



# Positive Mental Health and Well-being Among Seniors in the Central Region of Malaysia

Wan Hasmat Wan Hasan<sup>1</sup>, Fariha Aiza Ramly<sup>2</sup>, Afzan Nor Talib<sup>3</sup>, Nur Hidayah Zaini<sup>4</sup>, Rachel Samuel<sup>5</sup> and Farah Nadzirah Jamrus<sup>6</sup>

<sup>1,2,3,4,5</sup> Faculty of Business and Management, Universiti Teknologi MARA Cawangan Melaka, 110 off Jalan Hang Tuah, 75250 Melaka, Malaysia

<sup>6</sup> Faculty of Computer and Mathematic Sciences, Universiti Teknologi MARA Cawangan Melaka, 73300 Merlimau, Melaka, Malaysia  
hasmat@uitm.edu.my

**Abstract.** The number of elderly people is increasing globally, and Malaysia officially became an aging nation in 2020. While significant efforts have been made to ensure the welfare, physical health, and residential facilities for this segment of society, there is a lack of concerted effort in determining their mental well-being. Mental well-being is a crucial aspect of overall well-being since an individual's mental activity plays a vital role in achieving a balanced state of well-being. Nonetheless, plans and discussions on the elderly have commonly focused on the societal burden of their longevity in terms of health and economics. Besides, the public commonly regards the elderly as a non-contributing segment, particularly from an economic standpoint. In addressing this, a multi-dimensional model that includes various indicators is needed to promote positive aging. Therefore, this research intends to identify the factors that contribute to the mental well-being of the elderly by targeting respondents from the Central Region of Malaysia through purposive sampling. The mental well-being of the participants was assessed by the structured WHO Quality of Life questionnaire, while factors related to positive aging were measured based on the Self-Determination Theory. A total of one hundred structured questionnaires were administered, with 89 deemed usable for analysis. The collected data were analysed using SPSS version 30, revealing that only competence and autonomy significantly influence mental health.

**Keywords:** Aging, Mental Health, Mental Well-Being, Positive Aging, Seniors.

## 1 Introduction

An aging country, as defined by the United Nations, is where a community of people aged 65 years and above constitutes 7% of the total population. The age distribution of the population is undergoing a continuous transformation worldwide, prompted by a rise in life expectancy and a decline in fertility rates. Subsequently, longevity is increasing, resulting in a surge in the proportion and number of elderly individuals within

the overall populace. In 2020, the global count of individuals aged 65 or older was 727 million. By 2050, this number is predicted to be more than double, exceeding 1.5 billion. All regions will encounter a rise in the number of older people between 2020 and 2050. The proportion of the global population aged 65 or over is anticipated to escalate from 9.3% in 2020 to 16.0% by 2050 [1]. Nonetheless, some countries classify people who are 60 years old and above as senior citizens, which leads to a surge in the aging populace in those nations [2].

In Malaysia, persons aged 60 years and above are officially classified as senior citizens. The proportion of individuals aged 65 and above in Malaysia's populace stands at roughly 7.3% as of 2022 [3]. Nevertheless, this proportion is anticipated to rise to 15% by 2030, signifying a swiftly maturing population in the nation. For individuals who are young and healthy, aging difficulties may not seem like a very noteworthy cause. However, involving the elderly population in various sectors would be a positive step towards advancing the development of a positive aging model for the mental welfare of the aging society.

Although aging is part of being human, not everyone experiences it the same way. One person may lose mental or physical capacity and become more dependent as they age, while another may age actively, healthily, and independently [4]. Malaysians are generally pessimistic about aging due to existing problems like a lack of professional caregivers, affordable care, and elderly-friendly housing especially in rural areas [5]. Typically, the elderly have been defined as the chronological age of 65 or older. People from 65 to 74 years are usually considered early elderly while those over 75 years old are referred to as late elderly [6]. In Malaysia, the state of Perak has the highest aging population in 2020 (8.9%). The states with the largest leap of aging population from 2010 to 2020 are Sabah which has increased by 115.4%, followed by Putrajaya (100%), and Labuan (75%) [7].

Some elderly individuals are no longer able to move owing to illnesses, but they are still making a difference in society in some way. On the other hand, some physically healthy individuals can actively participate and make their presence known. These are the elderly people who have the potential to contribute to the elements of this healthy aging paradigm. However, when planning for the seniors, it is common for their perspectives and inputs be overlooked, even though they would be the best people to give the inputs having experienced the inadequacies of the existing system. Therefore, this present study focuses on identifying the elements which contribute to positive mental health and well-being among senior citizens in the Central Region of Malaysia, specifically the state of Selangor as well as the Federal Territories of Putrajaya and Kuala Lumpur as these states represent 15.4% of the total senior citizen population in Malaysia.

## **2 Literature Review**

### **2.1 Mental Health and Well-being**

The WHO's 1946 constitution has defined health as "a state of complete physical, mental, and social well-being," reflecting the long-standing understanding that mental health is essential to well-being [8]. The main factors associated with poor mental

health in older adults include low income, poor health, poor family relationships, loss of an only child, empty nesting, lack of emotional interaction, and the decline of social bonds and interactions [9]. Most of these factors lead to mental illness in older adults. Nonetheless, mental health is not simply free from mental illness but more to achieving mental well-being that includes components connected to both feeling good (hedonic well-being) and performing effectively (eudemonic well-being) [10].

Besides, the focus is not on the absence of mental disorders but the presence of positive experiences. The longevity of a population is a valuable resource for society, as older people can contribute after retirement with their positive experiences in life. A study conducted by [11] showed that the solution to sustaining mental health well-being appears to connect to creating resilience by older adults maintaining their mental activity and engaging in their community and relationships. This is supported by mental well-being which is defined as a state in which an individual realizes his or her abilities, can cope with normal stresses in life, can work productively and the most important part is being able to contribute to his or her community [4]. However, longevity is viewed negatively when discussions are focused on the health and economic burden of society as older people suffer poor financial, health, and economic issues. Whether the older person can contribute to society would largely depend on their physical health, mental health, and well-being. The experiences of aging have a psychological impact on humans.

As people age and become less valued in society, they struggle to find their place and need to redefine who they are and identify their purpose. Coping with diseases or the disease of a loved one, loss of autonomy, loneliness, grieving, and difficulties in managing day-to-day activities can lead to poor mental well-being. Globally, levels of life satisfaction and well-being in old age are low with increased levels of anxiety [12]. There is also a lack of literature on the mental well-being of the old, but more on anxiety and depression in the aging society [13]. Mental well-being is predicted by cultural differences and while studies have been vastly conducted in high-income and developed countries, there is a dearth of information on developing nations [14]. Among the factors that have been identified and linked to mental well-being include the desirability of happiness, personal growth, purpose in life, and interpersonal well-being. Depression affects around 22% of men and 28% of women aged 65 years and over [15]. One in four older adults experience issues with their mental health; the most common being depression, dementia, and anxiety. Older adults also have the highest rate of suicide when compared to other groups [16].

## 2.2 Mental Health and Well-being

Positive aging can be placed in the same category as aging well, optimal, successful, active, productive, and healthy aging. The concept of "productive aging" highlights the value of older people's continued participation in society and views them as assets [17]. Meanwhile, according to the WHO, healthy aging refers to the maintenance of functional abilities that allow people to meet their requirements and contribute to society in their immediate surroundings. There are, however, numerous definitions on positive aging. Research has been predominantly focused on the negative aspects of aging, such as mortality, morbidity, and disability [18], [19]. Describing aging from

the biomedical perspective or physical and functioning ability will not fully explain many aspects of the aging process including the social and psychological aspects which are more holistic and multidimensional. Yet, the growing positive aging model has not been adequately covered in the literature.

The goal of the positive aging model is to combat the negatives of aging and the focus is on individuals who are fighting the stereotypes of the aging process [20]. This model has its roots in the Self-Determination Theory conceptualized by [21]. For optimal psychological functioning, there are three basic innate human needs that are necessary. First, the need for competence, then the need for autonomy and lastly, the need for relatedness. Focusing on mental well-being of the aged could further strengthen understanding of positive aging and offer opportunities for interventions and policy development [22].

A study conducted in Finland focused on a group of individuals aged 85 and above, exploring how their descriptions of mental well-being and what it entails, as perceived in their everyday lives [23]. Interestingly, the participants of the study identified the factors of capability (functioning and independence), orientation (awareness and values), activities (enjoyment and fulfilment) and connectedness (sense of belonging) jointly to support their mental well-being. These are all aspects of positive aging identified by the aged themselves. These factors have kept them going despite being in nursing homes and facing various challenges at age 80 and above. Being functional is important for mental well-being but more important are empowering attitudes, a positive mind-set and actively creating circumstances which support mental well-being.

Another study on older working nurses similarly found that when interventions are conducted to enhance the positivity of the aging process, the nurses have a better psychological outlook, better mental well-being and less anxiety [24]. Differences in perception of aging can be attributed to culture or resources (personal, physical, economic and/or social). Previous study on two different nationalities found both culture and resources to be important indicators for different nationalities. Ethnicity remains a significant predictor of aging perception when other resources are considered [25]. Religion, spirituality and/or belief should be included within positive aging models as a support that helps aging adults to live positive lives despite many challenges of aging [26].

### **2.3 Self-Determination Theory (SDT)**

Edward Deci and Richard Ryan developed the Self-Determination Theory (henceforth, SDT) which links personality, human motivation, and optimal functioning and proposed that there are two types of motivation which are intrinsic and extrinsic [21].

SDT posits the fulfilment of Basic Psychological Needs (BPNs) among seniors can lead to intrinsic motivation, which in turn guide them to autonomously choose activities or behaviours based on their functional significance [27]. This can result in a more satisfying life and further enhance their BPNs, provided that an environment that supports autonomy is present. As a result, seniors can thrive and continue to participate in the process of self-regulation as they age. The SDT model shown in Figure 1

emphasizes a sense of autonomy in which seniors deal when faced with difficult or stressful circumstances. This is due to the fact that it has been established by [28] that people are more likely to engage in healthy behaviours if they are surrounded by positive influences. Therefore, the term "successful aging" may be seen as a dynamic process that aids humans in thriving as they age by assessing the quality of their motivations for achieving individual objectives, which in turn may lead to greater levels of well-being and fulfilment/satisfaction.



Sources: Prospective housing decision and Self Determination Theory (Barbosa, 2021)

**Fig. 1.** STD Model of Wellbeing for Successful Aging

[29] mentioned that SDT is a broad theory of human personality and motivation which concerns on how the individual interacts with and depends on the social environment [30]. SDT is based on the fundamental humanistic assumption that individuals naturally and actively orient themselves toward growth and self-organization [30]. Hence, people will strive to grow and experience new things by nurturing their interests and desires.

The three innate psychological needs of autonomy, competence, and relatedness [31] that affect self-determination are shown in Figure 2.

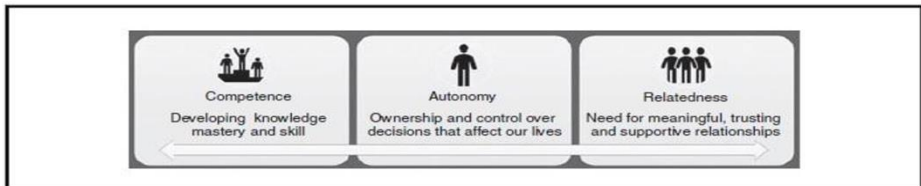
Autonomy has been recognized as an essential component of adult growth [32]. Autonomy is a psychological construct that gauges a person's ability to establish his or her own set of values and goals, and it is linked to motivation and maturity. While independence is the most popular meaning of autonomy, it can also refer to freedom from something or someone, freedom for something, or freedom from stereotypes, depending on the researcher's perspective. In some ways, autonomy "matures" with age; we may become less reliant on the opinions of others. However, data imply that age is not the most essential element in stereotype independence (for example, locus of control, temperament, and anxiety) [12]. In some ways, autonomy "matures" with age, and we can become less reliant on the opinions of others. When it comes to stereotype freedom, however, data suggest that age may not be the most crucial factor.

Competence refers to a person's ability to drive his or her path, manage his or her own life, and serve as a catalyst for change. According to [33], personality maturity is a multidimensional attribute made up of several qualities, one of which is the ability

to self-organize. According to [34] on personality maturity, this attribute improves with age. In other words, competence refers to a person's ability to direct his or her own life, to be the source of action, and to regulate his or her own existence. This component is strongly related to the phenomena of personality maturity, a complicated trait that includes a number of characteristics, one of which is the ability to self-organize. Personality maturity appears to increase with age, according to empirical research.

Relatedness refers to the feeling of belonging or attachment with others, as well as the ability to form and sustain meaningful relationships with others [29]. [35] stated that nature relatedness means the differences between how people view the natural world and their connection with nature. This has become the focus in increasing attention of individuals which may contribute to interaction with nature and will also influence well-being. Socioemotional selectivity theory suggested that aging affects an adult's social and emotional domain [36].

Nevertheless, all seniors or the elderly should be able to exercise self-determination in later life since it improves their quality of life and mental health. If self-determination is lacking, disempowerment and unhappiness might result [37]. People do some things to feel competent and self-determined. In most western cultures, seniors value independence, self-determination, and not burdening loved ones. Thus, intrinsic motivation starts with a proactive attitude to participate in exciting things without incentives, since humans are inherently active and oriented towards natural development to grow and mature. Therefore, for seniors, self-determination entails making choices about their finances and social life in addition to the everyday tasks necessary to maintain their health [27].



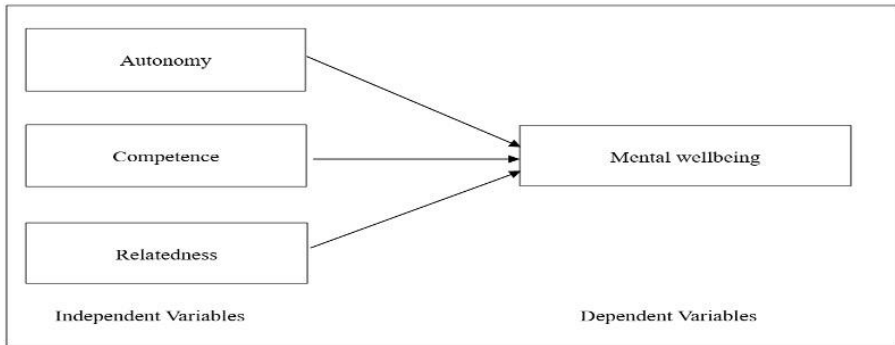
Source: Susan, E. 2018. Impact evaluation of an Independent Mental Health Advocacy (IMHA) service in a high secure hospital: A co-produced survey measuring self-reported changes to patient self-determination.

**Fig. 2.** SDT – Three psychological needs that require satisfaction for motivation and well-being.

The findings of Carstensen and Isaakowitz's socioemotional selectivity theory suggest that aging affects an adult's social and emotional domain, yet it is a common misperception (as they proved in their research) that a reduction in social relationships inevitably leads to loneliness [36]. In short, based on SDT, the fulfilment of these three fundamental psychological needs is imperative for attaining self-motivation and experiencing a state of well-being [39]. An individual's self-motivated behaviour and performance, well-being, and mental health will improve in settings that encourage and provide for the three universal requirements of autonomy, relatedness, and competence [38]. On the other hand, social contexts that lack support or create obstacles to

fulfilling those needs can result in passivity, estrangement, and psychological disorders. Studies have shown that fostering a relational environment that is autonomously supportive can boost a person's sense of autonomy and competence, leading to better health and well-being outcomes [40].

Based on the literature review, this present study proposes to look at the 3 factors of SDT (autonomy, competence, and relatedness) as the predictors and mental well-being of senior citizens as the criterion (Figure 3).



**Fig. 3.** Proposed Research Framework.

Figure 3 shows the independent variables (predictors) which are autonomy, competence, and relatedness while the dependent variable (criterion) is mental well-being. The independent variables are components from Self-Determination Theory.

### 3 Methodology

This study is a quantitative study conducted using a structured questionnaire to determine the relationship between autonomy, competence, relatedness, and mental well-being. In addition, this is a descriptive study that also incorporates correlational investigation. This research takes the form of a field study that minimizes researcher interference and adopts a cross-sectional design.

#### 3.1 Population and Sampling

The estimated population of Malaysian aged 65 and above in 2020 was 2.4 million. Purposive sampling was used in this present research due to its specific objectives that require the inclusion of individuals who could provide insights to fulfil those research objectives. Hence, the unit of analysis is the individual senior citizen. For this study, a total of 100 respondents were selected from aged homes and residential areas in the Central Region of Malaysia. The structured questionnaire was then administered to the selected respondents.

The collected data was analysed using SPSS version 30 to determine the relationship between the predictors (autonomy, competence, relatedness) and mental well-being of senior citizens. The findings are discussed in the following section.

This study focuses on the Central region of Malaysia which includes Selangor, Kuala Lumpur, and Putrajaya. A total of 100 questionnaires were administered to the identified respondents; however, only 89 questionnaires were deemed usable (89%).

### 3.2 Data Collection Methods

Data were gathered through structured questionnaire interviews with senior citizens. Since the respondents were elderly and required assistance to complete the questionnaire, the interview was conducted face-to-face with the intention of accurately recording their responses.

## 4 Findings

In terms of ethnicity, although an attempt was made to ensure representation from all three major ethnic groups, the majority of respondents were Malay (96.6%). In terms of their place of residence, 75.3% lived on their own while the remaining lived in old folks' homes and in welfare centres. In terms of gender, there was a higher proportion of males (66.3%). In terms of age, 80.9% were aged between 65-70 years old, while the remaining were between 71-80 years old. They are generally categorized as in the middle-old category. More of the respondents lived with their spouse and children (70.8%). Figure 4 illustrates that a higher percentage (49.4%) of respondents reported having a fixed income such as a monthly pension, while others relied on their spouses or children (12.4%), some are still working (7.9%), or had other sources of income (5.6%) like property rentals. Approximately 25% of the participants relied on welfare assistance.

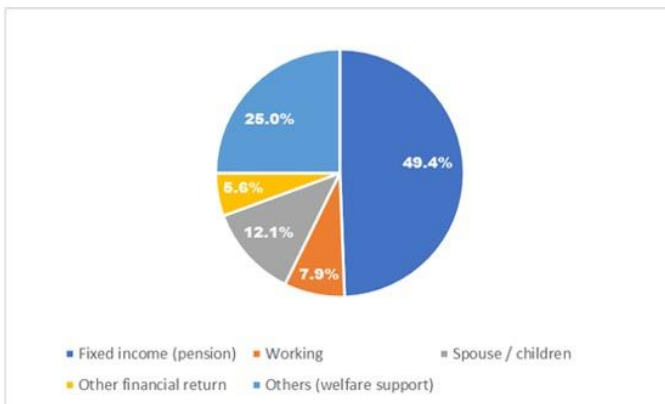


Fig. 4. Sources of Income.



Mental well-being was measured using the WHOQOL-BREF questionnaire which consists of 26 items measuring four domains (physical health, psychological health, social relationships, and environmental health). The Cronbach Alpha was 0.936, indicating high internal consistency. Competency, autonomy, and relatedness were measured based on SDT. As mentioned earlier, the study aims to determine the factors affecting the mental health of the senior citizens. In terms of correlations, all three predictors (Competence, Autonomy, Relatedness) exhibited significant associations with mental well-being. The results are as follows:

- i. There is a significant, negative, and moderate association between competency and mental well-being ( $r = -.416$ ,  $p < .05$ ).
- ii. There is a significant, positive, and weak association between autonomy and mental-being ( $r = .330$ ,  $p < .05$ ).
- iii. There is a significant, positive, and weak association between relatedness and mental-being ( $r = .341$ ,  $p < .05$ ).

Furthermore, linear regression was conducted, and the results are shown in Table 1.

**Table 1.** Regression Analysis (DV: Mental well-being).

Model	Standardized Coefficients	
	Beta	Sig.
(Constant)		.000
Competence	-.363	.023
Autonomy	.211	.015
Relatedness	.367	.145
R-square	.286	
F-value	11.336	

Competence and autonomy are found to influence mental well-being. An increase of one standard deviation in competence is associated with a decrease of 0.363 standard deviations in mental well-being. Conversely, an increase of one standard deviation in autonomy is associated with an increase of 0.211 standard deviations in mental well-being.

## 5 Conclusion

The mental well-being of the elderly is influenced by many variables and the impact of these variables varies as one ages. Generally, competence, autonomy and relatedness are found to positively affect mental well-being in most research. However, in the findings of this study, competence is found to have a negative effect on mental well-being and relatedness does not significantly affect mental well-being in this study.

As one ages, relationship with people around is extremely important for their mental well-being. Unfortunately, many elderly individuals have started losing their spouse, siblings, and friends, leading to feelings of loneliness. Subsequently, they may struggle to expand and maintain their social network.

## 6 Implications of Findings

Different perspectives on the relative importance of material factors (income, housing, employment) and psychosocial factors or attributes (relatedness, life satisfaction, positive affect, competence, autonomy), as well as the impact of material inequalities on people's subjective well-being are central to the ongoing debate about the determinants of mental health and well-being [41].

Autonomy, which is an internal sense of volition [42] demonstrates a positive relationship with mental well-being of the respondents.

Competence, which relates to a sense of efficacy and is related to psychological empowerment, interestingly, shows a negative effect of competence on the mental well-being of the respondents. Similar findings were found in a study on US citizens [43]. The respondents could be perceiving a sense of disempowerment as they age especially if they were in influential positions while gainfully employed in their younger years.

Relatedness refers to a sense of caring relationship which is interpersonal. As about 25% of the respondents in the present study are living in old folks and welfare homes, this finding shows that relatedness could be lacking in their lives. The relationship between the aged in homes and the carers might not be perceived as positive social relationships [44].

## 7 Directions for Future Research

More in-depth studies need to be carried out to determine how these factors affect a larger group of respondents and respondents from more varied walks of life. Additionally, there is a scarcity of cross-cultural research in this area. While SDT suggests that the fulfillment of autonomy, competence, and relatedness is universal, cross-cultural psychologists have debated the importance of autonomy satisfaction in collectivist cultures [45], [46]. More research needs to be carried out on this topic in order to get a better understanding of the similarities and contrasts between the ways in which the fulfillment of various needs contributes to well-being among elderly people in various countries and cultures. Furthermore, future research that integrates these studies with SDT theories and investigates the factors like aging attitudes, self-efficacy, social support, etc. within the SDT framework may shed fresh light on the topic of senior citizens' well-being [46].

## 8 Acknowledgement

The current research was funded under the Fundamental Research Grants Scheme (FRGS) of the Ministry of Higher Education (MoHE) (FRGS/1/2021/SSO/UITM/02/9) and Universiti Teknologi MARA (UiTM).

## References

1. United Nations Department of Economic and Social Affairs, Population Division: World Population Aging 2020 Highlights: Living arrangements of older persons (ST/ESA/SER.A/451) (2021).
2. Mohammad, N. M. N., Abbas, M. Y.: Elderly Environment in Malaysia: Impact of Multiple Built Environment Characteristics. *Procedia Soc. Behav. Sci.* 49, 120–126 (2012).
3. Department of Statistics Malaysia: Pocket Stats Quarter 4. *Canadian Psychology* 49(1), 14-23 (2022). Available online: <https://dev.dosm.gov.my/portal-main/release-content/current-population-estimates-malaysia-2022-domains>”,.
4. World Health Organization: Global Strategy and Action Plan on Aging and Health. World Health Organization: Geneva, Switzerland, 2017, pp. 1–56 (2018).
5. Statista Research Department: Research Report. Accessed December 15, 2022.
6. At what point is someone considered elderly? Retrieved from [www.devotedguardians.com](http://www.devotedguardians.com). Accessed April 21, 2021.
7. DOSM Department of Statistics Annual Report (2020).
8. Grad, F. P.: The Preamble of the Constitution of the World Health Organization. *Bulletin of the World Health Organization* 80 (12), (2002).
9. Barrio, C., Palinkas, L. A., Yamada, A.-M., Fuentes, D., Criado, V., Garcia, P., Jeste, D. V.: Unmet needs for mental health services for Latino older adults: Perspectives from consumers, family members, advocates, and service providers. *Community Mental Health Journal* 44(1), 57–74 (2008).
10. Ryan, R. M., Deci, E. L.: On happiness and human potential: A review of research on hedonic and eudaimonic well-being. *Annual Review of Psychology* 52, (2001).
11. Moyle, W., Clarke, C., Gracia, N., Reed, J., Cook, G., Klein, B., Marais, S., Richardson, E.: Older people maintaining mental health well-being through resilience: An appreciative inquiry study in four countries. *Journal of Nursing and Healthcare of Chronic Illness* 2(2), 113–121 (2010).
12. Sargent-Cox, K. A., Anstey, K. J., Luszcz, M. A.: Longitudinal change of self-perceptions of aging and mortality. *The Journals of Gerontology. Series B, Psychological Sciences and Social Sciences* 69(2), 168–173 (2014).
13. Miret, M., Cabello, M., Marchena, C., Mellor-Marsá, B., Caballero, F. F., Obradors-Tarragó, C., Haro, J. M., Ayuso-Mateos, J. L.: The state of the art on European well-being research within the area of mental health. *International Journal of Clinical and Health Psychology* 15, 171-179 (2015).
14. Suh, E. M., Choi, S.: Predictors of subjective well-being across cultures. In E. Diener, S. Oishi, & L. Tay (Eds.), *Handbook of Well-being*. DEF Publishers, Salt Lake City, UT (2018).
15. Survey of older people (2022). Retrieved from <http://www.hscic.gov.uk/pubs/hse05olderpeople>.
16. Breman, D.: What to know about mental health in older adults. UK WebMD Editorial Contributors. In: Carstensen, L., Fung, H., Charles, S. *Socioemotional Selectivity Theory and the Regulation of Emotion in the Second Half of Life. Motivation and Emotion* 27, 103–123 (2021).
17. OECD: Organization for Economic Cooperation and Development Report, (1998).
18. Cosco T. D., Prina A. M., Perales J., Blossom C. M., Brayne S., Brayne C.: Operational definitions of successful aging: A systematic review. *International Psychogeriatrics*, 26(3), 373–381 (2014).
19. Fernandez-Ballesteros, R. G., Cassinello, D. Z., Bravo, D. L., Martínez, A. M., Nicolás, J. D., López, P. M., del Moral, R. S.: Successful Aging. *Psychology in Spain* 18(1), 94-101 (2011).

20. Killen, A., Macaskill, A.: Positive Ageing: To what extent concurrent models of well-being categorize the life events perceived as positive by older adults. *International Journal of Applied Positive Psychology* 5(3), 99-119 (2020).
21. Ryan, R. M., Deci, E. L.: Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist* 55(1), 68–78 (2000).
22. Cresswell-Smith J., Amaddeo F., Donisi V., Forsman A. K., Kalseth J., Martin-Maria N., Walhbeck K.: Determinants of multidimensional mental well-being in the oldest old: A rapid review. *Social Psychiatry and Psychiatric Epidemiology* 54(2), 135–144 (2019).
23. Nordmyr, J., Cresswell-Smith, J., Donisi, V., Lara, E., Martin-Maria, N., Nyholm, L., Forsman, A. K.: Mental well-being among the oldest old: revisiting the model of healthy aging in a Finnish context. *International Journal of Qualitative Studies on Health and Well-being* 15(1), 1734276 (2020).
24. Maatouk, I., Muller, A., Angerer, P., Schmook, R., Herbst, K.: Healthy aging at work—Efficacy of group interventions on the mental health of nurses aged 45 and older: Results of a randomized controlled trial. *PLoS ONE* 13(1), e0191000. (2018). <https://doi.org/10.1371/journal.pone.0191000>
25. Cramm, J. M., Nieboer, A.P.: Positive aging perceptions among migrant Turkish and native Dutch older people: A matter of culture or resources? *BMC Geriatrics* 17(1), 1-12 (2017).
26. Malone, J., Dadswell, A.: The role of religion, spirituality, and/or belief in positive aging for older adults. *Geriatrics* 3(2), 28 (2018).
27. Barbosa, H. B.: Prospective housing decisions and Self-Determination Theory. Master of Human Kinetics (MHK), Laurentian University, Canada (2021).
28. Deci, E. L., Ryan, R. M.: The support of autonomy and the control of behaviour. *Journal of Personality and Social Psychology* 53(6), 1024-1037 (1987).
29. Zaini, N. H., Hasan, W. H. W., Samuel, R., Talib, A. N., Jamrus, F. N., Ramly, F. A.: Self Determination Theory Among Senior Citizen: A Review Paper. *Jurnal 'Ulwan* 7(1), 53-59 (2022).
30. Legault, L.: Self-Determination Theory. *Encyclopaedia of Personality and Individual Differences*. (2017).
31. Ryan, R. M., Deci, E. L.: *Self-Determination Theory: Basic Psychological Needs in Motivation, Development, and Wellness*. Guilford Press, New York (2017).
32. Verbraak, A.: Gerotranscendence: An Examination Of A Proposed Extension To Erik Erikson's Theory of Identity Development. (2000). <https://citeseerx.ist.psu.edu/download?doi=10.1.1.1145.527>
33. Josefsson, K., Jokela, M., Cloninger, R., Hintsanen, M.: Maturity and change in personality: Developmental trends of temperament and character in adulthood. *Development and Psychopathology* 25(3), 713-727 (2013). <https://doi.org/10.1017/S095457941300126>
34. Sharma, D.: Impact of Age on Emotional Intelligence and Its Components. *International Journal of Research and Innovation in Social Science (IJRISS)* 1(1), 2454-6186, 9 (2017).
35. Dean, J. H., Shanahan, D. F., Bush, R., Gaston, K. J., Lin, B. B., Barber, E., Franco, L., Fuller, R. A.: Is Nature Relatedness Associated with Better Mental and Physical Health? *International Journal of Environmental Research and Public Health* (2018).
36. Carstensen, L. L., Fung, H. H., Charles, S. T.: Socioemotional Selectivity Theory and the Regulation of Emotion in the Second Half of Life. *Motivation and Emotion* 27, 103–123 (2003). <https://doi.org/10.1023/A:1024569803230>
37. Ekelund, C., Dahlin-Ivanoff, S., Eklud, K.: Self-determination and older people – A concept analysis. *Scandinavian Journal of Occupational Therapy*, (2013).
38. Eades, S.: Impact evaluation of an Independent Mental Health Advocacy (IMHA) service in a high secure hospital: A co-produced survey measuring self-reported changes to patient self-determination. *Mental Health and Social Inclusion*, 22(1) 53-60, (2018).

39. Deci E. L., Ryan, R. M.: *Self-Determination Theory: Basic Psychological Needs in Motivation, Development, and Wellness*. Guilford Press, New York (2018).
40. Deci, E. L., Ryan, R. M.: Facilitating optimal motivation and psychological well-being across life's domains: Correction to Deci and Ryan (2008). *Canadian Psychology / Psychologie Canadienne* 49(3), 262 (2008). <https://doi.org/10.1037/0708-5591.49.3.262>
41. Barry, M. M., Friedli, L.: The influence of social, demographics and physical factors on positive mental health in children , adults and older people. Foresight Mental Capital and Well-being Project. State-of-Science Review: SR-B3. Government Office of Science and Innovation, London, UK (2008).
42. Moilanen, T., Kangasniemi, M., Papinaho, O., Mynttiner, M., Siipi, H., Suominen, S., Suhonen, R.: Older people's perceived autonomy in residential care: An integration review. *Nursing Ethics* 28(3), 414-434 (2021).
43. Martela, F., Riekkki, T. J. J.: Autonomy, Competence, Relatedness, and Beneficence: A Multicultural Comparison of the Four Pathways to Meaningful Work. *Front. Psychol.* 9, 1157 (2018). doi: 10.3389/fpsyg.2018.01157
44. Berglund, H., Duner, A., Blomberg, S., Kjellgren, K.: Care planning at home: A way to increase the influence of older people? *Int J Integr Care* 12, e134 (2012).
45. Tomás J. M., Pinazo-Hernandis, S., Oliver, A., Donio-Bellegarde, M., Tomás-Aguirre, F.: Loneliness and social support: Differential predictive power on depression and satisfaction in senior citizens. *J Community Psychol.*, 1–10 (2019). <https://doi.org/10.1002/jcop.22184>
46. Tang, M., Wang, D., Guerrien, A.: A systematic review and meta-analysis on basic psychological need satisfaction, motivation, and well-being in later life: Contributions of self-determination theory. *PsyCh Journal*, (2019).

**Open Access** This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

