.</p> <p>Excluded clients if on bed rest.</p>	<p>“There was no significant improvement for anxiety; however, significant positive changes occurred for depression and quality of life.”</p>

<i>Author</i>	<i>Method and intervention</i>	<i>Subjects</i>	<i>Outcome measure</i>	<i>Statistics</i>	<i>Strengths</i>	<i>Limitations</i>	<i>Conclusion</i>
	imagery, control and both.			increase in quality of life.			

Quantitative (n = 1)

<i>Author</i>	<i>Method and intervention</i>	<i>Subjects</i>	<i>Outcome measure</i>	<i>Statistics</i>	<i>Strengths</i>	<i>Limitations</i>	<i>Conclusion</i>
Schleimich (2008)	Canadian Model of Occupational Performance questionnaire. 40 palliative clients	Questionnaire re: priorities in palliative rehab from client perspective. Qualitative concept, they used quantitative measuring and mean data which loses sensitivity e.g. of HADS.	Client reports on VAS importance of goal to them on a scale of 1-10.	Mean value of goal importance from VAS.	Began to explore clients rehabilitation goals in palliative care.	Quality could have been improved by measuring quality of life. Did not acknowledge the need for confidentiality in the research environment. No clear methodology. Goals set by researchers, not initially by clients as in practice.	Clients identified reducing/managing stress and anxiety as their goals from a list created by therapists.

Qualitative research (n = 7):

<i>Author</i>	<i>Method</i>	<i>Intervention</i>	<i>Outcome measure</i>	<i>Statistics</i>	<i>Strengths</i>	<i>Limitations</i>	<i>Conclusion</i>
Halkett et al. (2010).	Qualitative – semi structured 1 hour interviews – content analysed. Australia researcher 10 OTs, 10 health care professionals (physiotherapist, social worker, medical registrars and clinical nurses). Convenience sample.	OT role analysis and barriers to practice (phenomenology)	4 themes: “inconsistent understanding of the contribution that OTs can make to palliative care, insufficient promotion of the potential contribution of OT, insufficient funding, and limited research on the role of OT in palliative care” p.301 (abstract) Themes are consistent with OT practice in UK.	Stress management and relaxation cited as interventions. Quality of life as key goal.	Peer reviewed. Considered OT and HCP understanding of role. Thematic analysis of Qualitative info. Author acknowledged limitations of convenience sampling.	Vague research location = “Mutually convenient location” not easy to repeat, and issues with confidentiality. Does not explain “researcher triangulation” – affects rigour/transferability. Students involved – not clear their role in the study, nor level of supervision they had. Homogeneous sample (as convenience sample). P.308	Understanding of barriers to OT in palliative in Australia. “Further research is required into effectiveness of OT interventions (in palliative care) p.308.
Keesing and Rosewax (2011)	Qualitative, semi structured interviews. OT Australia	Semi – structured interviews. Phenomenology	4 themes: “ongoing disengagement from usual activities with resultant occupational	One OT reported wants to do AM but can’t due to lack of resources.	Themes consistent with practice. Piloted interviews.	Difficulty recruiting male/rural clients. Vague research question (does not follow PICO format)	Occupational deprivation (seen with decrease in function as disease progresses) causes anxiety.

	18 OTs and 14 carers (not clients)	Analysed using grounded theory. Purposive sampling	deprivation, disempowerment of both people who are dying and their carers within palliative care services, occupation not being addressed adequately in palliative care and OT's frustration with limited opportunities to contribute to the care of people who are dying."		Peer reviewed increased trustworthiness. Wider range of palliative conditions than other studies.	Bias not discussed. Small sample, difficult to generalise. Lacks self reported limitations of own study. Excluded 2 carers as they were bereaved for more than 2 years - assumed increase in bias recall. Did not include palliative Parkinsons or MND.	
Kealey and McIntyre (2005)	Qualitative. Purposive sampling. Phenomenology OT Ireland Pilot study. 30 participants (patient and carer). Purposive sampling ("to give validity to results" p234.	Questionnaire (open and closed questions). Structured interviews.	Quantitative data "coded and analysed using excel. Descriptive statistics for analysis and frequency distributions. Qualitative content analysis. On open Q's – interviews transcribed and themes analysed". P.235	Number of palliative referrals. Percentage of participants who were male/female etc Type of problem and percentage e.g. 70% patients felt stress majorly impacted on their function, 60% stated fear, 70% stated worry. Percentage of OT intervention stress management was 30%, 60% techniques, 60% emotional support.	Qualitative methodology. Preferred place of care home, therefore research done in clients homes.	Small sample size. Difficult to generalise – different health care system/training. Not from client perspective. Ethical issues – clients were discharged (appreciate not all may require Anxiety Management, but with deteriorating picture of function, would expect unless client self discharges for them to be on ongoing caseload of the OT). NSF LTC advocates this.	Study was to evaluate OT services – turned into what area of ADL is most important to you and what do you think of OT.

				13% received stress management (contradicts earlier statement of 30%).		<p>Confidentiality/distractions within research environment not discussed (was in clients own home).</p> <p>Lack of resources – “single researcher, who was also the main author, did the research”</p> <p>Bias/influence not considered.</p> <p>Gross generalisation/anecdotal evidence “health care professionals do not appear to adequately identify psychological distress and tend to focus on physical concerns” p. 239.</p>	
Meeson, B. (1998b) part 2.	<p>Qualitative. Thematic analysis of interviews</p> <p>OT</p> <p>OTs in community mental health in the south east of England, UK.</p>	Interviewed 12 OTs on their beliefs of OT core skills in mental health (large sample for this style of research).	“Cognitive/behavioural frame of reference was used when dealing with anxiety problems” p. 59.	None	<p>Peer reviewed (increases rigour).</p> <p>Themes checked repeatedly.</p>	<p>Not clear on method used, nor clear research question.</p> <p>Small sample area of OTs (geographic/style of work).</p> <p>p. 61 “universal agreement in AM definition”, yet in part 1 of this article, they had to change the wording of “stress management” to “anxiety management”.</p> <p>“A weakness of this study may have been the assumption that occupational therapists in community mental health</p>	<p>“Anxiety management . . . appeared as the dominant intervention” p.60.</p> <p>P. 62 “It is argued a common language and approach to intervention needs to be developed”.</p>

						<p>conceptualise therapeutic intervention in a uniform way, despite evidence to the contrary being apparent in a search of the literature.”</p> <p>Difficult to generalise.</p> <p>Did not address palliative clients.</p>	
<p>Mok et al. (2010).</p>	<p>Qualitative Hong Kong 23 health care professionals (including OTs).</p>	<p>Focus group interviews. Grounded theory approach. Explored the phenomenon of existential distress in patients from HCP perspective Purposive sample (lacked heterogeneity).</p>	<p>Themes – “anticipation of negative future, failure to engage in meaningful activities and relationships, and having regrets”. HCP’s defined increased distress with reduced roles/relationship s/function/failure to engage in meaningful activities/ increased worsening of symptoms e.g. pain. Defined existentially distressed client as including “feeling afraid</p>	<p>None</p>	<p>Latest concept in palliative psychosocial wellbeing. Clear research question and method. Utilises MDT approach. Proposes “a sense of peace in patients” as an outcome. Recognises MDT role in reducing psycho-existential suffering in this population. Advocates incorporation into standard practice (not just MH).</p>	<p>Health professionals all worked in same palliative care unit.</p> <p>Causes of existential distress: “anticipation of a negative future, failure to engage in meaningful activities and relationship, and having regrets.”</p> <p>Linked to reduced quality of life.</p>	

			and worried” among other emotions.				
Murata and Morita (2006)	Consensus building, 2 days MDT and email confirmation Japan 26 pannel members (MDT) (including OT) in Japan	Group discussion/ phenomological interpretation	Theme psycho existential suffering MDT role. “Death anxiety” anxiety over future – “temporality” Loss issues can increase anxiety. Links with OT concepts of doing, being and becoming. Link with we already address psycho-existential suffering, just don’t call it that.	None	Recent, complex concept.	Thematic analysis – not verified with clients. Just focused on palliative cancer patients, excluded all other conditions. Restricts transferability of information when mixed caseload in practice.	Psycho-existential suffering as an umbrella term – anxiety (specifically death anxiety) is one part.
Norweg et al. (2008).	Qualitative. Peer reviewed. OT – USA Outpatient pulmonary rehab OT with physio. 1 male, 3 females.	“Descriptive exploratory design using semi-structured, one on one interviews.” Purposive sampling Phenomenology	Subjective – clients discussed issues, researcher defined themes	Themes “using biofeedback, finding support, building confidence, reducing shortness of breath, regaining hope, coping with emotions, maximizing energy, exercising regularly”. P120.	Peer reviewed. Trustworthy.	Not clear who interviewed participants, hence bias not considered. “Participants only interviewed once and themes not verified” author acknowledged. Student role not clear, nor level of supervision.	Perceived decrease anxiety and increased coping through breathlessness management decreases dyspnoea in COPD.

<p>“Sample size consistent with method”. P118.</p> <p>Older adults aged 69 – 80.</p> <p>Open coding.</p> <p>2 researchers Identified themes.</p>						
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Audit (n = 7)

<i>Author</i>	<i>Method</i>	<i>Intervention</i>	<i>Outcome measure</i>	<i>Statistics</i>	<i>Strengths</i>	<i>Limitations</i>	<i>Conclusion</i>
Cooper & Littlechild (2004)	Audit. Delivered by U.K, British OTs in practice. 10 OTs and 1 student over 5 units. 346 patients seen.	Time-study based methodology.	Percentage analysis of interventions, time spent by OTs and types of palliative diagnosis	Basic stats percentage pie diagrams and charts. Working party (not clear if experts) stated themes for time analysis breakdown.	Generally older clients seen (mean age 62 years). AM and relaxation and breathlessness management as symptom control.	Lack of information on how the Canadian Model of Occupational Performance impacted on results. Community clients only 4% of the results. Small sample size, difficult to generalise results – only 5 units, does not cover all areas of the UK. Need larger sample size e.g. cross section of UK. Weak hypothesis p332 “Patients with breast cancer were more likely to participate in relaxation – as younger, female, likely to be working and responsible for domestic tasks.” For this information to be extracted better, would expect qualitative analysis of clients reporting their own reasons why they wanted to do relaxation and stats on outcomes.	Anxiety management identified as “symptom management”. Links different interventions require different amounts of time.
Hoy, Twigg and Pearson (2008)	Audit Delivered by OT Australia	Home visit – preparation, travel, home visit and follow up.	Measured median amount of time taken to complete intervention, number of	Indicates more time spent travelling. Does not break down length of		No ethics. Different country – difficulty to generalise to the UK. Need data from community OTs on what they are doing on home visits.	“Home assessments... the most time consuming intervention”

	15 OTs, 107 home visits audited across community, inpatient (specialist) over 4 months.		patients, types of diagnosis, location of therapist, experience of OT (not same as UK grading of OT).	time per intervention.		Small sample. not clear geographic area the OTs worked in v. population density.	
Meeson, B. (1998) part 1.	Diary analysis and semi structured interviews of 12 OTs in mental health. OTs in mental health in the UK.	Diary analysis	None	None	Peer reviewed Themes checked repeatedly	Methodology of study not clear initially p.61 “universal agreement in anxiety management definition”, yet stress management was used in part a of Meesons (1998a) study.	Anxiety management, relaxation and Behavioural/cognitive therapy defined as different interventions. Anxiety management was used in 11 out of 12 OTs.
Miller and Hopkinson (2008)	Retrospective audit, over 3 years, large sample. Quantitative data (not easy to read, hidden in the text therefore we can’t analyse table form. Delivered by OT (UK) 186 total (out of 327)	Relaxation techniques (guided/unguided visualisation, autosuggestion, PMR, induction script) Ethics approval.	VAS “tension” from 1-10 “p.490 – describes range of symptoms pain, breathlessness, anxiety and helplessness”.	Excel spreadsheet analysis. Analysed perceived tension score differences from VAS.	Good structure Passed ethics	p.490 “Ideally the outcome measure should be an improvement or decline in occupational performance” – however palliative rehabilitation focus is on quality of life in majority of other studies. “Relaxation management” p.488 – not Anxiety Management or stress management.	Functional outcomes (loads), outcome of relaxation (small) “seemingly minimal reduction in tension have an immeasurable effect on the quality of life, this is often obtained in the form of patient comments.” p.490 ..

<p>Prior, S. (1998) a and b</p>	<p>Delivered by OT in UK. 37 clients (26 female, 11 male), “had anxiety regardless of diagnosis”, “insight into condition”, “motivated to work at reducing their level of anxiety and carry out homework tasks”. P.208 inclusion.</p>	<p>6 week anxiety management programme in day hospital. Questionnaire, all clients received AM. Over 10 months.</p>	<p>HADS, The Spielberger Questionnaire (state and trait), The Fear Questionnaire.</p>	<p>HADS showed statistically significant change (p<0.05).</p>		<p>Reason why client had anxiety wasn’t explored – clear panic module didn’t help them therefore more generalised anxiety. Not clear if anxious due to physical condition (was mentioned at the start e.g. long term conditions, chronic fatigue). Not clear what range of anxiety was in clients using HADS (they just did an average).</p>	<p>Anxiety Management was statistically effective with this population.</p>
<p>Rosier et al. (1998).</p>	<p>10 clients per group. OT supervised by psychotherapist. Student present. Clients issued with homework.</p>	<p>Mental Health OT delivered anxiety management closed group 7 weeks for 1 ½ hour sessions.</p>	<p>No formal outcome measure used.</p>	<p>No statistics used</p>	<p>Expert opinion Key reference in OT texts</p>	<p>No discussion of ethics Limited research method Limited referencing No discussion of contraindications</p>	<p>Expert opinion anxiety management reduces anxiety in non-palliative population in mental health OT.</p>

Survey (n = 1)

<i>Author</i>	<i>Method</i>	<i>Intervention</i>	<i>Outcomes</i>	<i>Strengths</i>	<i>Limitations</i>	<i>Conclusion</i>
Vockins (2004).	Survey of OTs working in specialist cancer centre with clients who have breast cancer.	Type and length of interventions recorded on log sheet.	<p>Large amount of time recorded as educating clients, use of relaxation and breathlessness/fatigue management.</p> <p>Highlighted this as one part of the OT role (there were 15 other parts of the role discussed).</p>	<p>Close link in interventions between relaxation training, breathlessness management and anxiety management due to techniques used.</p> <p>Relaxation used to improve function.</p> <p>Acknowledged potential for skills being used by other OTs (specifically Breathlessness Team).</p> <p>“[OTs] Reported use of simple breathing exercises, relaxation techniques (ranging from ‘physical’ methods, e.g. Progressive Muscular, Passive Neuro-Muscular techniques to visualization of colours and scenes to promote pleasant and calming thoughts”. P.50.</p> <p>Acknowledges input of OT to clients in metastatic stages.</p>	No other studies used the terminology ‘relaxation training’.	OTs use these techniques with clients with breast cancer in specialist cancer centre in the UK.

Expert opinion (n = 1)

<i>Author</i>	<i>Method</i>	<i>Intervention</i>	<i>Outcomes</i>	<i>Strengths</i>	<i>Limitations</i>	<i>Conclusion</i>
Ewer-Smith and Patterson, (2002).	Expert opinion and case study. Examples of interventions used in practice at The Royal Marsden Hospital (where key authors have worked). 1 client (case study) using 5 types of relaxation (Passive neuromuscular, autogenic relaxation, release only, guided visualisation, unguided visualisation). Around 6 sessions specific to AM. UK OT – The Royal Marsden Hospital.	5 types of relaxation (Passive neuromuscular, autogenic relaxation, release only, guided visualisation, unguided visualisation).	VAS (1-10) is “very relaxed” to “very tense”. Hence they measure TENSION, not anxiety nor stress.	They used anxiety management and relaxation to manage issues of breathlessness re: panic attack Clear in stating it is the OT role to “assess the impact of anxiety and stress on an individual’s function and employ relaxation techniques as one method of reducing anxiety levels and positively impacting on function”.	Only focuses on relaxation, not whole OT role. Hypothesises relaxation as cost effective intervention (but no statistical data or examples. Simple example is one admission to hospital due to anxiety attack v. cost of 6 sessions of OT in clients own home (reference costs). No statistics. Limited referencing of techniques and small sample size. No mention of ethics. Not a statistically significant score. Only one client. VAS does not accommodate visually impaired clients.	Expert opinion stated VAS score reduces by 6 (release only), 4 (passive neuromuscular etc). Not generalisable. Issues with reliability of information, rigour (method of how it was obtained). No statement of VAS needing to be 10cm or not reliable measure

Appendix 4 : Hierarchy of evidence

<i>Level of evidence</i>	<i>Content</i>
1	Systematic reviews and meta-analyses
2	Randomised Controlled Trial
3	Cohort studies, case controlled studies
4	Surveys
5	Case reports
6	Qualitative studies
7	Expert opinion
8	Anecdotal opinion

Sackett (1996) In: Aveyard (2010 p62)