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**Positive Interventions for Nursing  
Home Residents: A Systematic Review**

Charlotte Drenski, s1844857

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**Supervisors:**

Noortje Kloos, PhD

Marijke Schotanus-Dijkstra, PhD

Faculty of Behavioral, Management and Social  
Sciences (BMS)

## **Abstract**

**Background.** With the world population rising and life expectancy increasing, more older adults live in nursing homes. Often, the well-being of nursing home residents suffers due to a decline in e.g. physical abilities and a lack of positive resources. Most programs developed for older individuals merely target mental illnesses. However, the theory of gerotranscendence (GT) suggests that older people are still able to develop themselves in old age. The approach of positive psychology with a focus on the positive aspects of life could be used to enhance the well-being of older people and help them reach GT.

**Objective.** The current systematic review aimed at investigating the characteristics and effectiveness of positive interventions in the nursing home context. In addition, this review intended to extract useful strategies of interventions tailored to the needs of nursing home residents to enhance their well-being.

**Method.** A systematic literature review was conducted using the electronic databases SCOPUS, PubMed and PsycINFO. 1333 studies were found, of which 14 proved to be eligible based on inclusion criteria.

**Results.** The review showed that nursing home residents highly benefitted from the interventions, as all studies except for one found significant results. In addition, it was not possible to determine isolated themes that led to these positive effects, but the combination of several themes seemed to result in most beneficial effects. Useful strategies were on the one hand regarding the design of the intervention and on the other hand regarding the content of the intervention.

**Conclusion.** The results indicated that there are indeed possibilities for nursing home residents to increase their well-being and to strengthen their sense of purpose in life. Most importantly, group interaction and dealing with meaningful topics need to be promoted. Results of this study can be used to establish effective and age appropriate interventions.

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## **Introduction**

Until 2050, the world population of people over 80 is expected to triple, rising to 425 million people in this age range (UN, 2017). This poses new challenges to governments and communities, as older people have different demands which need to be met, not only concerning physical health but mental health as well (UN, 2017). Traditional psychology, which aims at decreasing symptoms of mental illnesses, often fails to support well-being itself (Seligman, Parks & Steen, 2004). However, to ensure complete mental health, mental well-being also needs to be regarded (Keyes, 2002). An approach which examines the concept of mental health from a different point of view, and thus not only fixes what is wrong but also builds what is right, is positive psychology (Bannink, 2012). Targeting positive aspects can support older people in dealing with adversities of old age and increase their well-being (Greenawalt, Orsega-Smith, Turner, Goodwin, & Rathie, 2019).

Nursing home residents present a particularly vulnerable group towards mental health issues. The decline in physical and cognitive ability and an increased dependency contribute to residents being more vulnerable to become hopeless and helpless, and thus depressive (Dwyer, Nordenfeldt, & Ternstedt, 2008). Feelings of hopelessness and helplessness are exacerbated by the cold and lonely atmosphere in nursing homes. This atmosphere results from a lack of specialized staff and few capacities to care for each resident intensively (McVicar, 2003). In addition, research points out that not only positive aspects, such as laughter, enjoyment and topics of interest, seem to decrease with age, but also sources of meaning, due to widowhood and retirement, are reduced (Fortin, Helliwell, & Shun Wang, 2015; Pinguart, 2002). In addition, research on positive psychology has shown that high mental well-being can serve as a buffer against mental illness, implying that a decrease in well-being is another risk factor for developing e.g. depression (Hendriks, Schotanus-Dijkstra, Hassankhan, de Jong, & Bohlmeijer, 2019). Thus, the missing positive and meaningful

aspects in nursing homes make residents more prone to mental illnesses. The positive mental health of nursing home residents should be targeted as well, so that residents are more resilient to psychiatric disorders and experience higher well-being.

One theory that indicates which aspects are supportive in increasing the positive mental health of nursing home residents is the concept of gerotranscendence (GT; Tornstam, 2011). GT is based on the belief that people do not only develop themselves during the first half of life but can continue to do so until the end of their lives. Possible developments encompass redefining oneself and one's relationships, looking at existential questions from different perspectives and gaining wisdom. Older people are able to experience fulfilment and feel a stronger sense of purpose in life by looking back at what they have achieved (Reker, Peacock & Wong, 1987). Moreover, wisdom, gained through difficult experiences, influences life satisfaction positively and serves as a buffer against depression (Ho, Yeung, & Kwok, 2014). As a consequence, people feel more united with the universe, past and future generations, become less self-absorbed and more interested in meaningful rather than superficial social interaction (Braam, Bramsen, van Tilburg, van der Ploeg, & Heeg, 2006). Consequently, GT encompasses a rise in emotional, social, functional and physical well-being with increasing age (Haugan, 2013).

Still, the proportion of older adults reaching GT is low: Haugan (2013) found that only 20% of older people experience GT and numbers are even lower in nursing homes. Different factors impede reaching this state. Firstly, nurse-patient interaction is one of the main supporting factors for being hopeful, experiencing meaning in life and self-transcending. However, interaction is often not sufficiently provided in nursing homes (Haugan, 2013). Secondly, the communication and interaction that is provided is not tailored to promote hope and meaning, thus, the communication between nursing home staff and residents does not lead patients to feel acknowledged, understood and valued (Haugan, 2013). Thirdly, having the opportunity to reflect on oneself appears to be of great importance in order to reach GT.

However, encouragement and interest of nursing staff and other residents are often not given (Wadensten, 2010). Consequently, interventions to help residents reach GT, which will then lead to overall well-being, need to be established.

When tailoring interventions to the needs of nursing home residents, different aspects have to be taken into account. Even though certain sources for meaningfulness cease, older people often derive a sense of meaning from caring about culture and traditions. Westerhof, Bohlmeijer and Valenkamp (2004) argue that society fails to offer meaningful activities to older adults, impeding them in finding purpose in late life. As a result, reaching GT is hindered. In addition, Ranzijn (2002) states that many older people care deeply about their community and are compassionately concerned about the world at large. Further, they often display an increased need for connectedness. This need indicates that companionship is required for complete mental health and that older people need meaningful experiences in a community in order to thrive (Ranzijn, 2002). Accordingly, taking into account older adults' deep need for meaningfulness and genuine connections can help develop suitable approaches to enhance their well-being and their level of GT (Haugan, 2013; Karakaya, Bilgin, Ekici, Köse, & Otman, 2009).

Applying positive psychology in the nursing home to increase the well-being of residents and the level of GT could be a suitable option. Comparing the concept of GT and the approach of positive psychology shows that there are conceptual overlappings. The goal of positive psychology is to help people flourish, which can be achieved when subjective well-being (experiencing positive emotions and life satisfaction), psychological well-being (experiencing meaning in life, accepting oneself, having positive relationships and being autonomous) and social well-being (perceiving society as being meaningful, belonging to a community and contributing to society) are given (Keyes, 2002; Westerhof & Keyes, 2010). Both GT and positive psychology highlight the ability in people to grow positively by means of their own engagement. In addition, positive and meaningful aspects, such as positive

relationships, purpose in life and wisdom play a crucial role and are thus focused on (Seligman, 2019; Tornstam, 1996). Altruism is an example for a concept that is important in both approaches: Self-transcendence, one aspect of GT, implies a shift from egoism to altruism (Tornstam, 1996). The benefits of engaging in altruistic activities is highlighted in positive psychology literature as well, often called “acts of kindness” (Curry et al., 2017). This resemblance between GT and positive psychology indicates that positive psychology interventions (PPIs) can not only be applied to enhance well-being but to also support reaching GT.

The effectiveness of PPIs has been demonstrated in various studies, although most studies focus on younger age groups (e.g. Seligman, Steen, Park, & Peterson, 2005; Hendriks et al., 2019; Bolier et al., 2013). However, Sin and Lyubomirsky (2009) pointed out that positive effects of the interventions increase with age. Evidently, older adults (from age 60 on) are better able to self-regulate and apply recommendations on how to perform PPIs more seriously and maturely (Sin & Lyubomirsky, 2009). Similarly, Greenawalt et al. (2019) administered PPIs to community-dwelling older adults intending to increase their happiness. The interventions appeared to be effective, as participants realized that their well-being greatly depends on their perception, implying that they can influence their mental health themselves. It can be assumed that PPIs are of great use for older adults, however, it is not fully clear yet if these results can be adopted to nursing home residents (Greenawalt et al., 2019).

Therefore, the primary aim of this systematic review is to examine the characteristics of positive interventions that are implemented in nursing homes and their effectiveness in increasing the well-being of nursing home residents. Further, this review aims at extracting useful strategies that enhance the mental well-being of nursing home residents. Findings of this systematic review can serve as a base for developing age-appropriate PPIs for nursing home residents and spread awareness for the importance of mental well-being of older people.

## **Method**

This systematic review was conducted according to the PRISMA statement to ensure quality (Moher et al., 2009). The electronic databases Scopus, PsycINFO and PubMed were systematically searched in March 2020. There was no restriction on published dates. Only published journal articles were included. Search fields were positive psychology, intervention and nursing home. The following search terms were used: (“*positive psych\**” OR “*well-being*” OR *happiness* OR “*life satisfaction*” OR *mindfulness* OR *transcendence* OR “*life review*”) AND (*intervention* OR *treatment* OR *therapy* OR *exercise*) AND (“*nursing home*” OR “*retirement home*” OR “*senior center*” OR “*aged care facility*”). In addition, to ensure that all possible studies were found, references of eligible studies were screened.

### **Type of Studies**

Inclusion criteria were: 1) participants were at least 60 years old and lived in nursing homes or comparable facilities, 2) concepts related to positive psychology, as positive emotions, meaning in life, self-transcendence, life satisfaction or similar concepts that help increase positivity in life were targeted, 3) the aim of the study was to increase aspects of mental well-being of nursing home residents, 4) pre- and posttests were conducted, and 5) participants were not severely cognitively impaired.

### **Selection and Data Extraction of Studies**

The selection of studies was done by one researcher. Firstly, search results were filtered based on titles. Then, the abstracts of selected articles were reviewed and assessed, and duplicates were removed. Following, the remaining articles were screened and assessed based on the inclusion and exclusion criteria. As a next step, data about characteristics of the study samples (e.g. percentage of each gender, mean age, recruitment procedure, inclusion criteria, country), the intervention (e.g. type of intervention, means of administration,



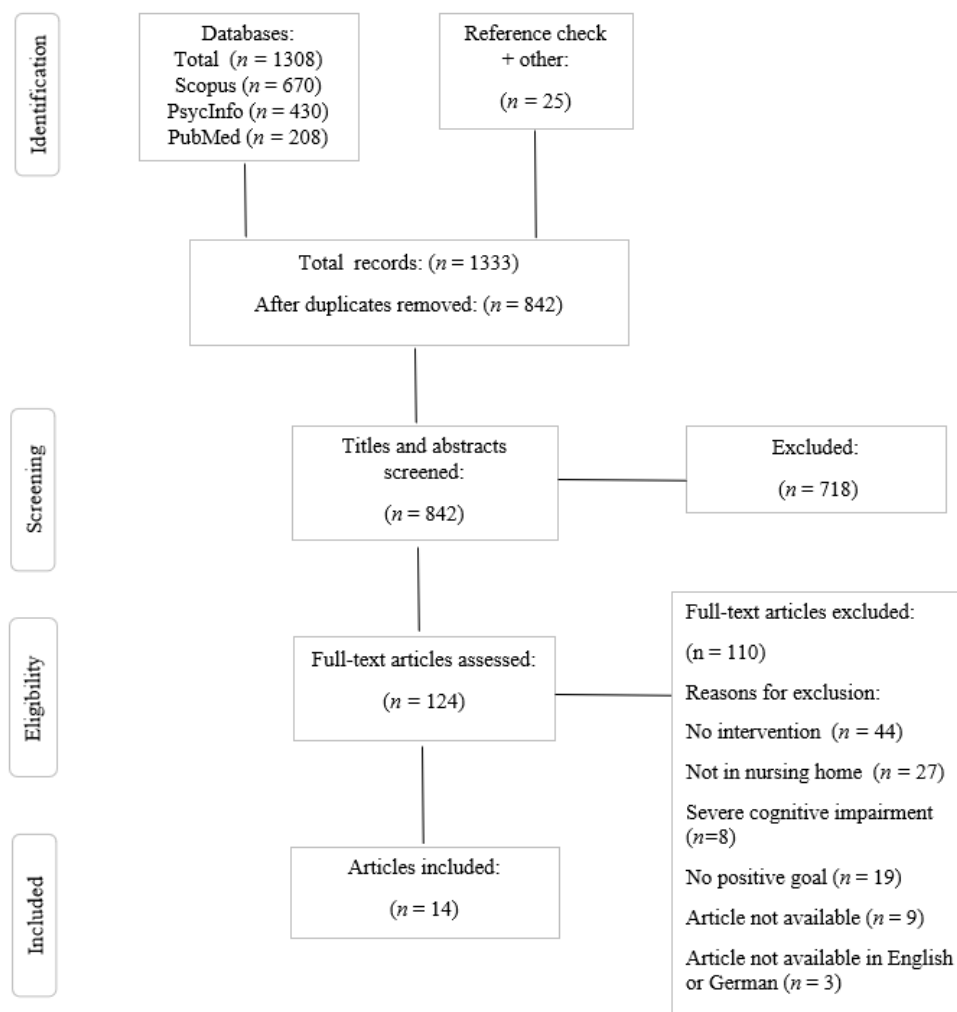
duration) and the effects of the studies were extracted. Lastly, useful strategies that made the interventions effective were identified, and compared to strategies of other studies.

## Study Selection

In total, 1333 records were found, of which 491 were duplicates. The titles and abstracts of 842 studies were screened and 124 articles remained, which were assessed for eligibility (see Figure 1). Finally, 14 articles were included.

**Figure 1**

### *Selection Process of Literature Search*



## Results

### Study Characteristics

The characteristics of the studies are presented in Table 1. Fourteen studies with a total of 876 participants were included. Most of the studies were conducted in Iran, followed by the US, Italy, Hong Kong, Taiwan and Japan. Half of the studies were randomized controlled trials (RCT;  $n = 7$ ). Four studies were quasi-experimental pre-test/post-test designs and three studies were one-group pre-test/post-test designs. Of the eleven studies with control groups, four were non-active (waitlist or no treatment) and seven were active (regular treatment or other activities). The sample sizes ranged from 21 to 180. The range of mean age was 66-88 years. The majority of participants was female in 13 studies. Delivery modes were group-based ( $n = 10$ ), individual ( $n = 2$ ), and mixed (group-based, individual and self-help;  $n = 1$ ). Participants took part in 3-16 sessions. One study did not report the duration of sessions.

**Table 1***Characteristics of Positive Interventions for Nursing Home Residents*

First author (year), country	Condition of participants	Design	Mean age (SD)	% female	Intervention	Control group	Duration of sessions	Follow up	Dependent positive variable	Effectiveness
Biassoni (2017), Italy	No mental health issues, no cognitive impairment	Quasi-experiment	88 (4.8)	71	Narrative individual training with pos. focus	-	3 weekly sessions	-	SWB PWB	Pre < Post NS
Chiang (2008), Taiwan	No cognitive impairment	RCT	78.82	Majority men	Life Review Program	Waiting list	8 weekly sessions, 60-75 minute sessions	1 month	SE LS	T > C T > C
Cesetti (2017), Italy	No cognitive impairment	Quasi-experiment	79.35 (7.28)	75	Narrative group intervention	Usual art and craft activities	4 weekly sessions, 120 minute sessions	1 month	PWB SWB	T > C
Elham (2015), Iran	No cognitive impairment	Quasi-experiment	68.86	45.15	Need-Based Spiritual/Religious Intervention	Treatment as usual	3 consecutive days, 60-90 minute sessions	-	Spiritual WB	T > C
Haberman (2013), USA	No severe cognitive impairment	Quasi-experiment	84.53 (8.56)	76.4	Intergenerational altruistic activities	-	1 week 30-minute sessions, multiple times	1 week	Engagement Happiness	Pre > Post Pre > Post
Haight (1998; 2000), USA	No severe cognitive impairment	RCT	79.6	69	Life review program	Friendly visit	6 weekly sessions, 60 minute sessions	1 year, 2 years, 3 years	LS PWB SE	T > C T > C T > C
Hanaoka (2004), Japan	No cognitive impairment	RCT	81.56 (5.09)	-	Life Review Program	Group discussions	8 weekly sessions, 60 minute sessions	3 months	LS SE	NS NS

*Notes.* C = Control Group; LS = Life Satisfaction; NS = Non-significant; PWB = Psychological Well-Being; RCT = Randomized Controlled Trial; SE = Self-Esteem; SWB = Subjective Well-Being; T = Treatment Group

**Table 1 continued***Characteristics of Positive Interventions for Nursing Home Residents*

First author (year), country	Condition of participants	Design	Mean age (SD)	% female	Intervention	Control group	Duration of sessions	Follow up	Dependent positive variable	Effectiveness
Ho (2014), Hong Kong	Not clinically depressed, intact hearing and verbal abilities	Quasi-experiment	77.97 (7.03)	89.2	PPI	-	9 weekly sessions, 90-minute sessions	-	LS SWB Gratitude	Pre < Post Pre < Post Pre < Post
Kashaniyan (2015), Iran	No cognitive or physical impairment	Quasi-experiment	76.73 (9.45)	-	PPI	NT	10 weekly sessions, 90-minute sessions	4 weeks	LS Meaning	T > C T > C
Nojabae (2018), Iran	No cognitive impairment, no psychological illnesses	RCT	78.1 (0.7)	76.7	PPI	NT	8 weeks, 2 90-minute sessions per week	4 weeks	Social Health	T > C
Salmabadi (2017), Iran	No cognitive impairment	Quasi-experiment	65 (2.88)	100	Life Review Program	NT	6 weekly sessions	-	LS Sense of coherence	T > C T > C
Sharif (2017), Iran	No information	RCT		52.9	Life Review Program	Usual activities	8 weeks, 2 120-minute sessions per week	4 weeks, 3 months	QoL	T > C
Van Haitsma (2015), USA	Moderate to severe cognitive + physical functional impairments	RCT	88.7	82.2	IPPI	Attention control	3 weeks, 3 10-minute sessions	-	Positive Affect	T > C
Wang (2011), Taiwan	Normal cognitive functioning	RCT	80.5 (7.3)	60	GT group sessions	Chatting activities	8 weekly sessions, 60 minute sessions	1 week	GT LS	T > C T > C

*Notes.* C = Control Group; GT = Gerotranscendence; IPPI = Individualized Positive Psychosocial Interventions; LS = Life Satisfaction; NT = No treatment; PPI = Positive Psychology Intervention; RCT = Randomized Controlled Trial; SWB = Subjective Well-Being; T = Treatment Group; QoL = Quality of Life

## **Themes and Means of Administration**

Ho, Yeung, and Kwok (2014), Kashaniyan and Khodabakhshi (2015), Nojabae et al. (2018) and van Haitsma et al. (2013) focused on themes related to subjective well-being (e.g. savouring, pleasure, optimism) and psychological well-being (e.g. abilities and strengths, personal growth, autonomy and positive relationships). Participants received lectures and exercises, and engaged in group discussions. Van Haitsma et al.'s study (2013) was individual-based as participants engaged in activities fitting their preferences with only one researcher. Participants could choose from physical exercise (e.g. going for a walk), music-related activities (e.g. singing, listening to music), reminiscence (e.g. writing letters, reviewing photos) or sensory stimulation (e.g. smelling a flower).

Chiang, Lu, Chu, Chang, and Chou (2008), Haight, Michel, and Henrix (1998), Hanaoka and Okamura (2004), Salmabdai, Rajabi, Safara, and Kokabi (2018) and Sharif, Jahanbin, Amirsadat, and Moghadam (2018) conducted Life Review therapy (LR). Only Haight et al. (1998) employed an individual setting where participants conducted life review individually with one therapist. The other studies conducted life reviews in groups. The goal of LR is to increase the level of integrity of an individual, including life satisfaction, psychosocial well-being and self-esteem, thus all studies focused on these themes. A crucial point across studies was to firstly collate the phases of the participant's lives and secondly to find new interpretations to integrate negative memories better.

Biassoni et al. (2017) and Cesetti et al. (2017) administered narrative strategies. Biassoni et al. (2017) asked participants to freely produce their autobiographical narratives in individual sessions. After listening to the narratives, participants were supported in thinking about possible, more positive, perspectives for difficult events. Cesetti et al. (2017) implemented a positive narrative intervention, which focused on a different emotion each week (fear, anger, sadness, happiness). The focus was on using fairy tales, with the intention

to make it easier for participants to access their own memories and emotions. Thus, residents dealt with emotions in a detached way at first. After, they had to share their personal experiences related to the emotion with the group and create their own fairy tale with a happy ending.

Wang et al. (2011) guided a GT support group, in which participants discussed and shared experiences related to the topics of ageing perspective, universe transcendence, self-transcendence, social transcendence, dealing with worries, experiences to improve life satisfaction, dealing with death and self-confidence. After, they were asked to narrate their life stories as well.

Elham, Hazrati, Momennasab and Sareh (2015) focused on the spiritual well-being of older people. Spiritual well-being includes on the one hand religious well-being, as in having a relationship with a superpower, and on the other hand existential well-being, which is a psychosocial element and represents one's feeling about who one is and what and why one does something (Elham et al., 2015). Participants were provided with a "caring presence", as a researcher talked with participants about spiritual experiences, gave them hope, encouraged their sense of generosity, and strengthened their relationships with family members. In addition, participants were provided with opportunities for worship and prayer, as for example the Holy Quran and a Walkman to listen to music and prayers.

Finally, Haberman (2013) developed an intergenerational, individual altruistic activity, in which participants donated care packages to local children. Participants had the chance to engage in the altruistic activity multiple times per week and decide themselves how much they wanted to contribute to the activity. For example, they could pack the packages themselves and interact with other participants and children. After, they talked to the researcher about their experiences.

## **Outcomes and Effectiveness of Interventions**

### ***Subjective Well-Being (SWB)***

**Pre-Test/Post-Test.** Biassoni et al. (2017) found significant effects on SWB compared to pre-test scores. Ho et al. (2014) reported significant increases in happiness and life satisfaction in post-test scores and Haberman (2013) found significant effects on happiness compared to pre-test scores.

**Treatment/Control Group.** Chiang et al. (2008), Haight et al. (1998), Hanaoka and Okamura (2004), Kashaniyan and Khodabakhshi (2015), Salmabadi et al. (2017) and Wang et al. (2011) reported significant effects on life satisfaction compared to control groups. Participants in Cesetti et al.' (2017) intervention showed higher SWB compared to a control group and van Haitsma et al. (2013) found significant increases in positive affect compared to a control group.

### ***Psychological Well-Being (PWB)***

**Pre-Test/Post-Test.** Biassoni et al. (2017) did not find significant results on PWB compared to pre-test scores.

**Treatment/Control Group.** Cesetti et al. (2017) and Haight et al. (1998) used complete PWB outcome measurements and found significant results compared to control groups. Kashaniyan and Khodabakhshi (2015) measured levels of meaning and Nojabae et al. (2018) measured social health. Both interventions showed significant results compared to the control groups.

### ***Self-Esteem (SE)***

**Treatment/Control Group.** Chiang et al. (2008), Haight et al. (1998), and Hanaoka and Okamura (2004) measured levels of SE compared to control groups. Chiang et al. (2008) and Haight et al. (1998) found significant results, whereas Hanaoka and Okamura (2004) reported only non-significant results.

## *Other*

**Pre-Test/Post-Test Scores.** Results of Ho et al.'s (2014) intervention showed significant increases in gratitude compared to pre-test scores. Haberman (2013) found higher engagement compared to pre-test scores.

**Treatment/Control Group.** Wang et al. (2011) reported significant changes in GT perspective compared to the control group, Salmabadi et al. (2017) found a significant increase in sense of coherence, Elham et al. (2015) reported significant effects on spiritual WB, and Sharif et al. (2017) found significant effects on quality of life of the treatment group.

## **Useful Strategies**

In most studies, it was not possible to identify exactly which aspect of the intervention led to positive results, whether it was the intervention itself, the presence of the interviewer or researcher, or group effects. However, certain strategies concerning firstly, the design of the intervention, and secondly, regarding the content of the intervention, appeared to be useful and beneficial across studies.

## *Design of Interventions*

**Group Interactions.** Most of the studies employed group-based interventions. Even though individual interventions appeared to be effective as well (e.g. Elham et al., 2015; van Haitsma et al., 2015) it was highlighted that participants constantly benefitted from interacting in groups (e.g. Cesetti et al., 2017; Ho et al., 2014; Nojabae et al., 2018; Wang et al., 2001). In most cases, the social skills of the participants improved as a side effect, as for example their abilities to communicate and to forgive were enhanced and their sense of belonging improved (Nojabae et al., 2018). Moreover, it was reported that participants were better able to solve their problems creatively, due to feeling more engaged and positive (Kashaniyan & Khodabakhshi, 2015). Ho et al. (2014) highlighted that sharing their experiences with the



group helped participants to become more aware of their values, wisdom and skills, and thus about their strengths.

The positive effects of collectively sharing and discussing experiences indicate the benefits of narrative psychology. Even though only two studies explicitly used narrative strategies (Biassoni et al., 2017; Cesetti et al., 2017), other studies also reported the benefits of participants sharing their memories and feelings (e.g. Ho et al., 2014; Wang et al., 2011).

**Individual Interactions.** Further, it stood out that participants highly appreciated the presence of a caring person that showed genuine interest in them (Biassoni et al., 2017; Elham et al., 2015; van Haitsma et al., 2015). In some studies, the researcher regularly spent time with the participants in order to engage them (van Haitsma et al., 2015), narrate their life stories (Biassoni et al., 2017) or to serve as an active listener and observer (Elham et al., 2015). In particular, van Haitsma et al. (2013) pointed out that it appeared to be effective to administer the activities individually since the participants became more resilient and experienced more positive emotions. In general, participants seemed to enjoy the company of someone who showed interest and talked about meaningful topics with them. However, these circumstances make it difficult to differentiate between the effect of the intervention itself and the effect of the presence of the researcher.

**Culture and Age Appropriateness.** Some studies actively tried to adapt the interventions to the age and culture of the participants. This strategy seemed to be helpful since participants were better able to identify with the discussed topics. For example, in Ho et al.'s study (2014) with Chinese older adults, some of the told stories were about famous older Chinese people, and the list of character strengths was adapted to strengths that older people can identify with. Regarding culture, Ho et al.'s (2014) and Kashaniyan and Khodabakhshi's (2015) participants were invited to enjoy a cup of tea during the session about savouring, which is a typical tradition in both China and Iran. Elham et al.'s intervention (2015) was culture-specific as the administered exercises were related to religion. Further, in her study on

intergenerational altruistic activities, Haberman (2015) found that older African-American people showed a greater change of rate in happiness. Haberman (2013) hypothesized that African-Americans might benefit more from activities that include social aspects compared to European Americans. This can be explained by African-Americans' tendency to collectivism (Haberman, 2013).

**Length and Intensity.** Another important aspect appeared to be the duration and intensity of the intervention. For example, LR interventions dedicated a lot of time to the process of a life review as integrating and processing memories cannot be done quickly but needs time (Chiang et al., 2008; Hanaoka & Okamura, 2004; Salmabadi et al., 2017; Sharif et al., 2017). Biassoni et al. (2017) reported that their intervention indeed had an effect on subjective well-being, but was too brief to positively affect psychological well-being. Similarly, Haberman (2013) pointed out that the positive effect of the intervention was stronger the more often the participants engaged in the activity. In addition, the intensity with which the participants occupied themselves in the task, by for example discussing with other participants or packing more care packages themselves, positively influenced their sense of meaning and levels of happiness.

### *Content of Interventions*

**Sense of Meaning.** Several studies pointed out that interventions were more effective when participants engaged in meaningful activities or discussed meaningful topics (e.g. Biassoni et al., 2017; Elham et al., 2015, Haberman, 2013; Wang et al., 2011). Firstly, especially Haberman (2013) emphasized that the meaningful component of the altruistic activity helped the participants to become more engaged and happy. Thus, instead of just keeping nursing home residents busy, they should actively be stimulated with meaningful experiences to be still able to contribute to society (Haberman, 2013).

Secondly, narrating life stories appeared to be helpful in creating meaning as well, as collecting memories helped participants to recognize the meaning of their existence (Wang et

al., 2011). Hence, discussions can easily be made more meaningful when participants are encouraged to talk about their own significant experiences and goals, as they feel more included and valued. In addition, Kashaniyan and Khodabakhshi (2015) put forward that the sessions helped participants to believe in their ability to achieve goals and realize their values. As a consequence, they experienced more meaning in life and a sense of identity after the intervention.

**Personal Strengths.** Moreover, most of the interventions helped participants to discover their personal strengths, which made them realize that they have used these strengths to tackle life challenges in the past (Ho et al., 2014; Nojabae et al., 2018; Kashaniyan et al., 2015). Once again, it was highlighted that interacting in a group had positive effects on the participants' communication and helped them to discover their own unique characteristics (Chiang et al., 2008). As a result, participants were able to change their attitude towards getting older and felt more competent to deal with the challenges of older life. Consequently, they experienced higher life satisfaction and more self-esteem (Chiang et al., 2008). Moreover, working on strengths and positive features of the participants' personalities enhanced hope and positivity, and helped participants to believe in their ability to achieve goals and realize their values (Nojabae et al., 2018; Kashaniyan and Khodabakhshi, 2015).

**Change of Perspective.** Lastly, some of the interventions helped participants to take on different perspectives and reinterpret life events. These were especially the LR programs (Chiang et al., 2008; Haight et al., 1998; Hanaoka et al., 2004; Salmabadi et al., 2017; Sharif et al., 2017) and studies that used narrative techniques (Biassoni et al., 2017; Cesetti et al., 2017; Ho et al., 2014; Wang et al., 2001). For example, in Biassoni et al.'s study (2017), participants were invited to consider their role in certain difficult situations, adapt other possible perspectives, and positively reinterpret the event by finding positive aspects. Thus, the method of deconstruction-reconstruction was employed. In Cesetti et al.'s intervention (2017), the use of fairy tales helped participants to access their own memories and emotions

better as they analysed situations with emotional distance and created their own fairy tale with a happy ending. Likewise, participants in Salmabadi et al.' study (2017) were supported in looking at situations from a different, and more positive perspective so that memories could be better integrated. Similarly, Wang et al. (2011) concluded that participants were able to more positively face the process of ageing and thus experienced increased life satisfaction.

## Discussion

The aim of this systematic review was to investigate the characteristics and effectiveness of positive interventions for nursing home residents. In addition, the most useful strategies regarding design and content of the intervention to enhance the well-being of residents were extracted. Fourteen eligible studies were found that focused on improving the well-being of nursing home residents by making use of positive interventions. The first main finding was that nursing home residents highly benefitted from the interventions, as all studies showed significant results, except for one. However, the effectiveness of the interventions could not be traced to a certain aspect of the intervention, but seemed to arise from the combination of several strategies. The second main finding was that increasing older adults' well-being requires a different approach compared to strategies used for younger generations. Interaction with other people and meaningfulness appeared to be the most important approaches to increase well-being.

To start with the effectiveness of studies, it was found that 13 out of 14 studies resulted in positive outcomes. Certain strategies contributed to these outcomes. The strategies can be divided into the design of the intervention and the content of the intervention. The most useful strategies regarding the design were *interaction with other people, culture and age appropriateness* and *length and intensity* of the intervention. The most useful strategies regarding the content of the intervention were *sense of meaning, personal strengths*, and *change of perspective*. The fact that all of these strategies played a crucial role across studies

suggests that interventions to increase well-being yield the best results when different aspects and techniques are implemented. This assumption is in line with the Synergistic Change Model (Rusk, Vella-Brodrick & Waters, 2018). The model shows that change in well-being is dynamic, as changes in one element of psycho-social functioning lead to changes in other elements. For example, when residents interacted with each other, they not only showed improvements in the relationship domain, but were also able to adapt different perspectives, changing their awareness. As a result, they often reported a deepened sense of meaning. Thus, changes in well-being should not be explained by causal sequences but multiple pathways for change should be considered (Rusk et al., 2018). Another explanation for dynamic interaction between elements of well-being is the spill-over effect (Rusk et al., 2018). If an intervention helps participants experiencing higher subjective well-being, influencing their emotions, this effect could also temporarily influence their attention, so that participants become more aware of positive aspects in their lives. Accordingly, the high effectiveness of the reviewed studies can be explained by the fact that different domains and strategies were included.

The second main finding was that *interaction with other people* and *sense of meaning* were aspects that participants highly appreciated and benefitted from. First, engaging in interactions appeared to be crucial in increasing well-being across studies. Most studies employed group-designs. On the contrary, meta-analyses of the effectiveness of PPIs by Bolier et al. (2013) and Sin and Lyubomirsky (2009) indicated that individual therapy is more effective than group therapy. It was argued that participants benefit more from individualized treatment that is adapted to their needs than from group interaction. Still, considering that participants in the meta-analyses were younger, and most likely have a lot of human interaction on a daily basis, the results cannot be extrapolated to nursing home residents. People living in nursing homes often suffer from a lack of human interaction, making them feel lonely and less worthy (McVicar, 2003). Even though individual-based studies that were examined in this review also proved to be effective (e.g. van Haitsma et al., 2013), human

resources for individual contact in nursing homes are limited. Thus, giving nursing home residents the opportunity to be listened to and engaging in exchange in groups is more time- and cost-effective.

Second, most interventions yielded an increased sense of meaning. This effect can be traced to the fact that residents felt like their voices and experiences still matter. This is in line with arguments of Ranzijn (2002) and Pinguart (2002) who stated that older people are not given enough opportunities to contribute to society in order to experience meaningfulness, impairing their well-being. Thus, it might be a valid point to try to integrate nursing home residents in a community, by giving them tasks by means of which they can contribute to society (Ranzijn, 2002). Notably, experiences of older people regarding critical times as war can facilitate peace-making, community-building and creating a better world (Ranzijn, 2002). Additionally, older adults derive a sense of meaning from intergenerational altruistic activities (Haberman, 2013). Already Erikson (1968) proposed that older adults have the developmental need for generativity, as in contributing to younger generations. This need is in contrast to needs of younger adults, who attribute more meaning to material possessions (Pinguart, 2002). Accordingly, PPIs for older adults require a different approach than PPIs for younger adults, as older people derive their sense of meaning from different sources than younger people.

Notably, interaction with other people and deriving a sense of meaning seem to mutually define each other. This view is supported by the concept of GT (Tornstam, 2011). When older people actively deal with the topic of self-transcendence in late life, the self-focus shifts to a need for deeper, more meaningful connections. Therefore, individualistic goals become less important and a sense for unity increases (Tornstam, 2011). Further, Wang et al. (2011) showed that storytelling in groups helped older adults to experience their life as being more meaningful and valuable. This change in perspective shows that personal development is still taking place, as proposed by the GT theory (Wadensten, 2010). Encouraging residents

to talk about their childhood and their development is also recommended by Wadensten (2003), who developed guidelines for nursing home staff to promote GT. For example, he suggests asking residents about their dreams and the meaning behind them in the morning. Thus, relatively simple strategies can help satisfy the need of older people to engage in meaningful and collective activities and should be regarded when developing interventions for them.

### **Strengths and Limitations**

One strength of the current study is that it was one of the first to systematically research the characteristics and effectiveness of PPIs for nursing home residents. Importantly, this review solely included studies that had the goal to increase positive aspects of mental health. Therefore, studies that only aimed at decreasing e.g. depressive symptoms were strictly excluded. As most interventions to this point focused on reducing symptoms of mental illnesses in older people (Greenawalt et al., 2019), this review sheds light on the importance of working on mental well-being as well, to achieve complete mental health (Keyes, 2002). Further, the systematic review was conducted according to the PRISMA statement for systematic reviews (Moher et al., 2009). Thus, transparent and complete reporting can be assured.

Still, some limitations need to be taken into account when interpreting the results. First, only half of the studies were RCTs. Therefore, the quality of the non-randomized controlled studies needs to be regarded with caution. Further, many studies did not conduct follow-up assessments indicating that the long-term effects are still unclear. Second, most studies included mainly female participants, thus, it remains questionable whether all genders were represented adequately. In addition, only samples with cognitively intact participants were included, however, a proportion of nursing home residents are severely cognitively impacted. Hence, other strategies might be needed to improve the mental health of cognitive

impaired residents. Lastly, the data extraction was only conducted by one researcher, which makes it difficult to determine if bias influenced the selection and extraction process. Future research should include at least two researchers to rate the studies.

### **Implications for Research and Practice**

The results of this systematic review indicate certain implications for research and practice. To start with, future studies testing PPIs in nursing homes should aim at employing RCTs with samples diverse in gender and cognitive functioning. These interventions should firstly aim at stimulating interaction between nursing home residents. Techniques of narrative psychology with a positive focus could facilitate discussions about meaningful topics, helping residents to perceive their life as being more meaningful. Preferably, interventions should target several aspects of well-being (e.g. awareness about positive situations and social interaction), so that the most durable effects are achieved. Secondly, residents could be provided with simple altruistic tasks, as for example creating presents for someone else. Nevertheless, research should not only develop interventions that may only have short-term effects but design instructions for nursing home staff on how to support well-being and reaching GT for residents. These strategies should be designed to be cost- and time effective, as nursing homes are understaffed and time to care for each resident individually is limited. Therefore, independent of certain interventions, group-meetings could be arranged where nursing home residents can talk to each other, so that the demand for individual conversations with nurses is reduced. Including conversations about meaningful topics will then give residents the feeling that the meetings actually have a purpose and not only have the intention to keep them busy. In conclusion, although applying positive psychology in the nursing home is still in its infancy, PPIs generally seem to have a positive impact on nursing home residents. Findings of this review can help to develop even more suitable interventions for nursing home



residents by training staff with regards to the concept of GT and by supporting residents to engage in meaningful exchange with others.

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