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# Quality of Life among Institutionalized and Non-Institutionalized Elderly Population: A Study with Special Reference to Kottayam District

**[1]Abin Abraham, [2]Annu Rose Tomy,**
[1]Research Scholar, Mahatma Gandhi University, Kottayam.
[2]Psychiatric Social Worker, Gilgal Ashwasa Bhavan, Pathanamthitta.
Email - [1]abinabrahamofficial@gmail.com, [2]annurose894@gmail.com.

***Abstract:*** *To study the Quality of life among Institutionalized and Non-Institutionalized elderly population is important for the future wellbeing of our ageing people, because Kerala is a steady ageing state suffering from large level of inequalities. The prime aim of this study was to evaluate the difference of quality of life between these two categories of old age people in Kerala. This study included 200 respondents. 100 respondents were from institutional category and the other remaining 100 were from non- institutional category was conducted in Kerala, Kottayam district between January 2018 to June 2019. The respondents of two category answered the questions regarding their Socio demographic information and Quality of life. The author applied self-made questionnaire to assess the Quality of life of the respondents and used descriptive and inferential statistics to analyse the data. The result of the study shows that, respondents from the family have high degree of quality of mental well-being than those living in old age homes, because they are cared and supported by the families. The effect of social networks on the psychological and social well-being of the elderly people help in their quality wellbeing. Most of the respondents supported that economic stability and wealth are required for a standard of living and a dignified social status in the society. Study concluded that, there is a difference related to Quality of life while dealing with both categories of elderly population.*

***Key Words:*** *Elderly, Quality of life, Institutionalized, Non-institutionalized, Health aspects, Economic wellbeing, Social networks.*

## 1. INTRODUCTION:

The ageing procedure is of development, a biological reality which has its own dynamics, largely beyond human control. The age of 60s, known as the retirement age and is said to be the beginning of old age. Old age, the last phase of one's life, is one of the most difficult stages of human life. This is mainly due to the general decline in health and physiological functioning, which is associated with ageing and their quality of life. Elderly face chronic illness, deteriorating functional capacities of muscles and the sense organs, and problems with memory and cognitive functions. The life of the aged is becoming more and more miserable and there is a growing dissatisfaction among the older population that they are not taking care of, as they deserve. The ageing process is very subtle and the changes are slow. However, by mid-60 the changes are more noticeable physically. Their skin becomes thinner and less elasticized wrinkles appear, bones become more brittle and more likely to break, joints become stiffer and more painful. Height is reduced and the spin may become rounded, also muscles become weaker. Their balance becomes impaired, taste and smell deteriorate. Hearing and sight start to fail, blood pressure can increase, the glands do not function so well, and they are more prone to health risk and infections. Elderly people still have many intellectual needs. Just because they are growing in years does not mean they can no longer grow and learn new things as well; the elderly people are essential to communicate with others as they may feel isolated and vulnerable. There are many sociable activities that an elderly person can do, they can go for walks, they can spend time in leisure activities, they can do many things and they have always wanted to. By doing this, they will be able to make more friends through formal activities. But the above-mentioned paragraph can be concluded in to a one title, that is Quality of life. So, this study is focusing on QOL and its different dimensions in details with institutionalized and non-institutionalized elderly.

### 1.1 Quality of life and Elderly

Quality of life often depends on physical, emotional, functional, social and psychological wellbeing. In many cases, the above-mentioned factors are very low in elderly. Quality of life affected in elderly people, those who have higher probability of suffering from multiple health disorders due to experience reduced physical and mental functions. Many of the elders are deprived from love and respect causing pain and anxiety in them. But there are elderly people whose wellbeing are high, and those people are always engaged in vocational activities with the support of a family, friends, relatives, etc. According to WHO statements, Quality of life defined as an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their expectations, goals, standards and concerns. In addition, Quality of life is defined as a wellness resulting from a mixture of physical,

emotional, functional and social factors. Poor economic, cultural, educational and health care conditions and also inadequate social interactions can result in poor quality of life in elderly people (Khaje Bishak, 2014). Quality of life of elderly can be maintained only by the adaptation and using the resilience to face and adjust the issues which may or may not come during the journey of life. For maintain Quality of life elderly people require support from the family, society, institutions and government.

## 2. BACKGROUND:

Quality of life was defined in 1994 by the World Health Organization, as an individual perception of the position in life, in the context of cultural system and values in which people live and related to their goals, expectations, norms and concerns. Regarding the elderly, the concepts of quality of life presented in the literature are also characterized by their multidimensionality, i.e., they take into account functional capacity, emotional, psychological and sexual well-being, social support, satisfaction with life in general, the perception of health status, among others (Ermelinda, 2017). When looking deep into the quality of life of those elderly in old age homes and family set ups, there is a considerable amount of differences that could be observed. In India, old age homes are looming large in every nook and corner and there are very few studies done on QOL in this special population and the influence of various factors in the elderly. Any organizations which cater for the elderly should aim at providing for their needs in an integrated approach (physical, psychological, social and spiritual) to improve the QOL. There is a significant difference in the Quality of life between the elderly people from old age homes and those living in the community. The elderly living in old age homes have better physical health compared to the participants in the community, which can be due to the regular, timely food intake and less physical exertion. On the other hand, social domain shows minimum scores for them. This may be due to the fact that, in the community, elderly people enjoy better social relationship as they stay closer to their family members as well as with the neighborhood (Praveen, 2011). Based on a survey on ageing scenario in Kerala conducted by the 'Centre for Development Studies' has pointed out that the proportion of aged in the population is rising (PTI, 2014). Less literature and less studies in Indian and Kerala scenario also paved the way to take up this study. Nevertheless, it is necessary to assess the Quality of life of institutionalized and non-institutionalized elderly for their future wellbeing.

## 3. BROAD OBJECTIVES:

The broad objective of the study is to know the quality of life of institutionalized and non- institutionalized elder population.

**Specific Objectives:**

- To study the socio-demographic profile of the respondents
- To assess the quality of life of respondents
- To examine the physical and mental health of the respondents
- To examine the social networks of the respondents
- To assess the economic wellbeing of the respondents

**Hypothesis**

- **$H_0$** = *There is no significant association between Physical health and Mental Health of the respondent*
- **$H_0$**= *There is no difference in social networks with regard to category of the respondent*
- **$H_0$** = *There is no significant association between Mental Health and Category of the respondent*

## 4. METHOD:

The 200 elderly (age 60 and above) had chosen to be representative of two categories (Institutionalized and Non- institutionalized). Data are collected from the old age homes and families in the Kottayam district. In Kottayam district only two municipalities had taken for the study. They were Pala and Erattupetta. This study followed quantitative in nature and explanatory research design. For collecting the sample from the field, this study chose stratified random sampling and lottery technique. This study has taken Young Old, Old Old and Oldest Old category from the field. Avoided mentally ill, and hospitalized elderly from the study. After the examination from two experts, self-made questionnaire was made. Reliability and validity were ensured and applied in the field. Interview schedule was used and the ethical consideration was ensured during and after the study.

## 5. ANALYSIS AND DISCUSSION:

The analysis of this study followed descriptive and inferential statistics. This study has taken 100 institutionalized and 100 non- institutionalized elderly people. There are 43 men and 57 women in the category of institutionalized and non-institutionalized included 55 men and 45 women. Most of the institutionalized elderly people are not living with their soul mates but in the case of non-institutionalized are living with their partners. Non- institutionalized have more education as compared to institutionalized elderly. Quality of life is important to everyone. Quality of life (QOL) is a broad multidimensional concept that usually includes subjective evaluations of both positive and negative aspects of

life. Good quality of life not only helps to physically strong but also emotionally, mentally and socially strong and helps to face the problems in their life positively. So, this study examined Quality of life from three dimensions. They are health, social networks and economic wellbeing and are explained below.

### 5.1 Quality of Life and Health:

The WHO (1948) defined health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (WHO, 2011). Health is more than just the absence of disease. Our health is affected by many factors such as the environment, the existence or the absence of a support networks, where we live, our finances, as well as our lifestyle. Health also includes physical, psychological, and social well-being. Many traditional models of health, however focus mostly on conditions such as diabetes, cancer, and heart disease. Health-related quality of life (HRQOL) is a multi-dimensional concept that includes domains related to physical, mental, emotional, and social functioning. The below table shows the health aspects and quality of life of both categories.

**(Table .1) Quality of Life and Health Aspects**

| Sl. No | Subjects | Percentage | |
|---|---|---|---|
| | | **Institutionalized** | **Non- institutionalized** |
| **1** | Health is important for maintaining QOL | Yes (100%)<br>No (0%) | Yes (100%)<br>No (0%) |
| **2** | Evaluation of physical health | Very good (4%)<br>Good (28%)<br>Satisfactory (38%)<br>Poor (30%) | Very good (30%)<br>Good (25%)<br>Satisfactory (40%)<br>Poor (5%) |
| 3 | Evaluation of mental health | Very good (12%)<br>Good (36%)<br>Satisfactory (48%)<br>Poor (2%) | Very good (50%)<br>Good (35%)<br>Satisfactory (10%)<br>Poor (5%) |

#### 5.1.1 Health and Maintaining QOL

Health is an important factor in everyone's life that leads to the wellbeing and quality of life. Here in this study, 100% of the respondents stated that health is very much important for maintaining quality of life.

#### 5.1.2 Evaluation of Physical Health

The key areas of physical health can be addressed through lifestyle choices like physical exercise, nutrition and diet, medical self-care, rest and sleep (Koshuta, 2001). The above table shows the physical health status of the respondents. In total category, majority of the elderly 39% have satisfied with their physical health, 26.5% respondents have better physical health, 17.5% respondents are not at all satisfied with their own health and remaining respondents 17% is very much happy with their health status. Elderly people are facing lot of physical health difficulties due to their improper nutrition and diet, old age problems and illnesses.

#### 5.1.3 Evaluation of Mental Health

Mental health can affect the daily life of an individual. Mental health also includes a person's ability to enjoy life, to attain a balance between life activities and efforts to achieve psychological resilience. Above table shows that, out of the total population, 31% of the respondents have very good mental health in which majority of the respondents are from non – institutionalized, 35.5% of the respondents have good mental health. Another 29% respondents are satisfied with mental wellbeing in which most of the respondents are from institutionalized and remaining 3.5% of the respondents have stated the poor status of mental health.

#### 5.1.4 Mental Health and Category

**$H_0$ =** *There is no significant association between Mental Health and Category of the respondent*
**$H_1$ =** *There is significant association between Mental Health and Category of the respondent*

**(Table. 2). Association between Mental Health and Category of the Respondent**

| Category | | Mental Health | | | | Total |
|---|---|---|---|---|---|---|
| | | **Very good** | **Good** | **Satisfactory** | **Poor** | |
| **Institutionalized** | Count | 12 | 36 | 58 | 2 | **100** |
| | % of Total | 8.6% | 27.1% | 34.3% | 1.4% | **71.4%** |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Non-institutionalized** | Count | 50 | 35 | 10 | 5 | **100** |
| | % of Total | 14.3% | 10.0% | 2.9% | 1.4% | **28.6%** |
| | Count | 62 | 71 | 68 | 7 | **200** |
| **Total** | **% of Total** | **22.9%** | **37.1%** | **37.1%** | **2.9** | **100.0%** |

**$\chi 2 = 15.063$ df = 3 P Value = 0.002**

The Chi square value is 15.063 in 3 degree of freedom. The P value is 0.002, which is less than 0.05, So there is a significant relationship between the mental health and category of the respondents. Hence, null hypothesis is rejected and alternative hypothesis is accepted at 1% level of significance. Here the elderly living in old age homes have less mental wellbeing, when compared to the elderly living in homes because they are cared and supported by family, thus it increases the quality of mental wellbeing.

### 5.1.5 Physical Health and Mental Health

Physical and mental wellbeing are the two important aspects of life. Poor mental health can affect our ability to make healthy decisions and fight off chronic diseases. Neglecting the mental health can lead to more serious health complications. According to 2016 study by the Columbia University Medical Center, less than a third of American adults who screened positive for depression received treatment for their symptoms. Getting help earlier can prevent mental health conditions, like depression and anxiety (Oberheu, 2017). The following hypothesis is used to find the association between physical and mental health of elderly in both categories.

**$H_0$** = *There is no significant association between the Physical health and Mental Health of the respondent*

**$H_1$** = *There is significant association between the Physical health and Mental Health of the respondent*

**(Table. 3). Association between Physical Health and Mental Health of the Respondent**

| **Physical Health** | **Mental Health** | | | | **Total** |
|---|---|---|---|---|---|
| | **V. Good** | **Good** | **Satisfactory** | **Poor** | |
| Very good | 20 (10%) | 5(2.5%) | 0(0.0%) | 0(0.0%) | 25 |
| Good | 14 (7%) | 34(17%) | 8(4%) | 0(0.0%) | 56 |
| Satisfactory | 9(4.5%) | 25(12.5%) | 5(17.5%) | 7(3.5%) | 76 |
| Poor | 5(2.5%) | 7(3.5%) | 26(13%) | 5(2.5%) | 43 |
| **Total** | **48(24%)** | **71(35.5%)** | **69(34.5%)** | **12(6%)** | **200** |

**$\chi 2 = 33.698$ df = 9 P Value = 0.000**

P value is 0.000, so the null hypothesis is rejected at 1% level of significance i.e. there is a significant association between physical health and mental health of the respondent. Here the study shows that physical health and mental health are associated with each other. Also, it provides that when physical wellbeing is poor and easily affects the mental wellbeing of a person. If a person has chronic health issues then automatically the person came into the stage of depression, frustration, etc. Physical activity in any form is a great way to keep you physically health as well as improving your mental wellbeing. Research shows that doing exercise influences the release and uptake of feel-good chemicals called endorphins in the brain. Poor physical health can lead to an increased risk of developing mental health problems. The promotion of positive mental health can often be overlooked when treating a physical condition. If the mind and heart are wiped off the negative thoughts and feelings, it helps in curing the illness. In case of elderly people, if they are happy from the bottom of the heart, then they can be free from the health issues, raised due to the mental and emotional disturbances.

## 5.2 Social Networks:

Social contacts with others always help to create and maintain a good relationship with them. Social support is important in daily activities of the elderly and is very much associated with cognitive functioning. Those elderly people who have strong positive support from family, friends and society have always had a higher cognitive function than others. The social networks dimensions are explained below.

**(Table .4). Quality of Life and Social Networks**

| **Sl. No** | **Subjects** | **Percentage** | |
|---|---|---|---|
| | | **Institutionalized** | **Non- institutionalized** |
| **1** | Good relationship with the family | Yes (38%) | Yes (85%) |

| | | | |
|---|---|---|---|
| | | No (62%) | No (15%) |
| **2** | Social contacts with the people | Yes (78%)<br>No (22%) | Yes (95%)<br>No (5%) |
| 3 | Government gives support to access the rights | Yes (34%)<br>No (66%) | Yes (65%)<br>No (35%) |

**5.2.1 Good Relationship with the Family:**

Family defined as a group of people who are related to each other, but it is more than that. It is a meaningful connection and experience. It is an incredible and unbreakable bond created by mothers, fathers, sisters and brothers. It is a source of inspiration and comfort zone in the world of uncertainties. Family support, love and concern are very much important for every person's wellbeing and their growth. The above table shows the relationship of each respondent towards their families. In institutionalized, 62% of them not have a strong bonding with their families and 38% of them are having an intimate relationship with their families and later came into the institutions due to some other reasons. In case non- institutionalized, 85% of the respondents are living happily along with their families and remaining 15% of the respondents are not having a strong bond with their families.

**5.2.2 Social Contacts with the People:**

Socializing helps to lead a better quality of life. Most people would not choose isolation and loneliness versus spending time with companions. Lack of social support can affect the quality of life and also brings negative impacts on health and wellbeing, especially for older people. Support from others can be important in reducing stress, increasing physical health and defeating psychological problems such as depression and anxiety. From the above table, it is understood that 78% of the respondents in institutionalized are interested in keeping social contacts with people and remaining 22% of the respondents are against socialization. In case of non – institutionalized, 95% of the respondents are socialized with people and 5% of them are introvert and not interested in mingling with the society.

**5.2.3 Government and Access the Rights:**

The government has the duty and responsibility to protects the rights of citizens and helps them to access the rights. The government must protect its citizens when there is an attempt to take away their rights. The above table shows that 66% of the respondents in institutionalized agree with the government support in accessing the rights and remaining 34% of them are not accessed their rights. In case of non- institutionalized, 65% of the respondents are able to access their rights and remaining 35% of them are not accessed any rights.

**$H_0$ =** *There is no difference in social contacts with regard to category of the respondent*

**$H_1$ =** *There is difference in social contacts with regard to category of the respondent*

**(Table .5). Quality of Life of Categories and Social networks**

| | **Category** | **N** | **Mean** | **Std. Deviation** | T | df | Sig |
|---|---|---|---|---|---|---|---|
| **Social Networks** | Institutionalized | 100 | 1.2400 | .43142 | 1.866 | 168 | 0.00 |
| | Non-institutionalized | 100 | 1.0500 | .22361 | | | |

The P value is 0.00, the null hypothesis is rejected at 1% level of significance i.e. there is a significant difference in social contacts with regard to category of the respondent. The effect of social support systems (emotional support, tangible support, informational support, companionship support) on the psychological and social well-being of the elderly people help in their quality wellbeing. Social support has significant effect on the psychosocial well-being of the elderly. It was recommended that, there is a need for the structural framework to address the complex system of the elderly services in all old people's homes. The areas of services should include economic services, attitudes of people towards aging, establishing support groups, aged responsive library services and health care services that are responsive to the needs of the elderly (Oluwagbemiga, 2016).

**5.3 Quality of life and Economic Wellbeing**

Economic wellbeing is well-defined as having present and future economic security. Present financial security comprises the ability of families, individuals, and societies to consistently meet their basic needs and have control over their everyday finances. Economic well-being may be achieved by individuals, families, and communities through public policies that ensure the ability to build financial knowledge and skills, access to safe and affordable financial products and economic resources, and opportunities for generating income and asset-building. So definitely economic wellbeing can lead to better quality of life. The following sections dealt with economic dimensions.

**(Table .6). Quality of Life and Economic Wellbeing**

| Sl. No | Subjects | Percentage | |
|---|---|---|---|
| | | **Institutionalized** | **Non- institutionalized** |
| 1 | Money to meet the Financial needs | Yes (12%)<br>No (88%) | Yes (60%)<br>No (40%) |
| 2 | Economic stability brings standard of living | Yes (96%)<br>No (4%) | Yes (100%)<br>No (0%) |
| 3 | Wealth is required to have a dignified social status in a society | Yes (86%)<br>No (14%) | Yes (90%)<br>No (10%) |

**5.3.1 Money and Financial Needs:**

Finance has now become an organic function and inseparable part of our day-to-day lives**.** Most of the senior citizens of non – institutionalized, those who are educated had healthy wellbeing and enough money to meet their needs. When it comes to non – institutionalized, majority of the respondents do not have any financial resources except few of them. The only source, some of them have pension, so they do not have enough money to meet the financial needs. From the above table, 88% of the respondents of institutionalized not have enough money to meet the financial needs and remaining 12% of the respondents have enough money to meet their needs. In case of non – institutionalized, 60% of the respondents have financial support and remaining 40% of the respondents are financially weak.

**5.3.2 Economic Stability and Standard of Living:**

Economic stability means the economy of a region or country shows no wide fluctuations in key measures of economic performance, such as gross domestic product, unemployment or inflation. Rather, stable economies demonstrate modest growth in GDP and jobs while holding inflation to a minimum (Hall, 2017). Better standard of living leads to a good quality of life. It can also raise the emotional, physical and social wellbeing. Those senior citizens living in families, who are economically stable has a good standard of living and similarly in case of old age homes also. From the above table shows that 96% of the respondents residing in the institutionalized agreed that economic stability is required for standard of living and remaining 4% of them ignored it. Total respondents from non- institutionalized. i.e. 100% of them stated that economic stability is required of standard of living.

**5.3.3 Wealth and Dignified Social Status in a Society:**

Wealth is defined as a valuable resource. Those who are having a huge amount of wealth, most probably have a dignified status in a society. Those persons always keep a social contact with people, community etc. Majority of old age people live in families and old age homes stated their view that wealth is required for having a renowned position in the society and also keeping a social contact. The above table shows that most of the respondents 86% stated that wealth is required to have a dignified social status in a society and 14% of the respondents are not supported the statement. In non-institutionalized, 90% of them supported with the statement and remaining of them 10% stated that wealth is not the thing which makes them value.

## 6. MAJOR FINDINGS:

Quality of life (QOL) is a broad multidimensional concept that usually includes subjective evaluations of both positive and negative aspects of life. So, the major findings can be divided into three. They are health aspects, social networks and economic aspects. They are explained as below.

**Health Aspects:**

- Majority of the respondents in which, 38.6% of them are satisfied with physical health. If they are suffering with chronic health issues, then it affects their mental health and study shows that, majority of the respondents in which 37.1% are having satisfied mental wellbeing
- Most of the respondents 45.7% are frequently taking medicines due to health issues
- 100% of the respondents from both categories accepted that health is an important element in determining quality of life
- As a result of chi-square test carried out, it was found that there is an association between physical health and mental health. When physical health is declined it affects the mental health also. Increase of quality of physical health can increase the mental health also
- As a result of chi-square test carried out, it was found that there is an association between mental health and category of the respondents. Here the respondents from the family have high degree of quality of mental wellbeing than those living in old age homes, because they are cared and supported by the families

**Social Networks:**

- In most of the cases, 62% of Institutionalized elderly do not have a strong bond between the families
- It is easy for the Non- Institutionalized elderly to maintain a social contact with people than Institutionalized. Most of the respondents 95% of them are having the social contacts where as in Institutionalized, 78% of the respondents maintaining social contacts
- As a result of T-test carried out it was found that there is a significant difference in social contacts with regard to category of the respondent
- The effect of social support systems (emotional support, tangible support, informational support, companionship support) on the psychological and social well-being of the elderly helps in their quality wellbeing

**Economic Wellbeing:**

- Most of the respondents 88% of the Institutionalized had no money to meet the financial needs and they are financially weak
- Most of the respondents supported that economic stability and wealth is required for a standard of living and a dignified social status in the society

## 7. CONCLUSION:

Quality of life determines physical health of an elderly person, their psychological status, emotional status, level of dependency, social relationships with the important aspects within their environment. While determine one's quality of life, environment is a major factor. Because environmental situations can strongly influence a person's mental, physical and social aspects. Health, social networks and economic conditions can enhance the life quality of elderly people. So, this study concludes that both institutionalized and non- institutionalized elderly people have difference in their life quality based on their environment.

## REFERENCES:

1. Ermelinda. (2017). *ojs/index.php/iam/article/view/2486/2223*. Retrieved from imedicalsociety.org: http://imedicalsociety.org/ojs/index.php/iam/article/view/2486/2223
2. Hall, S. (2017, september 26). *Bizfluent*. Retrieved from https://bizfluent.com: https://bizfluent.com/info-10049313-economic-stability-measured.html
3. Khaje Bishak, Y. P. (2014). Assessing the quality of life in elderly people and related factors in tabriz, Iran. *Journal of caring science*, 257-263. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4334177/
4. Koshuta, J. (2001). *Human growth and development*. Retrieved from study.com/academy/lesson/what-is-physical-health-definition-components-examples.html: https://study.com/academy/lesson/what-is-physical-health-definition-components-examples.html
5. Oberheu, A. M. (2017, march 28). *Bcbsnc*. Retrieved from http://blog.bcbsnc.com: http://blog.bcbsnc.com/2017/03/mental-health-affects-physical-health/
6. Oluwagbemiga, O. (2016, September 19). *OMICS*. Retrieved from https://www.omicsonline.org: https://www.omicsonline.org/open-access/effect-of-social-support-systems-on-the-psychosocial-wellbeing-of-the-elderly-in-old-people-s-homes-in-ibadan-2167-7182-1000343.php?aid=80718
7. Praveen. (2011). *Users/user/Downloads/7-7_546-5501.pdf*. Retrieved from C:/Users/user/Downloads/7-7_546-5501.pdf: file:///C:/Users/user/Downloads/7-7_546-5501.pdf
8. PTI. (2014). *Busines standard*. Retrieved from www.business-standard.com: http://www.business-standard.com/article/pti-stories/kerala-population-ageing-fast-survey-114091800463_1.html
9. WHO. (2011, october 7). *European Health Forum Gastein* . Retrieved from http://www.euro.who.int: http://www.euro.who.int/__data/assets/pdf_file/0003/152184/RD_Dastein_speech_wellbeing_07Oct.pdf