

On the current mental state of the Hungarian elderly

THE EFFECT OF THE TYPE OF RESIDENCY ON THE PSYCHOLOGICAL HEALTH OF THE HUNGARIAN ELDERLY AND AN EFFORT TO MAKE THE HUNGARIAN ELDERLY'S LIFE MORE FULFILLING

JELIGE: DUM VITA EST, SPES EST

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Abstract

Hungary is one of the many countries facing the socioeconomic burden of an aging society (Vajda, 2022). Although the number of elderly is continuously increasing along with the life expectancy of humans, the geriatric population receives alarmingly little attention from researchers and psychotherapeutic care providers. Today, it is common that families cannot provide sufficient quality and quantity of support to their elderly members, and therefore turn to the social care system for assistance. Although nursing homes (NH) ensure a safe environment for their residents, they also distance them from their social environment which may hinder the successful resolution of the last stage of psychosocial development, predisposing them to despair (Woods & Witte, 1981). To fill in the gap of knowledge regarding this phenomenon as well as to bring awareness to this issue, two studies were conducted. The first half of this entry is dedicated to a questionnaire-based study that showed a significantly lower basic psychological need satisfaction, sense of coherence, and social support as well as a higher sense of loneliness in NHs compared to elderly living in their own homes (Table 2). Based on these results, an experiment was conducted to enhance the well-being of the participating NH residents showing mixed results (Table 3-6). Findings were compared with the literature and future directions in geriatric research was being advocated for.

Keywords: elderly homes, Hungary, psychosocial development, McAdams life story interview

Introduction

In modern Western societies, due to the technological, economic, and societal changes after the Industrial Revolution, the family structure began to shift from extended families living together to a rather separated family functioning where the more juvenile and older generations are usually contained by discrete households (Cowan, 1976). Furthermore, owing to the advancements in medicine, sanitation, nutrition, and health care, a significant rise in average life expectancy at birth has been observed since the early 20th century which is in sharp contrast to the increasingly pressing issue of loneliness and chronic illnesses in elderly years (Barlow et al., 2015; Singh & Afroz, 2018).

The growing number of elderly and the accompanying shift in the composition of the population of many developed, aging societies had a widespread and serious impact. On a societal level, it placed extra pressure on the labor market and the infrastructure, including the trends of demand for goods or services to change (Singh & Afroz, 2018; Yung et al., 2016). Moreover, improvements brought about by urbanization, modernization, and globalization contributed to the alteration of the structure of households as well as the traditional family roles.

Slowly the social functions of the family have reduced to consumption, socialization of children, and tension management, meaning that the social bonds that once held together the family circle have loosened (Rosenmayr, 1968). To maintain and manage the relationships among family members and mediate between older and younger generations, a sort of distant, effectivity-focused but still intimate form of interaction has become the primary strategy. However, this shift accompanied by the segmentation of nuclear families into joint families made today's elderly more isolated than ever before.

As humans live longer, they are more exposed to the adverse effects of aging (Bodner, 2009). Even without major illnesses, simple age-related deterioration such as a decline in vision or hearing can make the geriatric population more vulnerable to feeling alone, which is associated with cognitive decay, symptoms of anxiety, and depression (Singh & Afroz, 2018). Since women entered the workplace to provide for the family during the world wars, they could no longer take care of the elderly without sacrificing their careers, contradictory to the fact that the prevalence of illnesses is higher in old age and may require assistance, monitoring (Singh & Afroz, 2018). Consequently, institutionalized elderly care emerged and nursing homes (NH) became a common remedy to this issue. Although this solution yields immediate benefits for struggling families, it may further deepen the gap between the older and younger generations.

Being separated from their family in space is only a fraction of the problem of the developing divide. Some of the tension between these two groups stems from the divergence in terms of subcultural and personal value, belief systems, and lifestyle. As the internet became a widely used platform to connect with their peers, youngsters today use non-identical channels to communicate introducing a communicational difficulty (Bianchi, 2021). In addition to this, with the Internet, the original function of the elderly has been taken away too. Their purpose of being the source of knowledge for the younger generations became almost completely lost which may partially explain the worryingly high prevalence of mental disorders and suicide in this population (Dahan-Oliel et al., 2008; Rihmer et al., 2013). Additionally, the continuously changing modern world might be increasingly difficult for them to understand and keep up with thus potentially harming the elderly's sense of coherence which may be amplified in NHs.

The unfolding gap between these age groups fostered prejudice towards seniors that is reinforcing the issue of loneliness and isolation of this population (Arabzadeh, 2017; Nemmers, 2009). Such hindrances to their psychological wellness may make the successful resolution of the 8th stage of psychosocial development more troublesome nowadays. People in this developmental stage are attending to evaluate their life, however, the lack of purpose as a result of the inability to transfer their knowledge to younger generations may hinder this process (Woods & Witte, 1981).

Although NHs are quite useful as these facilities employ staff that are skilled to take care of older individuals even with special health requirements, they may not be able to provide sufficient quality of social support. Furthermore, people living in these institutions might not feel as competent because they cannot participate in everyday duties or other activities that are important and meaningful to them. They may have less worthwhile conversations since this environment is considerably lower in new impulses that would require sophisticated cognitive elaboration skills like problem-solving or the shaping and expression of their opinion. Moreover, some residents due to physical or psychological restraints might be unable or less open to forming new relationships with others in the facility.

It is crucial to add that in most countries, there is still stigma around mental health, meaning that old age individuals may be even more reluctant to seek professional help (Singh & Afroz, 2018). Importantly, today's geriatric care is faced with a novel challenge that is managing and treating mental disorders along with finding ways to reduce the risk and pervasiveness of psychopathologies (e.g. major depression) among the elderly especially in

Eastern European countries that seem to be especially impacted by this topic considering the epidemiological and clinical perspectives of suicide and mental illness (Rihmer et al., 2013).

The situation of the Elderly in Hungary

Between 2001 and 2021, the proportion of individuals above 65 years of age increased from 15.8% to 20.8% in Hungary (Vajda, 2022). This trend is evident in many other countries across Europe and is likely to persist. For instance, by 2050, the proportion of elderly in the whole Hungarian population is anticipated to be over 27%. In addition to this, women are expected to live longer, however, they do not have more years spent in health than males do which makes them more likely to seek assistance from social healthcare institutions. Therefore, geriatric care provision is a pressing issue that should be researched and improved.

In Hungary, the social care system is primarily managed by the government, although recently religious facilities have also been established (Vajda, 2022). Overall, the system can be divided into two main sections: basic services (e.g. social catering, home-based assistance), and specialized care including retirement homes which serve as a long-term care facility, as well as institutions providing temporary accommodation that is suitable for shorter stays. These studies were mostly interested in long-term care institutions. To cover the different types of establishments, both religious and governmental institutes have been included in the experiment presented in the second part of the current paper.

Erikson's theory of psychosocial development

The basic developmental framework of the two studies was given by Erik Erikson's theory of psychosocial development. Erikson's work was revolutionary for a variety of reasons including that it viewed development as a process that continues through adulthood (Woods & Witte, 1981). In addition to this, it emphasized the importance of social context in the healthy life and maturation of human beings (Orenstein & Lewis, 2022).

The theory describes eight consecutive stages with each containing a crisis to be overcome by the individual (Woods & Witte, 1981). In each stage, the continuum on which the successfulness of the resolution shall be understood is described by two endpoints. Solving the given developmental task more adaptively predisposes the person to resolve the next stage favorably.

The elderly years are a sensitive period in human development because they are exposed to novel threats such as increased risk of health issues (Arabzadeh, 2017; Troen, 2003). Therefore, many think of this period as a continuous decline, however, according to Erikson's theory there is still a goal toward which one can thrive. This last stage of psychosocial development starts at about 65 years of age and lasts until death and was named after its main conflict: ego integrity versus despair (McLeod, 2024, Woods & Witte, 1981). These years are thought to be concerned with self-reflection, a kind of retrospective evaluation of one's existence judging whether it was a life well lived or a lifetime full of missed opportunities and unreach goals leaving one with the agony of regret and despair.

Those ending up with ego integrity can be characterized by being tolerant and accepting towards others and themselves, along with feeling satisfied with their lives (Woods & Witte, 1981). This sense of completeness helps the individual to make peace with the concept of death and to balance out their fears and anxieties imposed by the end of their existence. On the other hand, people falling into despair tend to be rather bitter, fearful of death, and generally unsatisfied with their essence. This outcome may produce even more anxiety which elevates the danger of isolation and loneliness thereby enhancing their vulnerability to diseases (Arabzadeh, 2017). Adequate resolution to this conflict yields wisdom, the formulation of a strong body of knowledge attained by the integration of life experiences into a unified whole that they can pass on to the younger generations.

Later, the original theory was expanded with an additional ninth stage by Joan Erikson as the universality of old age was debated. It incorporated all aspects of the previous model except for differentiating between two subsequent phases of the elderly years (Orenstein & Lewis, 2022). The eighth stage's conflict became involvement versus resignation, while the ninth stage remained the same as the above-described eighth stage: integrity versus despair (Bugajska, 2017). On the other hand, since both of these models agree upon the last developmental task and considering that the eighth stage of the modified theory serves solely a preparational role to the final stage, the current investigation builds upon the conflict of ego integrity versus despair.

Social Isolation

In the older years, a significant drop in the number of social contacts is detectable, as they emphasize the quality rather than the quantity of their relationships perhaps because they

are not looking to enter a new stage of life. Interestingly, according to the study of Kasser and Ryan (1999), instead of the number of social contacts, the depth of relationships correlated positively with well-being. Indeed, subjective social isolation, which refers to the perceived shortage of one's social resources, is more strongly associated with detrimental psychological effects (e.g. sleep disturbance, fatigue, depressive symptoms) than objective isolation is regardless of culture or ethnicity (Choi et al., 2015). Therefore, having a good quality social support system might be the key to preserving one's psychological wellness in old age.

Loneliness

Loneliness may be defined as the subjective experience of a negative emotional state related to the perception of unfulfilled intimate or social needs (Grover & Сандип, 2022). According to the evolutionary viewpoint, it is an adaptive feature as feeling lonely promoted the hunter to return with their resources to their offspring therefore decreasing their vulnerability to environmental dangers and ensuring the survival of their genes (Luanaigh & Lawlor, 2008).

Social loneliness refers to the feeling of lack of social integration, while emotional loneliness is experienced as the absence of attachment figures (Luanaigh & Lawlor, 2008). It can be transient or short-term, situational or chronic if experienced for more than 2 years. It may be unidimensional or multidimensional when encountered across specific life domains. The death of a spouse or significant others, the loss of family involvement or neighborhood network due to retirement, as well as the loss of an important ability (eg. to drive) due to physical or cognitive changes, are all considered to be significant risk factors of increased, often long-lasting loneliness relevant to the geriatric population (Grover & Сандип, 2022).

Prolonged loneliness has deleterious effects on mental and physical health. It is associated with a higher risk of cardiovascular diseases, stroke, diabetes mellitus, arthritis, depression, anxiety, dementia, increased cholesterol levels, poor immunological functioning, insomnia, increased suicide rates, higher risk of mortality and poor quality of life (Luanaigh & Lawlor, 2008).

Before modernization, religion frequently relieved the burden of loneliness as God was assumed to always be with the believers. Many still have a strict religious belief system today which helps them maintain their relationships with others they met through their religion as well as their God. However, nowadays the influence of religion has decreased, individualism

has become the notion of the world and it is still unclear whether modern technology could offer a sufficient remedy with its new ways of connecting for those who do not have strong religious beliefs (Grover & Сандип, 2022).

Psychological well-being

According to the biopsychosocial model, psychological and physical wellness are interrelated and should be considered simultaneously along with social factors (Adler, 2009). To map the elderly's mental wellness, aside from psychological well-being other constructs are investigated in this paper that are briefly introduced here.

Firstly, psychological well-being is a multifaceted concept, its definition is debated and changing. Regardless, it can be concisely summarized as an individual's satisfaction with their lives, experience of happiness, and emotional and mental health (Dhanabhakym & Sarath, 2023). In the below-described studies, it was measured by basic psychological need satisfaction, and by the WHO's well-being scale.

Drawing upon Erikson's theory and the biopsychosocial model, a sense of social support was also considered. According to the definition of the American Psychological Association (2018), it is a kind of assistance provided by the social environment that helps an individual to cope with various stressors and makes the individual feel understood and valued. In the current study, the Hungarian version of the Medical Outcomes Study Social Support Survey was used to measure this dimension.

Other concepts, such as sense of coherence and sense of purpose in life were included in this paper because they were thought to be related to the well-being of this particular age group. Sense of coherence means that the individual perceives events as manageable, meaningful, and comprehensible (Eriksson & Lindström, 2005). It is a concept closely related to Antonovsky's salutogenesis theory and has been shown to be impactful to one's health. A similar concept, sense of purpose, is also associated with longevity and physical and mental wellness (Godman, 2023).

Ageism

Instead of turning to them with respect and viewing seniors as the source of cultural and factual knowledge, ageist ideas are being dispersed in both individualistic and collectivistic

countries of the modern age. Ageism entails continuous and systematic stereotyping along with discrimination against the elderly solely on the basis of being old (Bodner, 2009). People with high levels of ageism are motivated to maintain physical and psychological remoteness from seniors because they view them as the living reminders of mortality. To these people, growing old is strongly associated with feeling powerless, and experiencing disability or disease (Németh et al., 2020). As a result, to create psychological distance from them, these people set up a mental barrier between the in-group (the relatively young) and the outgroup (those of old age). These stereotypes oversimplify seniors and assign them traits that oftentimes they do not possess in real life. Regardless, this process has a strong influence on their attitudes toward the elderly (Nemmers, 2005).

Today, most people live in cities which caused an inevitable change in people's attitudes toward certain parts of their lives such as death. People these days are more likely to pass away in hospitals when modern medicine can no longer save them, as opposed to in their own homes surrounded by their loved ones which may have contributed to the heightened anxiety and uncertainty surrounding death. Based on the terror management theory, younger individuals may begin to adopt ageist attitudes to protect themselves from the overwhelming fear of death (Bodner, 2009). On the other hand, by doing so they are contributing to the isolation of the venerable. A common response of the elderly to this phenomenon is self-distancing which may be explained by the social identity theory. According to Singh and Afroz (2018), senior individuals who internalized ageist attitudes identify themselves with younger individuals as in-groups to protect their self-esteem since the aged are associated with having a lower social status. By doing so, they are not simply justifying this false view of their age cohort, but internalizing this conflict which hinders them from living their older years in harmony and psychological wellness.

These age-based biases have cast the older populations as largely insignificant and incompetent for the rest of society (North & Fiske, 2015). They may be pictured as ones who cede resources and are therefore a burden on the ambitious younger generation. Most modern societies hold certain ageist stereotypes themselves that make the barrier more persistent to change such as the seniors have many illnesses, they cannot learn new skills or sustain themselves on their own (Nemmers, 2005). Further, ageism has a widespread impact in the healthcare industry too, resulting in seniors hardly ever receiving preventative care, they might

not get appropriate screening done or get excluded from certain medical interventions or clinical trials due to their age.

The reason why negative ageism is such a widespread and difficult issue to combat is that these thoughts, feelings, or behaviours are oftentimes implicit and operate without conscious awareness (North & Fiske, 2015). Nevertheless, their effects on the mental and physical health of seniors are well pronounced which is shown by a study where elderly subjects who were exposed to subliminal negative stereotype primes elicited higher blood pressure and heart rate, impaired memory, and basic motor skills whereas subjects in the positive stereotype condition showed improved measures in gait speed (Nemmers, 2005). Thus, due to the high prevalence of ageism and its pronounced impact on the lives of the elderly, prevention and interventions would be timely.

Human Library (HL) events gained popularity over the last two decades owing to their high efficiency in reducing prejudice and increasing awareness about a variety of stigmatized groups (Bagci & Blazhenkova, 2020). During these experiments, the so-called “Readers” get a chance to interact with “Books”, people from a stigmatized group. These direct, face-to-face sessions were shown to improve the attitude towards a variety of minority groups. This HL approach provided the basic idea of the experiment presented later with the exception that, as opposed to the original design, the aim of the exhibited inquiry was not to battle ageist ideas, but to aid the “Books”, the elderly participants, to construct and tell their life narrative with the help of the McAdams life story interviews.

In the following sections, two pieces of research will be discussed. These investigations were conducted separately with one being based upon the other. Firstly, a questionnaire-based study will be presented that was aimed to investigate whether the type of residence affects the psychological wellness of old-age individuals. Based on the obtained results, an experimental study was issued that will be presented second, aimed to test if the observed tendencies could be improved in the less fortunate group.

Study1: The differences in the psychological well-being of the Hungarian elderly in terms of residence

Introduction: The Self-Determination Theory

The first questionnaire-based comparative study was based on the Self-Determination Theory (SDT) which is a macro-theory that describes human behaviour and personality development while exploring the energization and direction of behaviour (Tang et al., 2020). It investigates how biological, social, and cultural underpinnings influence the innate capacities of individuals for psychological growth, engagement, and wellness as well as what people need to realize their potentials or capacities to thrive. It specifies the psychological processes and social conditions under which growth, self-regulation, and social integrity are best optimized based on evolutionary, neuroscientific, psychophysiological, economic, and socio-cultural findings (Ryan & Deci, 2017). SDT contains six mini theories: Cognitive Evaluation Theory, Organismic Integration Theory, Causality Orientation Theory, Goal Contents Theory, Relationship Motivation Theory, and Basic Psychological Need Theory (BPNT). The research being discussed here was built on the latter, which is concerned with the dynamics of how the three basic needs -that is autonomy, relatedness, and competence- affect vitality, well-being, healthy functioning, and the development of psychopathology (Ryan & Deci, 2017).

The need for autonomy may be defined as one's desire to regulate their actions and experiences, ensuring that their deeds are self-endorsed and congruent with their values (Ryan & Deci, 2017). The need for competence refers to the motivation to feel mastery and effectiveness. Although it energizes myriad behaviours, it is vulnerable to person-focused criticism and social comparison. Lastly, the relatedness need is concerned with experiencing social connection, belonging to a group, and feeling significant as well as being cared for by others. These needs are all essential for optimal psychological development and full functioning regardless of cultural context. As the satisfaction of each needs correlates positively with the others, people cannot thrive with the fulfilment of only one need or in only a single domain. On top of that, imbalance across life domains regarding BPN satisfaction causes the individual to experience additional distress and negative effects (Ryan & Deci, 2017).

As opposed to the ego-depletion model, the SDT states that deficit needs (e.g. self-esteem, security) are important under threat or distress, but the satisfaction of such needs does not contribute to enhanced well-being. Therefore, they might set the stage for but do not promote optimal functioning (Ryan & Deci, 2017).

In general, need satisfaction has both bottom-up and top-down effects on situational and domain-specific experiences (Kasser & Ryan, 1999). Wellness in the SDT framework can be captured by flourishing and being fully functioning. People who are functioning healthily exhibit higher levels of happiness and subjective vitality, less anxiety, or depressive and somatic symptoms as well as an elevated sense of coherence and meaning (Ryan & Deci, 2017). These people can mobilize and harness psychological and physical energy to engage in activities that are valuable to them.

BPN frustration is associated with diminished growth, greater ill-being, and impoverished functioning (Ryan & Deci, 2017). When needs are frustrated, passive or fragmented functioning may arise which is characteristic of psychopathology. Supportive social contexts promote integrated development and effective psychological functioning and therefore predict cultural, organizational, and personal vitality. The predictability of well- or ill-being based on need satisfaction is just as applicable to within-person, as it is to between-person levels of analysis across domains and social contexts (Ryan & Deci, 2017).

According to the SDT, people can be motivated intrinsically and extrinsically (Ryan & Deci, 2017). Regulation through rather autonomous means leads to more positive experiences, enhanced well-being, and functional differences. Satisfaction of competence and autonomy needs as well as relational security is essential for autonomous motivation, and strong emotional ties (Ryan & Deci, 2017; Tang et al., 2020). The SDT assumes that the nascent self is inherently curious, intrinsically motivated to learn, gain mastery, and active during their development if they are under supportive conditions. However, when someone is in a need-thwarting environment, they are more likely to become aggressive, self-focused, unmotivated, and antisocial which is the manifestation of fragmentation and defence (Ryan & Deci, 2017).

Satisfaction of autonomy is essential for the initiation and behaviour regulation that allows to pursuit of the satisfaction of relatedness and competence, thus controlling contexts disrupt not only autonomy but the global need fulfilment (Kasser & Ryan, 1999). Autonomous actions entail an internal perceived locus of causality (IPLOC), whereas forced actions foster an external perceived locus of causality (EPLOC) which reduces creativity, confidence, and vitality.

According to the article of Kasser & Ryan (1999), people in retirement homes who experienced an enhanced level of autonomy in decision-making elicited increased health,

activity, and satisfaction than the control group, however, these subjects reported a decline in the follow-up investigation due to taking away such control. In facilities characterized by a lack of autonomy support, the interaction patterns between staff and residents are likely to happen along the dependency-support script which is marked by over-caring and rewarding independence behavior therefore hindering autonomy and well-being which has detrimental long-term outcomes for the residents.

Hypothesis

The present research aimed to explore one important supposition to better understand the mental well-being of the elderly living in Hungary. It was hypothesized that the extent of psychological well-being, sense of coherence, sense of purpose in life, level of perceived social support as well as feeling of loneliness, would differ with the type of residence. Those living in retirement homes were expected to elicit a lower sense of coherence and find less purpose in life as well as report higher levels of perceived loneliness in contrast to those who are living in their own homes. Furthermore, to broaden the investigation of the BPNT framework to the elderly population, the relationship of the above-mentioned constructs to the satisfaction of the basic psychological needs was also investigated. It was hypothesized that perceived sense of coherence, sense of purpose and social support would correlate positively with the satisfaction of basic psychological needs as opposed to perceived loneliness which was hypothesized to correlate negatively. Moreover, those participants who lived in elderly homes were assumed to have lower satisfaction of the three basic needs.

Method of data collection

Participants

The intended sample size was 60 participants aiming for an equal ratio between retirement home residents and people living in their own homes. The research was conducted in Hungary, with the data collection being centered in the capital, Budapest as well as in Pécs city. In accordance with most articles investigating the elderly, the age criteria for participants was set at 65 years of age, meaning that those below this limit were excluded from the study.

Data collection took place between the beginning of October 2022 and the end of November 2022. At the end of this period, answers from 80 volunteers were gathered in total. To meet the age requirement, 9 participants were excluded from the analysis, resulting in the

final sample of 71 subjects with 57 of them (80.3%) being female. The ages of the subjects ranged from 65 to 96 years of age ($M=77.4$, $SD=7.45$). Among them, 25 (35.2%) of the total number of subjects were nursery home residents.

Tools

The questionnaire package that was handed out contained the participant information sheet, the consent form, demographic questions as well as five psychological instruments. The scales included were the De Jong Gierveld Loneliness Scale (DJGLS), Sense of Coherence (SOC) scale, Basic Psychological Needs Scale (BPNS), Purpose In Life (PIL), and the Medical Outcomes Study Support Survey (MOS-SSS), respectively.

De Jong Gierveld Loneliness Scale

In the current investigation, the Hungarian version of the De Jong Gierveld Loneliness Scale (DJGLS-H) was employed which is a unidimensional measure containing 11 items (Szabó & Szili, 2022). It had good internal consistency (Cronbach's alpha being 0.814), meaning that it is a reliable instrument for the assessment of loneliness. The scale is suitable for measuring emotional loneliness (represented by the six negatively formulated items) and social loneliness (represented by the five positively formulated items) separately, however in the current context it was used as a general loneliness scale. Each statement was rated on a 3-point Likert scale ("yes", "no", or "more or less") with the scores ranging from 0 (not lonely) to 11 (extremely lonely). For one to be considered as lonely, they shall score at 3 points or higher on the DJGLS-H (Uysal-Bozkir et. al, 2017).

Purpose in Life

The Purpose in Life (PIL) instrument's Hungarian version was used to assess the respondents' sense of meaningfulness and determination in life. It contains 20 items, each rated on a 7-point Likert scale (Konkolý Thege & Martos, 2006). It has 9 reversed items, but the scale values account for those during the evaluation. Obtainable scores range from 20 to 140. Although 4 factors were detected in the analysis during the validation of the Hungarian version of the PIL scale, it was used as a unidimensional instrument as it was advised by the authors (Konkolý Thege & Martos, 2006). The instrument showed almost excellent internal consistency based on the dataset of this investigation (Cronbach's alpha being 0.887), hence proving its reliability.

Sense of Coherence

The Sense of Coherence scale (SOC) was developed by Antonovsky in the 1980s to operationalize his theory of salutogenesis which examines the determinants of health (Drageset et al., 2008). This, originally 29-item scale, aims to measure one's dispositions to interpret situations as comprehensible and manageable as well as their ability to find meaning in them. These three aspects of thinking may serve as a buffer against stress and disease regardless of age, gender, or ethnicity (Balajti et al., 2006; Eriksson & Lindström, 2005).

In both pieces of research being presented here, the Hungarian version of the 13-item short form of the SOC scale was used which was translated and validated by Balajti and his colleagues (2006). Each item of the scale was rated on a 7-point Likert scale, with items 1, 2, 3, 7, and 10 being reversed questions. Since there is no consensus in the scientific community regarding the exact structural composition of the scale (Eriksson & Lindström, 2005), considering Antonovsky's original intentions, in the investigations a unidimensional approach was taken. Scores go from 13 to 93 points (Mafla et al., 2021). The SOC elicited good internal consistency in the questionnaire study with Cronbach's alpha being 0.811.

Basic Psychological Needs Scale

The 21-item, Hungarian version of the Basic Psychological Needs Scale (BPNS) was used to assess the satisfaction of competence (Cronbach's alpha being 0.617), autonomy (Cronbach's alpha being 0.742), and relatedness (Cronbach's alpha being 0.762) needs of the respondents. Each item was rated on a 7-point Likert scale (Basic psychological needs scales, 2022). Every subscale had 3 reversed items with the possible global BPNS scores ranging from 21 to 147. In the current analysis the BPNS had a good internal consistency (Cronbach's alpha being 0.87) and, therefore, has been shown to be a reliable instrument.

Medical Outcomes Study Social Support Survey

The Medical Outcomes Study Social Support Survey (MOS-SSS) is a widely used instrument to assess one's perceived level of social support (Szentiványi-Makó et al., 2016; Sherbourne & Stewart, 1991). It is a 20-item measurement in which statements from number 2 to 20 shall be rated on a 5-point Likert scale with higher scores indicating stronger social support whereas the first item asks the respondents to give an estimate of the number of trusting

relationships they have. The instrument had very good internal consistency with the overall Cronbach's alpha being 0.816.

In the current study the Hungarian translation of the scale was used which was validated by Szentiványi-Makó and her colleagues (2016). During the adaptation process, the original four factorial constructions of the scale (emotional or informational, tangible, affectionate, and positive social interaction dimensions) could not be replicated (Szentiványi-Makó et al., 2016; Sherbourne & Stewart, 1991), therefore the factorial makeup suggested by the authors of the Hungarian version was considered in the statistical analyses. Cronbach values for the subscales were as follows: for the emotional- informational social support 0.924, for the instrumental social support subscale 0.86, and finally for the affective-positive social interaction subscale, Chronbach's alpha was 0.904.

World Health Organization Well-Being Index

The short version of the World Health Organization Well-Being Index (WHO WBI-5 or in short WBI) is a five-item questionnaire that assesses the general psychological well-being of the respondent (Susánszky et al., 2006). The items are to be rated on a 4-point Likert scale based on how one felt in the past two weeks. Its original version was developed in 1982 which contained 28 items that was later shortened to 22-, 10-, and 5-item versions.

The 5-item Hungarian version of this scale was validated based on the results of the "Hungarostudy 2002" measuring the bio-psycho-social characteristics of Hungarian adults (Susánszky et al., 2006). The scale does not include any reversed items. Scores range from 0-15 with higher sum scores indicating a more positive psychological well-being. In the current study, the Cronbach's value of the WBI was 0.853 showing good reliability.

Procedure

Prior to the data collection, elderly homes in Pécs as well as in Budapest were contacted via phone and/or email. After explaining the research process and answering the questions of the head of each institute regarding the study or the questionnaires along with obtaining their approval of the research, questionnaire administration could commence in the elderly homes. In the meanwhile, the researcher handed out the printed questionnaire packages to those fellow university students who stated that they had elderly acquaintances (e.g. grandparents,

neighbors, family friends, etc.) who would like to participate and would be able to indicate their answers on their own. They were asked to return the filled-out forms by the end of November.

Informed consent was obtained from all participants who were involved in the study. To treat the subjects as equally as possible, and to minimize the distortion of their answers, independent questionnaire completion was encouraged even among the residents. However, taking into consideration the mental and physical health condition of some of the respondents in retirement homes, the majority of test completion was carried out by asking each question individually by the researcher in a manner similar to a structured interview. During so, the instructions were read aloud and explained by the researcher for each scale to the subject after which the items were asked one by one and then the participant told the experimenter what to indicate on the answer sheet. For these interviews the researcher aimed to create a calm and confidential environment as much as the circumstances made it possible. Each conversation took approximately 30 to 90 minutes per participant.

Results

For the data analysis the statistical computer software, Jamovi (2022) was used with the level of significance set at $p=0.05$. After filtering the data to meet the expectations of the age criteria, descriptive statistics such as mean age, sex distribution, and number of subjects in each group were calculated. Afterwards, the sum scores of each scale and subscale were computed on which assumption checks were performed. Because the PIL, DJGLS, and MOS-SSS-H scores were not normally distributed, in the following analyses, non-parametric tests were used to interpret their relationship to the other scales as well as to examine the differences between the 2 group of participants determined by their type of residence.

Hypothesis 1

In order to investigate the relationship between the various psychological constructs (perceived loneliness, sense of purpose and coherence, global well-being, and social support with well-being scores) correlation analyses were conducted (see Table 1). DJGLS-H correlated significantly negatively with the basic need for relatedness ($r_s = -0.659$, $p < 0.001$), competence ($r_s = -0.499$, $p < 0.001$), and autonomy ($r_s = -0.497$, $p < 0.001$) meaning that those with higher loneliness scores were more likely to show low satisfaction of their basic needs.

There was a significantly positive correlation between PIL and the need for relatedness, ($r_s = 0.651$, $p < 0.001$), competence ($r_s = 0.795$, $p < 0.001$), and autonomy ($r_s = 0.545$, $p < 0.001$) scores. SOC also showed a significant positive correlation with the satisfaction of relatedness ($r = 0.512$, $p < 0.001$), competence ($r = 0.609$, $p < 0.001$), and autonomy ($r = 0.413$, $p < 0.001$) needs. Finally, global MOS-SSS-H scores correlated significantly positively with the subjective fulfillment of the need for relatedness ($r_s = 0.772$, $p < 0.001$), competence ($r_s = 0.593$, $p < 0.001$), as well as autonomy ($r_s = 0.571$, $p < 0.001$). Therefore those who feel like they have a purpose in life, interpret their lives as a coherent whole and have sufficient quantity and quality of social support, elicited higher relatedness, competence, and autonomy need satisfaction as well.

WBI scores showed a positive correlation with the fulfillment of both the relatedness ($r = 0.484$, $p < 0.001$) and competence ($r = 0.467$, $p < 0.001$) subscales of the WBI, however, this could not be said in terms of the autonomy subscale ($r = 0.243$, $p = 0.055$). Thus, having one's need for competence and relatedness satisfied relates positively with their subjective well-being among the elderly. Interestingly, the satisfaction of one's need for autonomy in relation to their psychological well-being did not reach the established level of significance, therefore a moderation analysis was conducted that revealed a possible explanation. Namely, the type of residence has shown to be a significant moderator between the need for autonomy and global WBI score ($\beta = 7.930$, $SE = 1.69$, $Z = 4.692$, $p < 0.001$) which may have caused the significance of the relationship between the two scales to diminish.

Hypothesis 2

To test the main hypothesis of this questionnaire-based study, the differences between retirement facility residents and senior living in their own homes were investigated in terms of BPNS, SOC, PIL, MOS-SSSH, WBI, and DJGLS-H scores (see Table 2). To compare these two groups, independent samples t-test and Mann-Whitney tests were utilized.

There was a medium significant difference in terms of the fulfillment of two basic psychological needs, relatedness ($t(67) = -3.13$, $p = 0.003$ with Cohen's d being -0.783), and competence ($t(65) = -2.89$, $p = 0.005$, Cohen's d being -0.762), as well as in need for autonomy scores ($U = 196$, $p < 0.001$, Rank biserial correlation $= 0.629$) indicated that the residents scored systematically lower in terms of BPN satisfaction.

Similarly, there was a significant difference between the two groups in PIL ($t(54) = -3.75$, $p < 0.001$, Cohen's $d = -1.057$ indicating a large effect size) and DJGLS-H ($U = 267$, $p = 0.007$ with

Rank biserial correlation being 0.409 indicating a small effect size) sum scores, but not in terms of global SOC, WBI or MOS-SSS-H scores. However, when taking a closer look at the MOS-SSS-H and its subscales, a significant difference was found in terms of general social network size measured by the first item ($U=150$; $p=0.005$), emotional-informational ($U=338$; $p=0.019$), and affective-positive social interactional ($U=284$; $p=0.033$) subscales.

This means that the elderly who live in their own home reported having substantially more sense of purpose in life and felt significantly less lonely than the other group. Furthermore, their non-instrumental social support seems to be less satisfactory compared to those residing in their own homes. Unexpectedly, the sense of coherence, and mental wellness did not follow such a pattern meaning that regardless of the type of residency, seniors elicited relatively homogenous total scores in these concepts.

Discussion

The results of the investigation revealed that the satisfaction of BPN may serve as a protective factor against loneliness. In addition to this, feeling like one has a purpose in life and a social environment one can rely on in times of need was also positively associated with the satisfaction of the three basic psychological needs among the older population. Loneliness and the need for relatedness had the most pronounced negative correlation with one another, hence those who scored higher on the DJLSH felt more disconnected socially from others. In short, elderly who see themselves as capable of deciding for themselves, has sufficient and fulfilling social interactions as well as feel able to conquer everyday tasks are less likely to feel lonely, they have a good social network, and are more likely to feel that their life has an aim.

Except for SOC, WBI, and global MOS-SSS-H scores, the elderly home resident group performed more poorly compared to those living in their own homes. BPNS and PIL scores among retirement home residents were consistently lower, while DJGLS-H scores were significantly higher compared to the other group. Thus, the quality of residence is a significant contributor to the psychological wellness of the elderly. These findings might be attributed to the fact that they have limited access to their loved ones, outside events, or to create meaningful relationships with those in their given social environment. Some of them may feel especially isolated if they are required to stay in bed owing to their poor physical health. Although it has shown that a result of degenerative (eg. dementia, loss of hearing or vision) or social-circumstantial reasons (eg. death of family members, spouse, friends, not having children, etc.)

puts this population at risk of feeling lonely or even depressed (Djernes, 2006). However, it should be noted that those who were included in the group living at home must have had at least some social acquaintances through which the researcher could reach them.

There might be some socio-cultural or care-provision differences between Hungary and other countries which makes the universality of these results laborious. For instance, in the study of Panday and his colleagues (2015) investigating the difference in life quality between NH residents and those living with their families found that the social health of the former group was significantly lower, while in terms of environmental and total quality of life, residents outperformed the other group. This finding although somewhat contradictory to the results presented here, both agree upon the same issue: the importance of social relationships and support one falls from when one seeks institutionalized elderly care.

NHs residents had a significantly lower sense of purpose in life perhaps due to the isolation from outside events or the lack of involvement in the tasks that are meaningful to them. Furthermore, this finding may be alarming as it can indicate that people in these facilities are struggling to successfully resolve the 8th stage in Erikson's theory and thus are falling into despair. This decreased sense of meaningfulness and its connection to decreased mental wellness are in congruence with the findings of Hill and Turiano (2014). Based on the effect size, this was the most pronounced difference between the two groups which might indicate the most crucial point where intervention is needed to enhance psychological well-being.

Moreover, residents also elicited significantly higher scores of loneliness, which highlights the importance of family and friends in successful aging. Feeling a sense of belonging and bonding may be especially difficult for the residing as the peers they live with are not chosen by them and may not be as socially satisfactory as their family or friends. This may make them feel alone with the emotional burden and questions about aging, illness, and death especially when considering the prevalence of seeing others get sick or die within the very walls they live in.

Congruently with the literature, our findings indicate that an environment that puts constraints on autonomy, relatedness, and competence, results in an elevated sense of loneliness and loss of purpose (Kasser & Ryan, 1999). Feeling like one has an environment to take care of, chores to complete, and people to connect with is key to preserving psychological and physiological well-being. However, since NHs have no choice but to butcher some of these

needs, it may be fruitful to establish programs with the help of outside organizations to keep the social environment of the residents more fluid.

The possible explanation for sense of coherence not eliciting the expected significant difference between the two groups might be attributable to the fact that the political and economic state of the world was quite unpredictable during the time of the research. Perhaps this population may be more vulnerable to the lingering aftermath of the COVID-19 pandemic including the changes in hospital policies as well as the economic impact of the lockdown (Lábadi et al., 2021). In addition to this, the Ukrainian conflict was also happening during the time of data collection, which could have also impacted our results.

Considering the mental wellness of the sample, the results were more puzzling to interpret. Although the type of residence was found to be a moderator in the relation between the need for autonomy and WBI scores, no significant difference had been found between the two groups based on WBI sum scores. Perhaps, these results could be due to the relative shortness of the WHO WBI-5 or its non-relevance to the elderly population. However, more feasibly, mental wellness is more strongly influenced by other psychological constructs such as personality (Siedlecki et al., 2013).

Limitations

Unfortunately, the resources of the presented study were quite limited thus answers from only 25 NH residents were obtained. It should also be noted, that based on the dataset of this research the reliability of the competence subscale of the BPNS elicited a questionable Cronbach's alpha (0.617). This finding deviated from the results published in the validation of the Hungarian version of the BPNS scale which may be due to its restricted applicability to the geriatric population or the small sample size. Moreover, participants were gathered from the capital, Pécs, as well as from smaller cities, but no standardized environment could be ensured.

Based on these results, a second study was conducted. It aimed to test whether it is possible to increase the psychological wellness of those living in NHs by facilitating the successful resolution of the psychosocial developmental stage they are in. The aim was to provide gentle, simplistic, but effective guidance via the administration of the McAdams life story interview which is an instrument based on the narrative identity theory.

Study2: The Impact of Life Story Interviews on the Mental Wellness of Elderly: A Comparative Analysis of Sense of Coherence, Loneliness, and Global Well-Being in Hungarian Retirement Homes

Introduction: The Narrative identity

According to McAdams (2008), narrative identity (NI) is a key concept in personality psychology which refers to the integrated, continuously changing story of the self. Its purpose is to aid the meaning-making process as well as to orient the individuals in the social context. Therefore, NI has strong autobiographical and situational roots. In consonance with the life-story model of identity, according to the NI approach people construct their lives through the stories they tell which organize their past, present, and anticipated future with the goal of finding unity and purpose. The primary function of these stories is to harmonize personal experiences, although they do need to be tailored to the societal expectations and norms surrounding the situation as well as the cultural context.

Sharing significant stories again and again encourages the tellers to formulate its emotional significance (McAdams, 2008). Therefore, providing an attentive and safe atmosphere for the elderly to share their stories throughout the experiment, may help them in this formulation process which could facilitate the achievement of a more coherent view of themselves. Similar to narrative therapy, in this paradigm participants could get a chance to integrate or even reconstruct their stories by sharing them throughout the interview.

Undeniably, life stories have positive and negative events, turning points, and characters who are helping or hindering the protagonist along the way (McAdams, 2007; McAdams, 2008). These elements are reflected in the questions of the original interview manual of the McAdams life story interview (MLSI) (McAdams, 2007). However, to protect the interviewers' and the interviewees' mental health and welfare, all questions regarding distressing life events had been eliminated from the inquiry manual of this research. The description of each week's schedule and preventative measures undertaken in this study are discussed in the following sections.

Hypotheses

The present experiment aimed to explore two suppositions. Firstly, it was hypothesized that the topic of the conversations would have different effects on the participants. It was expected that if the elderly interviewee was sharing life experiences with the volunteer, their

post-intervention scores of global well-being (WBI), and sense of coherence (SOC) would increase whereas their sense of loneliness (DJGLS-H) would decrease compared to their baseline measures. It was also expected that those in the experimental group would benefit more from the conversations as opposed to the control group of elderly, which was anticipated to exhibit relatively stable measurement scores in the aforementioned psychological dimensions.

The other main supposition of this study was that having conversations during which they were encouraged to share their life experiences would enhance the elderly's mental wellness in the short-term (shown by an enhanced positive affective state after each session) as well as in the long-term (based on comparing the before and after WBI, SOC, and DJGLS-H scores) in contrast to those who were talking about casual topics. Supposedly, this experimental paradigm would help the treatment group to better integrate their life experiences thereby bringing them closer to successfully solve the last task of Erikson's theory of psychosocial development and attain the virtue of wisdom. This change would be reflected by their increased sense of coherence and decreased loneliness which would perhaps ultimately enhance their general well-being.

Methods

Participants

University Students. In order to help the execution of the current study, the researcher reached out to the student community of the University of Pécs via email to recruit students who would be willing to conduct conversations about everyday topics and to administer the MLSI with the elderly home residents. A total of nine Hungarian psychology students have volunteered.

To ensure that the group of students participating in the experiment is homogeneous in terms of ageism and empathy skills, they were asked to complete a short online survey to apply as participants. The data collection took place between the 25th of October and the 2nd of November 2023. The questionnaire assessed the respondents' attitude towards the elderly measured by the Hungarian version of the Fraboni Scale of Ageism (FSA), and their empathy skills assessed by the Empathic Concern (EC) and Perspective Taking (PT) subscales of the Hungarian version of the Interpersonal Reactivity Index (IRI) (Hofmeister-Tóth, et al., 2021; Kulcsár, 2002).

The inclusion criteria were established based on the 3SD rule. Throughout the statistical analysis, one outlier had been detected whom the experimenter had to exclude from the experiment. Moreover, one other person had to be ruled out due to not being able to find a suitable time to help with the interviews. The 7 remaining participants' mean age was 22.7 years ($SD=4.64$), with most of them being female (86%). The mean FSA sum score was 68 ($SD=5.16$), mean IRI scores for the EC and PT subscales were 23.3 ($SD=2.21$) and 25 ($SD=2.08$), respectively.

Elderly participants. For the investigation, nursing homes all around Pécs had been contacted via email or phone call asking them whether they would be willing to participate in the experiment. Three of the institutes agreed to do so. After consulting with the head of each institute as well as the mental-hygiene professionals working there, and gaining their approval of the research, they were asked to invite those residents to the experiment who would like to participate and are in sufficient condition to do so based on the staff's judgment (e.g. being able to converse fluently, not eliciting signs of severe dementia, etc.).

Based on the G power anticipatory analysis, the minimum sample size was established: the aim was to include at least 28 elderly participants. In the investigation, a total of 31 elderly persons (83.9% being women) have been involved (mean age was 83.3 years, $SD=7.63$). After completing the baseline questionnaire, one person withdrew from partaking in the weekly sessions. Furthermore, due to various reasons (e.g. hospitalization), the analyses were conducted with varying sample sizes, depending on the quality and quantity of the obtained data.

Tools

Firstly, the Interpersonal Reactivity Index (IRI) scale and the Fraboni Scale of Ageism (FSA) will be discussed. These two instruments were contained by the survey to assess the volunteers' interpersonal skills and their level of prejudice towards the aged.

Afterwards, the scales included in the questionnaire package will be discussed that were not elaborated on beforehand. The one completed by the participating elderly beforehand consisted of five parts: basic demographic questions, state version of the Positive and Negative Affect Schedule (PANAS), the Medical Outcomes Study Support Survey (MOS-SSS-H), Sense of Coherence (SOC), short version of the World Health Organization Well-Being Index (WBI) and finally the De Jong Gierveld Loneliness Scale (DJGLS-H). The survey package completed

after the experiment contained only the PANAS, SOC, WBI, and DJGLS-H scales. In addition to this, the positive items of the PANAS scale were administered both before and immediately after the conversations by the students.

Since many of these instruments were introduced above, they will not be described again, however their psychometric performance in throughout the experiment is reported here. The MOS-SS-H elicited good internal consistency in the second study as well with Cronbach's alpha being 0.815. The SOC scale's reliability was based on the results of this study was questionable in the before (Cronbach's alpha was 0.656), but acceptable (Cronbach value=0.771) in the after condition. The reliability of the WBI in the present research was good in the pre-intervention (Cronbach's alpha=0.857) and acceptable in the post-intervention condition (Cronbach's alpha=0.764). Lastly, the DJGLS-H also elicited of the measurement both times with Cronbach's value being 0.739 in the first and 0.729 in the last administration.

Interpersonal Reactivity Index

To assess the empathy skills of the volunteering students, the Empathic Concern (EC) and Perspective Taking (PT) subscales of the Hungarian adaptation of the Interpersonal Reactivity Index (IRI) were used. In accordance with the administration manual, respondents were asked to rate 14 statements in total (7 per each subscale), on a 5-point Likert scale ranging from 0 to 4 (Kulcsár, 2002). The scores of each subscale were summed up separately after accounting for the reversed items. The mean score of the final sample was for the EC and PT subscales were 23.3 (SD=2.21) and 25 (SD=2.08), respectively. Due to the small sample size and lack of variability between the scores in case of multiple items, Cronbach's alpha values could not be provided for either of the subscales.

Fraboni Scale of Ageism

The Fraboni Scale of Ageism (FSA) is an explicit multidimensional measurement of negative attitudes toward old-age persons. It inquires directly about the ageist cognitions (stereotypes), affections (prejudice), and behavioral patterns (discrimination) the respondent may hold (Hofmeister-Tóth et al., 2021). Its original version was created in Canada in the 1990s and was adapted to Hungarian by Hofmeister-Tóth et al. (2021). Measuring ageism in this context was thought to be necessary since the experiment took place in a city and was conducted with the assistance of young adults. As both of these factors correlate with higher ageism,

measuring the volunteers' FSA and excluding those with a high score was issued to protect the elderly's psychological welfare.

Students were asked to rate these 29 statements on a 5-point Likert scale (Hofmeister-Tóth et al., 2021). Higher scores indicated a higher level of ageism. After adjusting for the reversed items, the total score of each participant was calculated. No outliers were detected after applying the 3SD rule. The mean score was 68 with the standard deviation being 5.16 in the final sample. The Cronbach value could not be provided for the same reason as mentioned in case of the IRI subscales.

Positive and Negative Affect Schedule

The PANAS is a 20-item questionnaire used to measure the positive and negative feelings of the responder usually on a state level. Questionees were asked to rate each of the 10 positive and 10 negative emotions on a 5-point Likert scale based on their general or current affective state (Gyollai et al., 2011). In order to maximize the reliability of the instrument, the original, long version had been used that was adapted to Hungarian by Rózsa and colleagues (2008).

At the beginning and at the end of the experiment, the entirety of the instrument was administered. On the other hand, as the items measuring the negative affect states were found to sway the conversations and thus were difficult to administer, before and after each talking session, only the positive affect state (PAS) subscale was used after the first session. To make the results comparable, only the PAS scores were used as an indicator of the immediate effect of the treatment in the analysis. The Cronbach's alpha values of the PAS at the first and last administration were 0.819 and 0.787 while that of the negative affective state (NAS) subscale were 0.785 and 0.699, respectively.

The McAdam's Life Story Interview

The McAdam's Life Story Interview (MLSI) describes a method of inquiring about the NI of interviewees (McAdams, 2007). It comprises of open-ended questions with which the responder is guided to construct their life narrative. Firstly, the participant is asked to imagine their life as a book as well as to name and briefly describe its chapters. Afterwards, the key scenes, future scripts, challenges, personal ideology, and life theme are discussed followed by a brief reflection at the end of the interview.

In this experiment, the original interview script was modified by the researcher to tailor the questions to the audience as well as to avoid the agitation of the senior participants and the potential harmdoing or injury of the psychology students. These alterations entailed the removal of all questions probing for the negative life events, negative influences, mistakes as well as challenges, turning points, and future scripts. The conversations were not recorded nor were its contents used during the analysis. The remaining questions were divided into three sections that were administered during three consecutive weeks in the treatment group.

Procedure

The experiment took place at Pécs between October 2023 and December 2023. During the first month, the researcher reached out to psychology students at the University of Pécs via email. The letter contained a short description of the experiment along with the link to the online survey to fill out by those who were interested in participating. After analyzing the results, an online training was arranged by the researcher and their supervisor on the 30th of October 2023 for the recruited students to discuss the experiment in detail and teach them the interview protocol. After the verbal consent of all participants had been obtained, the meeting was recorded to share the information with those who were unable to attend and provide the students with the opportunity to rewatch the video for educational purposes. During the training, the purpose of the investigation was explained, and the applicants were taught to conduct the MLSI, the control conversations (e.g. asking about the everyday life of the participant, how they have been lately, etc.) and what to do if they experience any difficulties. Furthermore, the schedule of the following weeks was discussed. The volunteers were encouraged to ask questions throughout this process and were instructed to report immediately if either them or their elderly pair experienced long-lasting distress after or during the interviews. They were also asked to contact the researcher and the mental health team of the institutions if they judged it to be necessary for the sake of the elderly participant's mental health.

Simultaneously, nearby retirement homes were contacted regarding the research. In those institutes who agreed to participate, the pre-intervention questionnaires were filled out by the residing participants either individually or in small groups (2-4 people). Informed consent was obtained from all subjects who agreed to participate. The surveys were filled in on paper either on their own, with the assistance of mental hygiene workers of the institute or the researcher depending on the partaker's condition and preferences. In each institute, half of the candidates were randomly assigned to the control or the experimental group.

The following week (from the 13th of November 2023) the conversation stage of the experiment could commence. The volunteers along with the researcher visited the retirement homes and conversed with the participants along the modified MLSI (experimental condition) or about everyday topics (control condition) for 30 minutes per person each week for 3 consecutive weeks.

During the first session, in the experimental group, the life chapters were discussed. The second week's topic was the key positive life events including a significant or dear childhood and adult memory as well as the high point of the participant's life. On the final week, the life theme as well as the positive characters of the subjects' life stories were discussed. Before and after every occasion, the volunteers registered the PAS to measure the immediate effects of the discussions. The week after the last occasion, all elderly participants completed the post-intervention questionnaire and were thanked for their participation.

Results

Statistical analyses were performed using the statistical program Jamovi version 1.6.23 (The jamovi project, 2022). To map the supposed effects of the two conditions, mixed ANOVA analyses were conducted separately using the calculated total scores of the SOC, DJGLS-H, and WBI obtained before and after the 3 weeks. Interestingly, there was no significant difference between the two groups in terms of social support measured by the MOS-SSS-H at the baseline ($t(20)=-1.15$, $p=0.264$).

Sense of Coherence

Firstly, the participants' sense of coherence was analyzed. There was no significant difference between the two groups (treatment vs control) in terms of SOC scores ($F(1, 21)=0.992$, $p=0.331$). Moreover, there was no significant interaction between the two groups and the time of SOC measurement either (before vs after) ($F(1, 21)=0.863$, $p=0.363$). However, a significant time main effect was detected when examining the pre-and post-intervention SOC scores ($F(1,21)=9.778$, $p=0.005$) (Table 3). The effect size of the time main effect was large, indicated by the partial eta squared score being higher than 0.14 ($\eta^2_p=0.318$). This means that the participants scored higher on the SOC scale regardless of the group they were assigned to.

Loneliness

Similarly, there was no significant group main effect ($F(1, 23)=2.05, p=0.166$) nor a significant interaction between the two groups and the time of measurement in case of DJGLS-H sum scores ($F(1, 23)=0.618, p=0.440$). However, just like in the previous case, a significant time main effect was detected ($F(1, 23)=8.899, p=0.007$), meaning that regardless of the topic of the conversations, all participants reported lower levels of loneliness (Table 4). The time effect size was large, although smaller compared to the SOC time main effect ($\eta^2_p=0.279$).

Well-being

In case of WBI, there was no significant interactions between the time and two groups ($F(1, 23)=0.139, p=0.713$). Furthermore, there was also no significant main effect found neither in terms of time ($F(1, 23)=1.282, p=0.269$) nor in terms of group the participants were assigned to ($F(1, 23)=1.0, p=0.327$) (see Table 5).

Affect State

To explore the immediate effects of the conversations on the senior's emotional state, PAS scores were analyzed. The mixed-measure ANOVA did not reveal a significant main effect between the two groups ($F(1, 18)=1.81, p=0.195$), indicating that the group the participants were assigned to did not have a significant effect on the scores. The interaction between groups and time of measurement was also non-significant ($F(5, 90) = 1.02, p=0.408$). There was, however, a significant main effect of time ($F(5, 90) = 5.64, p<0.001$), suggesting that regardless of the group the subjects were assigned to, they elicited higher PAS scores after talking with the volunteers (Table 6). The effect size for this time main effect was large indicated by the high partial eta-squared score ($\eta^2_p=0.238$).

To further investigated the significant PAS time main effect, paired samples t-tests were performed on the control and experimental group separately using the PAS sum scores of each session obtained before and after the discourse. There was no significant difference found between the before and after PAS scores in the control group during the first week ($t(13)=-1.78, p>0.05$). In the second week, however, there was a significant difference between the two time points ($t(11)=-2.54, p=0.027$) showing that the control group elicited higher PAS scores after the fact. Cohen's d was -0.733 suggesting a medium effect size. Due to the violation of the Normality assumption when examining the results of the third week, paired samples Wilcoxon rank was performed. There was a significant, large difference between the two conditions in the

control group ($W=3.00$, $p=0.008$). After the intervention, these elderly participants reported more positive affect (rank biserial correlation was -0.909).

The findings of the McAdams group were very similar to the trends observed in the control group. There was no significant difference between the before and after conditions during the first week ($t(11)=0.188$, $p>0.05$). However, there was a significant difference between the before and after treatment PAS scores both on the second ($t(11)=-2.538$, $p=0.028$) and third week ($t(12)=-2.578$, $p=0.024$). These results indicate that the experimental group had a significantly more positive affective state after the conversations than beforehand. The effect size of these differences was medium in both cases with Cohen's d being -0.7323 in the case of the second, and -0.7151 in the third week.

Discussion and limitations

Interestingly, neither of the analyses revealed any statistically significant difference between the experimental and control groups but indicated that all elderly benefited from participating in the study. The first supposition to explain the lack of group effects is that although somewhat differently, but two groups received social support during the study by conversing with the subjects. Perhaps the students could provide a refreshing new kind of support the residents needed but were lacking. This suspicion is also strengthened by the increasing tendency of the PAS scores after each session.

Furthermore, that fact that in this research, the administration of the modified MLSI were executed throughout a 3-week period, it may have contributed to the diminished group effect of the treatment. Based on the experiences gained from the study, perhaps administering the interview in a few consecutive days may yield more fruitful results. However, due to the tight schedule of all participants as well as the small number of university students, such concentrated treatment administration could not be achieved here.

Moreover, as the study was conducted with the assistance of relatively inexperienced undergraduate psychology students, the administration of the full-length MLSI was judged to be unethical. Probing for only the positive or neutral experiences, however, meant that important aspects of the lives of the subjects were neglected in the interview which may have contributed to the lack of group effect.

Interestingly, the WBI scores seemed to be relatively stable in both the experimental and the questionnaire-based research paradigms. Based on the article of Siedlecki and their colleagues (2013), this might be strengthening their view of the issue of wellness being connected to more stable underlining constructs. In their study, personality traits, namely extroversion and neuroticism, accounted for 39% of the variance in case of life satisfaction measured by the Subjective Well-Being scale. Unfortunately, in the present study personality factors were not measured, although, such connections might be able to explain the lack of change in the current investigation and its lack of divergence across living conditions.

Since the experiment took place in NHs, there were limited options to control for interference from outside events. During the second and third weeks of the study, some of the participants got hospitalized, staff members quit their jobs, and most importantly, a worker as well as a resident dear to many of the partaking elderly passed away. These unfortunate events have impacted not only the mental state of the participants but also the topics being discussed especially in the control condition. Talking about death and having someone to share these difficult experiences with may contributed to the similarity of results obtained in the two groups. Further, it may explain why the lack of change in general well-being scores in either group. Regardless, the presented results suggest that those living in elderly homes benefit largely from having social contacts, which may be a key variable in the mission to improve the mental health of old-age individuals living in social care facilities (Dahan-Oliel, 2013).

Perhaps to improve the psychological health of the elderly living in retirement homes, mobilizing already available social resources could yield a time and cost-effective solution. For instance, in Hungary, high schoolers are required to dedicate 50 hours to social work, however only a fraction of them view this as an opportunity to part-take in a service that could benefit their psychological and personal development too. Allocating these masses to join a similarly structured program may be worthwhile for both the students and the residents. It may serve as an ageism prevention program by breaking the stigmas about ageing and reuniting these two generations (Bagci & Blazhenkova, 2020; Nemmers, 2005). Additionally, it would provide more good quality social stimuli for the seniors without putting extra pressure on the nurses and mental hygiene staff. This way some of the stories, skills, and wisdom of the residents attained throughout their lives could live on while the elderly could also learn from the younger generations.

Nevertheless, the significant elevation of sense of coherence as well as the decreased perceived loneliness of the partaking elderly even after this very brief intervention advocate for the geriatric population's potential to improve psychologically. Thus, I truly hope that the presentation of these results will contribute to the reconsideration of the aged and instead of neglecting them, we will learn to turn to them with the same scientific curiosity as we do so to other populations. Other countries are already making exciting initiatives using social robots (Khosla et al., 2013) or the internet (Bianchi, 2021) to work on successful aging which seems promising to find a feasible solution to the issues outlined above.

Future directions

The difficulties and limitations encountered throughout this experiment will hopefully provide researchers with a more complex picture of the challenges they shall account for in future projects involving the geriatric population. For instance, it would be advisable to start with a larger sample and to conduct the research leaving the least amount of time between the sessions to minimize the impact of outside effects on the results and account for the number of dropouts. Due to the above unforeseen events, despite the efforts to present a sufficiently large sample, the number of elderly individuals included in the study ended up being relatively low. Therefore, replicating the current study on a larger sample would be necessary to strengthen the validity of the presented results.

In the experiment only elderly homes in the vicinity of Pécs were included, thus expanding the investigation to other Hungarian cities and villages would be beneficial in the future. Besides, since similar issues are being faced by other aging societies, conducting studies to map the current state and needs of the seniors in different countries would be necessary. This would be timely to do so because the social system of many aging nations is not yet equipped to provide sufficient care for the growing number of senior citizens (Singh & Afroz, 2018).

Additionally, the scarcity of psychological instruments adapted to Hungarian made it difficult to find the appropriate tools needed for this research and thus to interpret some of the results. As an example, there is no validated Hungarian version of questionnaires to our knowledge that would have been suitable for measuring the successful resolution of the developmental stages based on Erikson's theory. Therefore, expanding the number of questionnaires that have a validated Hungarian form would be vital to improve the quality and comparability of the Hungarian pieces of research.

Although geriatric research is much needed, conducting such studies has not just situational but population-related setbacks (for a comprehensive review see Faes et al., 2007). Since the geriatric population is underrepresented in the literature, exploring the reliability of the tools on this sample as well as the adaptation of instruments for geriatric care is missing as well. It would be worth considering switching to a three-point Likert scale or a dichotomous answer format as they are easier to use and thus could increase the accuracy of the obtained data. In future research, it would be advisable to conduct the interviews or research in the morning, before lunch because the elderly are usually the calmest and most focused during that time. Lunchtime also provides a concrete end point of the research process which makes it more predictable and hence less anxiety-provoking.

Throughout this study, it became obvious that very different environment is provided to the elderly based on very different protocols across the institutes. There were deviations between the care provided for the residents, the number of elderly in each institute, the equipment of these care facilities, etc. For example, in certain establishments, those suffering from dementia or other serious degenerative disorders were separated from the other residents, although mostly that was not the case. Thus, not just the modernization of the elderly care system, but the uniformization of the facilities would also be needed.

Finally, based on the experiences attained throughout this study, retirement home residents spend the majority of their time watching television or listening to the radio which oftentimes provides a scarcity of good quality information. In line with the thoughts of Bodner (2009), education about the ageist stereotypes presented on TV might also be beneficial to increase their mindfulness thereby protecting them from internalizing negative attitudes.

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Appendix

Table 1

The relationship between basic psychological needs (BPNS), loneliness (DJGLS), purpose in life (PIL) and sense of coherence (SOC), perceived social support (MOS-SSS-H), and well-being (WBI) scores. Spearman correlations are indicated with bold, italics. On the left side of each column the value of Pearson's r or Spearman's ρ is written whereas on the right side, the corresponding p -values can be seen.

	Relatedness		Competence		Autonomy	
<i>DJGLS</i>	<i>-0.659</i>	<i><.001</i>	<i>-0.499</i>	<i><.001</i>	<i>-0.497</i>	<i><.001</i>
<i>PIL</i>	<i>0.651</i>	<i><.001</i>	<i>0.795</i>	<i><.001</i>	<i>0.545</i>	<i><.001</i>
SOC	0.512	<.001	0.609	<.001	0.413	<.001
<i>MOS-SSS-H</i>	<i>0.772</i>	<i><.001</i>	<i>0.593</i>	<i><.001</i>	<i>0.571</i>	<i><.001</i>
WBI	0.484	<.001	0.467	<.001	0.243	0.055

Table 2

Differences in terms of relatedness, competence, autonomy, loneliness (DJGLS), sense of coherence (SOC), purpose in life (PIL), perceived social support (MOS-SSS-H), and well-being (WBI) scores between elderly living in retirement homes (NH) and those living in their own homes (OH). In case of PIL, DJGLS, SOC, and MOS-SSS-H scores, the medians are provided to compare the two groups since non-parametric tests were used to assess the differences among them. In the first row under the title of each column, the statistical report is reported. In case of statistically significant results, the effect size (Cohen's d in parametric and rank biserial correlation/ rbc in case of non-parametric tests) is also provided.

	Relatedness	competence	Autonomy	DJGLS	PIL
	t(67)=-3.13; $p=0.003$	t(65)=-2.89; $p=0.005$	U=196; $p<.001$	U=267; $p=0.007$	t(54)=-3.75; $p<.001$
NH	Mean=39.80	Mean=26.19	Median=29	Median=5	Median=92
OH	Mean=45.52	Mean=30.57	Median=38.5	Median=3	Median=114
Effect size	Cohen's $d=-0.783$	Cohen's $d=-0.762$	Rbc=0.629	Rbc=0.409	Cohen's $d=-1.057$

	Global MOS-SSS	MOS-SSS instrumental	MOS-SSS emotional- informational	MOS-SSS affective- positive social interaction	MOS-SSS item1
	U=252; p=0.061	U=367; p=0.225	U=338; p=0.019	U=284; p=0.033	U=150; p=0.005
NH (median)	60.32	17	32	27	5
OH (median)	65.20	19	36	32	10
Effect size (rbc)	NS	NS	0.347	0.336	0.483

	SOC	WBI
	t(61)=-1.54; p=0.129	t(63)=-1.10; p=0.277
NH	Mean=60.32	Mean=7.59
OH	Mean=65.20	Mean=8.63

Table 3

Significant time main effect based on the SOC sum scores. SOC scores were significantly higher in both the control and treatment groups after the experiment (The jamovi project, 2022).

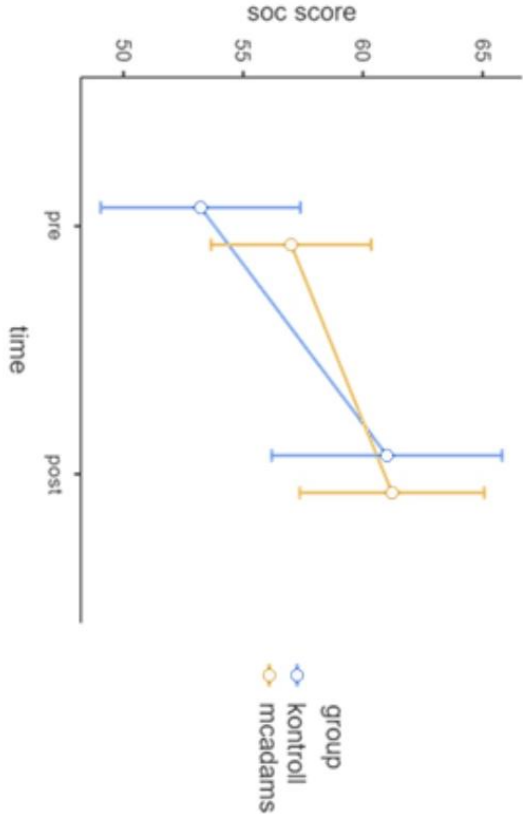


Table 4

Significant time main effect observed upon analyzing DJGLS-H sum scores. DJGLS-H scores decreased significantly in both groups (The jamovi project, 2022).

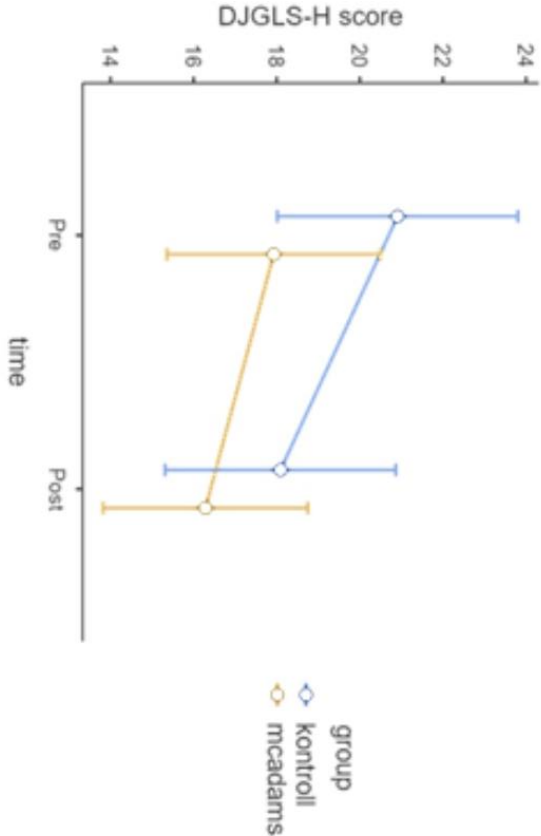


Table 5

WBI scores before and after the experiment. The mixed ANOVA analysis yielded only nonsignificant results (The jamovi project, 2022).

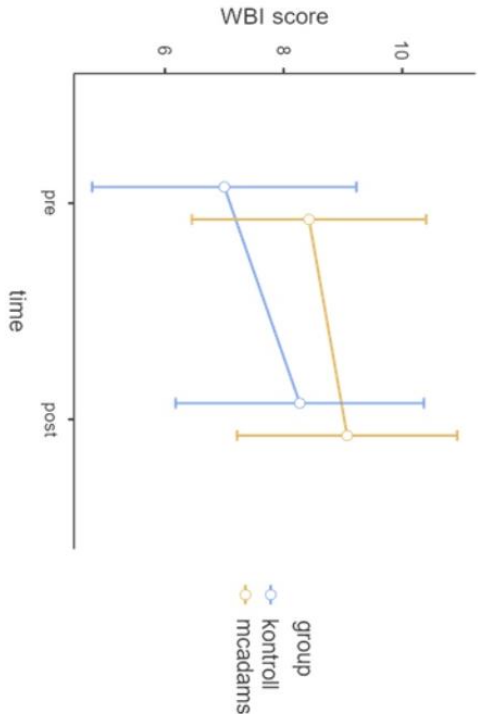


Table 6

Positive emotional states before and after each session. The treatment group's PAS scores peaked after the second session probably due to the topic that was being discussed. PAS scores were higher in both groups after the conversations except for the first session in the McAdams group. Because the affective state of individuals changes the PAS scores served solely to give immediate feedback about the sessions' effects on the participants (The jamovi project, 2022).

