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Meaningful activities for improving the wellbeing of people with dementia:

Beyond mere pleasure to meeting fundamental psychological needs

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ABSTRACT

Aims: Dementia is being increasingly recognised as a major public health issue for our ageing populations. A critical aspect of supporting people with dementia is facilitating their participation in meaningful activities. However, research to date has not drawn on theories of ageing from developmental psychology that would help undergird the importance of such meaningful activity. For the first time, we connect existing activity provision for people with dementia with developmental psychology theories of ageing.

Method: We reviewed the literature in two stages: First, we narratively searched the literature to demonstrate the relevance of psychological theories of ageing for provision of meaningful activities for people with dementia, and in particular focused on the stage-based theories of adult development (Carl Jung and Erik Erikson), gerotranscendence (Tornstam), selective optimisation with compensation (Baltes and Baltes), and optimisation in primary and secondary control (Heckhausen and Schulz). Second, we systematically searched PubMed and PsycINFO for studies with people with dementia that made use of the aforementioned theories.

Results: The narrative review highlights that activity provision for people with dementia goes beyond mere pleasure to meeting fundamental psychological needs. More specifically, that: life review therapy and life story work addresses the need for life review; spiritual / religious activities addresses the need for death preparation; intergenerational activities addresses the need for intergenerational relationships; re-acquaintance with previously-conducted leisure activities addresses the need for a sense of control and to achieve life goals; and pursuit of new leisure activities addresses the need to be creative. The systematic searches identified

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two studies that demonstrated the utility of applying Erikson's theory of psychosocial

development to dementia care.

Conclusions: We argue for the importance of activity provision for people with dementia to

help promote wellbeing amongst an increasing proportion of older people.

Key words: Adaptation, Psychological; Dementia; Leisure Activities; Psychological Theory;

Quality of Life.

Word count of main body of text: 3,990

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INTRODUCTION

Dementia is now recognised as a key challenge for societies as they face population ageing. It was estimated that in 2015, 46.8 million people had dementia, and this figure is expected to rise to 131.5 million by 2050 [1]. Dementia is the leading cause of dependency and disability among older people, and hence most people with dementia will require some form of care [1] at an estimated cost of \$604 billion per year [2]. With approximately two thirds of people with dementia living in the community [3], early and appropriate support to access community services is essential to enable people with dementia and their carers to continue to live independent and fulfilling lives [4-6]. This is in addition to the wider benefits for all older people to keep socially engaged, intellectually stimulated, and physically active to promote wellbeing [7] and reduce the risk of developing dementia [8].

Core to the public health agenda for people with dementia and their carers is the promotion of wellbeing. Wellbeing concerns the positive aspects of an individual's mental health such as enjoyment and fulfilling one's potential: "As well as feeling satisfied and happy, well-being means developing as a person, being fulfilled, and making a contribution to the community" [9, p. 2]. To help promote wellbeing among people with dementia, they can be facilitated to participate in meaningful activities in both informal and formal settings. Informally, this may take the form of memory cafés, and groups organised for peer support, reading, or 'singing for the brain' [10-13]. Formally, psychological therapies may be available such as reminiscence therapy, where people with dementia are prompted to recall past events and personal memories [14].

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Psychological theory has been influential in informing our understanding of the lived experience of dementia and in turn for promoting wellbeing among people with dementia and their carers. Of note is Kitwood's social psychological approach that has challenged practitioners to tailor their care to individuals so that it is person-centred [15-16]. This approach has been used e.g. to explain the benefits of an art-gallery-based intervention along with providing social and intellectual stimulation, enhancing the relationship with their carer, and changing perceptions of dementia [17-18]. Others have drawn on attachment and psychodynamic theories to better understand distressed behaviours among people with dementia [19-20]. However, theory from the developmental psychology of ageing has yet to be applied to the promotion of meaningful activities among people with dementia. This is a missed opportunity to deepen our understanding of the significance of these activities and to provide another direction for improving dementia practice. It is likely that this disconnection between developmental psychological theory and dementia practice has arisen because the theories were originally only developed for use with the general healthy older population.

There is a long history from the developmental psychology literature that speaks of the significance of activities that meet deep-seated human needs as we age. Application of such theories would strengthen the case for the provision of meaningful activities that benefit the psychological wellbeing of people with dementia and their carers. We build on a recent argument to connect a developmental psychological theory with the management of people with dementia [21], and add to previous arguments for the public health benefits of pleasurable activities such as visiting museums, art galleries [22] and exposure to plants and green spaces [23]. For the first time, we connect existing initiatives to facilitate participation of people with dementia in meaningful activities with psychological theory to show how they go beyond merely providing pleasure in the moment, to promoting wellbeing by addressing fundamental psychological needs.

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METHOD

We reviewed the literature using both narrative and systematic methods. For both review methods, we identified five meaningful activities for people with dementia that directly overlap with psychological theories of ageing: life review therapy and life story work, spiritual / religious activities, intergenerational activities, re-acquaintance with previously-conducted leisure activities, and pursuit of new leisure activities (see Table 1). We focused on these five activities because of their immediate relevance to psychological theory and related each one to psychological theories of ageing, and in particular: Carl Jung's theory of adult development ('stages of life') [24-25], Erik Erikson's theory of psychosocial development ('eight stages of man') [26-28], gerotranscendence [29-31], selective optimisation with compensation [32], and optimisation in primary and secondary control [33-34].

Narrative review

Journal articles and reports from esteemed institutions were used to define each meaningful activity. We then searched PubMed and PsycINFO for evidence for meaningful activities on any outcome for people with dementia, with a particular focus on systematic reviews. We then used key journal articles and book chapters from each developmental psychological theory to describe and connect them with the meaningful activities.

Systematic review

We searched for articles that made use of any of the above developmental psychological theories in relation to people with dementia. We conducted searches of titles and abstracts using the names of the authors of the theories and key terms from their theories with key terms for dementia in both PubMed and PsycINFO with no restrictions, which were updated on 28/10/2015 (see Box 1 for details). The reference lists of relevant papers identified from

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the review were also hand searched for further papers. The inclusion criteria were that papers were published in a peer-reviewed journal, reported an empirical study that recruited people with dementia, and made explicit reference to one of the above theories or one of their key concepts. Publications excluded from our review are detailed in Box 1, which incorporated those that only concerned carers of people with dementia. The majority of articles from the searches were excluded due to study design (not empirical) or study sample (did not include people with dementia).

RESULTS

Narrative review

We briefly define each meaningful activity and review its evidence-base, and then discuss developmental psychological theory that can underpin its importance (see Table 1).

Life review therapy and life story work

Approaches that stimulate people to reflect on their past include life review therapy and life story work [14]. Life review therapy seeks to help people make sense of their past and may be particularly useful for those who experienced difficult life events and wish to receive talking therapy. Life story work seeks to help people make sense of their past, present, and future (their unfinished life story), and may be particularly useful for planning for the future (e.g. moving to a care home) [14]. While there is promise for the use of life review therapy and life story work with people with dementia, the evidence is currently inconclusive [e.g. 35-36].

Jung's theory of adult development emphasised that older people should have time to reflect on their lives. This time of reflection is a form of life review [37], where the individual evaluates the life they have lived and by doing so they begin to incorporate all the positive and negative aspects of their lives into a coherent life story [38]. This process of 'individuation' allows people to become more fully integrated and truly oneself, and by developing a greater appreciation of their 'shadow' they come to accept the imperfections of their life [24]. Such reflection was also stressed in Erikson's theory of psychosocial development through which older people achieve a sense of meaning and order in their life, society, and the universe, to achieve 'ego integrity'. If one does not achieve this sense of meaning they are at risk of developing despair (sense of failure) or disgust (at others, especially younger generations) [26]. More recently, it has been proposed that in later life we

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are to reflect to engage in 'gerotranscendence'; a redefinition of the self, time, space, life, and death: "...a shift in meta-perspective, from a materialistic and pragmatic view of the world to a more cosmic and transcendent one" [29, p. 17]. One level of gerotranscendence relates to a new perspective of the self, where people not only develop a greater appreciation for their shadow but become more concerned with morality. As a consequence, older people can become less self-centred, less materialistic, and more concerned for younger generations (see below) [29-31].

Critics of life review therapy and life story work may argue instead of dwelling on the past, which may include painful memories, that people with dementia should be engaged in the present and focus on new learning [39]. However it is likely that people with dementia can both be facilitated to dwell on the past through life review therapy and life story work and enjoy the present through engagement in leisure activities (see below). Therefore, life review therapy and life story work not only serve as an enjoyable activity and one that can be shared socially with others, but is a way of facilitating people with dementia to engage in the important process of life review. This review of one's life leads to the development of wisdom, perspective, and a sense of meaning, and avoids the potential development of a sense of despair and / or disgust.

Spiritual / religious activities

Spirituality and religion are used interchangeably in the literature, however, it is important to note the differences between the two concepts. Spirituality lacks a specific definition as it is deeply personal and can be expressed in various ways, e.g. meditation, prayer, and yoga, but its common feature is connecting with and believing in a higher purpose. Organised religion is characterised by structure and principles for expressing faith and spirituality [40]. A small body of evidence has reported on the beneficial effects of spirituality and religion on a

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number of outcomes, including: improvements in cognition, quality of life, coping [41], social behaviour, and reductions in agitated physical behaviour and the rate of progression of dementia [40]. Due to the subjectivity of spirituality and religion, most available evidence comes from qualitative studies that add to the understanding of the phenomenon but do not afford firm conclusions.

In the UK at least, often it is the physical health needs of individuals that is viewed as of paramount importance. This reflects the view in the west of a mind body dualism. However, the other needs of an individual (emotional, psychological, intellectual, social, etc.) are not to be neglected. Spirituality and / or religiosity can be of particular importance to individuals and even increase in importance among frailer older people [42]. People with dementia should be facilitated to continue to engage in spiritual activity (e.g. prayer), and facilitated to attend religious services and observe religious practices where possible. This not only serves individual's immediate spiritual needs, but according to Jungian and Erikson's theory, also helps the individual with dementia psychologically prepare for death. It has been argued that death is the ultimate goal that people are to be striving for and that this goal helps provide a sense of purpose [25], with acceptance of death as the conclusion to one's life story [27]. One level of gerotranscendence relates to the cosmos, in that older people are said to develop a greater sense of communion with the universe. Associated with this new perspective is a reduction in fear of death and greater affinity with past and coming generations and cultures [29-31]. Whether religious or not, this suggests that spirituality can become increasingly important in old age [43].

However, spirituality and religious activity may not be of benefit to all older people with dementia. Several people are not religious [44], and it may be challenging to facilitate specific religious practices due to the range of religions and denominations within them.

There is also the possibility of reminding people of abusive incidents from clergy [45], or

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reinforcing negative spiritual beliefs associated with poorer mental health such as believing in a punishing God rather than a supportive one [46]. In addition, moderate levels of spiritual belief may lead to greater unease and questioning on spiritual matters in the face of loss compared with those with relatively very strong / no spiritual beliefs [47]. Though, overall, evidence suggests that religious involvement is usually associated with better mental health [48-50].

Therefore, spiritual / religious activities can serve as not only an enjoyable activity that can be shared socially with others, but is a way of facilitating people with dementia to psychologically prepare for death. This helps foster a sense of purpose and a conclusion to one's life narrative, resulting in a greater sense of coherence and meaning in one's life, and thereby avoiding the potential development of a fear of death.

Intergenerational activities

Intergenerational activities are designed for people of different generations to interact with each other. In the context of dementia, intergenerational activities can include any activity shared by people with dementia and children or younger adults. Some of the most popular initiatives reported in the literature include Montessori-based activities that draw on the principles of rehabilitation (e.g. task breakdown, guided repetition) [51-52], music [53], and reminiscence [54]. There is also an intergenerational school in the USA where children and adults including those with dementia can learn and interact with each other [55]. There is no existing review of available evidence of the effectiveness of intergenerational activities. Studies are difficult to compare as they involve different types of activities with the only common denominator being involvement of two or more generations. Some of the reported benefits for people with dementia in individual studies include decreased agitation and more frequent touching in intergenerational music activities [53], higher levels of positive

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engagement in Montessori-based activities compared to standard activities [52], and improved quality of life in a reminiscence programme [54].

While intergenerational activities are likely to be pleasurable for all concerned, Erikson's theory states that a key task from middle-age is for adults to engage in 'generativity'; where they seek to establish and guide younger generations. This is a specific form of altruism targeted at younger generations. This facilitates people with dementia to be more caring and productive, and younger people benefit from the input of the older person. In contrast, if such activity is not initiated then adults are at risk of becoming self-indulgent and losing a sense of purpose [26]. While originally generativity was thought to be of importance to middle-age adults, it has since been found to be of continued importance in later life [56]. Indeed, studies have suggested that generativity brings benefits for older people including a greater likelihood of psychological wellbeing [57] and reduced risk of impairment in activities of daily living and mortality [58].

Therefore, intergenerational activities not only serve as an enjoyable activity and one that is shared socially with children and / or younger adults, but is a way of facilitating people with dementia to engage in the important process of generativity. This altruism targeted at younger generations leads to the development of care for others and productivity, and avoids the potential development of becoming self-indulgent and losing a sense of purpose.

Engagement in leisure activity

While the evidence is currently inconclusive, it has been suggested that pursuit of leisure activities (e.g. reading, dancing, and playing musical instruments) is associated with a reduced risk of developing dementia [59-62]. Engagement in leisure activity has also been shown to benefit people diagnosed with dementia [62-63], including: reduced dependence on services and others [64], reduced social isolation [64-65], reduction in the rate of cognitive

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decline [62-63;66] and improvement in physical functioning [67] and wellbeing [68]. The potential for the creative arts to promote wellbeing among people with dementia has received particular attention. While the evidence-base is weak, reviewers have concluded that with support, people with dementia can produce and appreciate visual art, and that art therapy enhances engagement with creative activity, stimulates attention and memories, provides pleasure, and improves neuropsychiatric symptoms, social behaviour, and self-esteem [69-72]. Engagement in leisure activity can be both re-acquaintance with previously-conducted activities and the pursuit of new activities.

Re-acquaintance with previously-conducted leisure activities.

Given that every individual has different needs, interests, and abilities, a person-centred approach will need to be adopted when working with people with dementia [15]. Such an approach will entail tailoring activities to suit the individual. People with dementia may be able to still participate in activities that they once enjoyed (e.g. ballroom dancing), or participate in a slightly different way. For example, for a gentleman who used to enjoy skiing, he was engaged in playing a skiing computer game and was able to relive the enjoyment of skiing through this computer simulation [65]. Engagement in such activity will not only serve as a pleasurable activity but help the individual with dementia cope with the losses associated with their condition (e.g. no longer being able to go on skiing holidays). Developmental psychological theory points to the need for individuals to retain a sense of control over their lives and to still be achieving life goals that they hold dear [32-34]. Facilitating people to continue to engage in cherished hobbies and carry out activities important to them, with the degree of assistance required, will help people adjust to their growing deterioration in capabilities. For example, a person with a passion for sport and a strong sport-identity would

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find it not only pleasurable to be facilitated to attend a sporting event, but help them keep contact with their passion and therefore maintain a sense of control / purpose.

Pursuit of new leisure activities.

There are initiatives for people with dementia where individuals or groups are facilitated to try a new activity. This might be for example the opportunity to play games using computer technology that they have not used before [65]. Opportunities to engage in new activities has been emphasised in Jung's theory of ageing. In this theory, it is stressed that from mid-life people are to appreciate that it is not too late to dream new dreams. This is part of a process called 'de-illusionment' [73], where people are to avoid becoming stagnant - either in a restrictive present or regrettable past - and create a new path and for example may have a newfound desire to take up new interests, hobbies, or relationships [24]. Opportunities to engage in new social and leisure activities not only provides pleasure in the moment but also an opportunity to maintain a good quality of life and a sense of wellbeing. Other psychological needs such as the need to be needed and leaving a legacy for younger generations can also be met through engaging in such meaningful activity.

Systematic review

Two papers met the inclusion criteria. Both drew on Erikson's theory of psychosocial development and were conducted in the USA and Sweden. The purpose of the study from the USA was to explore generative behaviour among people with dementia [74]. The data comprised field notes from eight months of participant observation and 20 interviews with people with dementia in a dementia-care setting. Through thematic analysis, the authors provided three examples of how people with dementia in a long-term care setting engaged in generativity: through work, productivity, and advice; continued role as a mother and

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grandmother; and within the community. The purpose of the Swedish study was to observe if the qualities of a person with dementia's personality can remain despite severe dementia symptoms, and if staff who received training based on Erikson's theory could help elicit these qualitities [75]. The data was from video recordings of morning care delivered by hospital staff to five patients with dementia. Phenomenological-hermeneutic analysis of the staff-patient interactions indicated that the qualities of the patient's personalities were preserved, and that a supportive and caring environment from trained staff (using Erikson's theory) can enable people with dementia to make full use of their remaining cognitive faculties. The same research team have published other papers that detail how the intervention was successful, namely, in changing staff behaviour and communication toward patients [76-78]. However, only slight changes in the opinions of staff were noted post-intervention [79] and care was better when bilingual patients were cared for by bilingual staff [80].

DISCUSSION

In this review, for the first time, we have connected existing initiatives to facilitate participation of people with dementia in meaningful activities with developmental psychological theories of ageing. The literature was reviewed using both narrative and systematic methods. Through the use of theory, in our narrative review we have stressed the importance of the continued provision of meaningful activity, and that facilitating engagement of people with dementia in such activity goes beyond merely providing pleasure in the moment but also addresses their fundamental psychological human needs. To this endeavour, the production of toolkits to prompt ideas for how to engage people with dementia in everyday activities is welcome [81], as well as practical guides to help organisations become dementia-friendly including arts venues and museums [82-83]. The systematic review identified only two papers for inclusion, which highlights the untapped potential of applying developmental psychological theories of ageing to dementia care. The first study indicated that people with dementia can continue to be altruistic toward younger generations and that there are several ways that this can be achieved. The second study indicated that staff trained in Erikson's theory may provide an environment conducive for people with dementia to continue to develop a sense of meaning and order in their lives.

However, it should be noted that not all activities will be appealing to every older person, and that people with dementia should not be expected to be engaged in stimulating activity all the time. Developmental psychological theory has emphasised the need for people in later life to put time aside for reflection, e.g. to engage in life review and spiritual reflection / religious practice [24-31]. In addition, it has been noted that older people have less need to make new friends and prefer to spend time with a few close relatives or friends who confirm their self-identity [30;84].

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A limitation of our review is that the psychological theories of ageing discussed in the main have a limited evidence base. This in part stems from the psychodynamic approach adopted, particularly by Jung, Erikson, and Tornstam (gerotranscendence), where concepts such as developing a sense of meaning and greater life perspective are difficult to reliably measure. In addition, our argument for the application of these theories to the study of dementia has yet to be formally tested and awaits empirical investigation as to the utility of our suggestion for the advance of both theory and dementia care.

Future research could focus on the fundamental psychological needs identified by the different theories of ageing highlighted in this review and evaluate initiatives against them. Research could identify which needs appear to be less catered for among older people with dementia in different areas (e.g. urban vs. rural areas), from different communities (e.g. ethnic minorities), and among those with different abilities (e.g. those with comorbidities). In addition, evaluations of initiatives could help identify how best to meet psychological needs such as the need for intergenerational relationships, and how to balance e.g. providing leisure activities that are both for helping people maintain a sense of control and achievement of life goals with the need to be creative. Research should also consider the influence of activities on the carers of people with dementia. A large trial of reminiscence groups held jointly with people with dementia and their carers not only found non-significant effects on people with dementia but also found an increase in anxiety and stress among the carers [85]. Therefore, if any meaningful activities cause strain on carers then this will need to be balanced against any benefits noted for the person with dementia.

In conclusion, we hope that our review will spur researchers and practitioners to explore the relevance of developmental psychological theories of ageing for dementia care. From our review, we find that these theories provide an additional perspective that adds richness to our understanding of the significance of meaningful activities for the wellbeing of

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people with dementia. Such theory may also be useful in shaping novel interventions and amending current practice to promote the wellbeing of people with dementia and enhance the public health of a growing segment of our populations.

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Box 1

Search terms used and their results for the systematic literature review. All searches were conducted in PubMed and PsycINFO with no restrictions, which were updated on 28/10/2015.

Search terms

Search results

("Jung*" or "individuation" or "de-illusionment") and ("dement*" or "cognitive impair*" or "Alzheimer*")

- 75 articles retrieved from the searches (27 PubMed, 48 PsycINFO)
- Number of articles included: 0

No records were found of studies that used Jungian theory in relation to people with dementia. We only found one study that used Mahler's [86] interpretation of individuation in relation to how informal carers cope in supporting an individual with dementia [87].

("Erikson*" or

"generativity" or "ego

integrity") and ("dement*"

or "cognitive impair*" or

"Alzheimer*")

- 29 articles retrieved from the searches (10 PubMed, 19 PsycINFO)
- Number of articles included: 2

We only found two dementia studies that used Eriksonian theory that are described in the results section [74-75]. In addition, a review article argued for the use of Erikson's approach in caring for people with dementia [88]. While another paper used the term 'generativity', this was in relation to creating a 'generativity document' that is not in relation to Erikson's theory but dignity therapy whereby significant life events of an individual with dementia are documented for sharing with others [89].

Nyman, S. R., & Szymczynska, P. (in press). Meaningful activities for improving the wellbeing of people with dementia: Beyond mere pleasure to meeting fundamental psychological needs. *Perspectives in Public Health*.

("Tornstam" or

"gerotranscendence") and

("dement*" or "cognitive

impair*" or "Alzheimer*")

("Baltes" or "Select* and

Compensation") and

("dement* or "cognitive

impair*" or "Alzheimer*")

- 3 articles retrieved from the searches (0 PubMed, 3 PsycINFO)
- Number of articles included: 0

No records were found of studies that used gerotranscendence theory in relation to people with dementia.

- 5,521 articles retrieved from the searches (0 PubMed,
 5,521 PsycINFO)
- Number of articles included: 0

We only found one study that used Selective Optimisation with Compensation theory where it was used as a framework for interpreting the views of informal carers. This study focused on how carers needed to acknowledge and make sense of changes in their loved one as a result of dementia, and the information and support carers needed to continue to engage people with dementia in leisure activities [90]. We also found a review article that argued for the role of factors such as individuality and compensation for cognitive impairments to lead to successful cognitive rehabilitation for people with early Alzheimer's disease. However, Selective Optimisation with Compensation theory was not explicitly referred to in the abstract and the article was not accessed as it was published in German [91].

("Heckhausen" or "Schulz"

or "Primary control" or

"Secondary control") and

- 133 articles retrieved from the searches (4 PubMed,
 129 PsycINFO)
- Number of articles included: 0

Nyman, S. R., & Szymczynska, P. (in press). Meaningful activities for improving the wellbeing of people with dementia: Beyond mere pleasure to meeting fundamental psychological needs. *Perspectives in Public Health*.

(dement*" or "cognitive impair*" or "Alzheimer*")

No records were found of studies that used Optimisation in Primary and Secondary control theory in relation to people with dementia. We only found two studies in relation to carers' use of coping strategies. One study suggested carers use primary and secondary control strategies, and progress to using more secondary control strategies as the person with dementia deteriorates [92]. Another study suggested carers express negative emotions in a way that may be considered secondary control [93].

("Carstensen" or "Socioemotional selectivity theory") and ("dement*" or "cognitive impair*" or "Alzheimer*")

- 4 articles retrieved from the searches (1 PubMed, 3 PsycINFO)
- Number of articles included: 0

We found one review paper that proposed socio-emotional selectivity theory should be applied for working with people with dementia [21]. Other studies have suggested that older people with dementia are similar to their cognitively intact peers in having a sense of a limited amount of time left [94], social goals, and who they choose to spend their time with [95].

Table 1

Meaningful activities for people with dementia that address fundamental psychological needs according to developmental psychological theory

according to developmental psychological theory	
Meaningful activities for people	Fundamental psychological needs being addressed
with dementia	
Life review therapy and life story	Need for life review
work	• Results in the development of wisdom and
	perspective that provides a sense of meaning and
	order (rather than a sense of despair and / or
	disgust) [24;26;29-31;37-38].
Spiritual / religious activities	Need for death preparation
	• Results in the development of a sense of purpose
	and one's place in the universe, and with this an
	acceptance of one's own inevitable death (rather
	than fear of death) [24;26;29-31].
Intergenerational activities	Need for intergenerational relationships
	Generativity (altruism directed at younger
	generations) results in the development of care
	for others and productivity (rather than
	becoming self-indulgent and losing a sense of
	purpose) [26;56].
Re-acquaintance with previously-	Need for sense of control and to achieve life goals

Re-acquaintance with previously
Need for sense of control and to achieve life goals

conducted leisure activities

 Results in maintaining a sense of control over one's life and the satisfaction of achieving goals that are deeply valued (rather than a sense of

Nyman, S. R., & Szymczynska, P. (in press). Meaningful activities for improving the wellbeing of people with dementia: Beyond mere pleasure to meeting fundamental psychological needs. *Perspectives in Public Health*.

helplessness or loss) [32-34].

Pursuit of new leisure activities

Need to be creative

 Enjoying ageing as its own new phase in life and dreaming new dreams results in continued creative activity (rather than becoming stagnant)
 [24].