



## RESEARCH

# INTERVIEWS ABOUT LIFE WITH INDIVIDUALS AGED 100 YEARS OR OLDER

## ABSTRACT

**Introduction:** The human population is ageing. A centenarian is an individual who has reached the age of at least 100 years. Longevity has been associated with long-lived families and their related genetic material but genes are not the entire story. The study aimed to briefly explore the life stories and perceptions of key variables contributing to their longevity of eight centenarians.

**Materials and Method:** While the present study involves qualitative characteristics, we have attempted to support these aspects with quantitative data. In four towns of Samsun city, northern Turkey, interviews were conducted with eight centenarian participants. These individuals were identified from a population consisting of 200,000 people residing within the countryside or in mountainous regions. The visits were conducted in their homes, between the dates of October 2016 and December 2016.

**Results:** We found the ratio of centenarian as 0.4/10,000 people for target towns of Samsun. The mean age of the participants was 101.8 years, and all of them are women. Yogurt consumption was found to be quite frequent among our participants. A number of our participants also thought that religious rituals, such as worship and prayer, were effective for living a long-life and they advised such practices to younger generations. the most common problems consisted of hypertension and musculoskeletal system diseases.

**Conclusion:** Individuals who reach the age of 100 years or more generally feel youthful and healthy. The common secret our participants provided for reaching advanced age is a natural diet, avoiding bad habits and living in a peaceful environment.

**Key Words:** Aged, Interview, Life

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## ARAŞTIRMA

# 100 YAŞ VE ÜZERİNDEKİ BİREYLERLE YAŞAM HAKKINDA RÖPORTAJLAR

## Öz

**Giriş:** İnsan nüfusu yaşlanmaktadır. Asırlık, en az 100 yılı geride bırakmış yaşayan kişidir. Uzun ömürlülük genelde genetik materyal ile ilişkilendirilir ancak genler hikayenin tamamı değildir. Bu çalışma, asırlık sekiz katılımcının yaşam hikayelerini ve uzun ömürlü yaşamlarına katkıda bulunan kilit değişkenlerin algılarını kısaca keşfetmeyi amaçlamıştır.

**Gereç ve Yöntem:** Çalışmamız niteliksel karakterde olmasına rağmen, niceliksel verilerle desteklenmiştir. Türkiye'nin kuzey kesiminde bulunan Samsun'un dört ilçesinde, yüz yılı geride bırakan sekiz katılımcı ile görüşmeler yapılmıştır. Bu kişiler, toplamda 200.000 kişiden oluşan bir popülasyondan saptanmıştı, kırsalda ve dağlık bölgelerde ikamet ediyorlardı. Röportajlar Ekim 2016- Aralık 2016 tarihleri arasında kişilerin kendi evlerinde gerçekleştirilmiştir.

**Bulgular:** Samsun'daki hedef ilçelerimizde asırlık katılımcıların total nüfusa oranını 0.4 / 10.000 kişi olarak bulduk. Katılımcıların yaş ortalaması 101.8 yıldır ve hepsi kadınlardı. Katılımcılarımızın arasında yoğurt tüketimi oldukça sık görüldü. Katılımcılarımızın birçoğu, ibadet ve dua gibi dini ritüellerin uzun ömürlü olmak için etkili olduğunu düşünüyorlardı ve bu tür uygulamaları genç nesillere tavsiye ettiler. En sık karşılaşılan sağlık sorunları ise hipertansiyon ve kas-iskelet sistemi hastalıklarından oluşmaktadır.

**Sonuç:** 100 yaş ve üzerindeki bireyler genellikle genç ve sağlıklı hissetmektedir. Katılımcılarımızın ileri yaşlara ulaşmadaki ortak sırrı, kötü alışkanlıklardan kaçınma, huzurlu bir çevrede yaşama ve doğal bir diyetdir.

**Anahtar Sözcükler:** Yaşlı, Röportaj, Yaşam

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## INTRODUCTION

Population aging is occurring worldwide with much of the growth numerically taking place in the developing world. Europe started experiencing population aging earlier but while growth was gradual in Europe it is happening very fast in the developing world. Eg it took France 125 years to go from 7-14% aged 65+; in China this happens in about 12 years. Currently, the number of elderly people is 605 million worldwide, and the WHO estimates that this population will reach 2 billion by 2050 (1). The population of elderly individuals is increasing, which might be correlated with decreasing mortality rate among 'oldest olds' (2).

Western countries use age 65 as the threshold to old age. However, recognizing that people at the beginning of this period are different in various ways from those who are older, it is common to speak of the young-old (age 65-74), middle-old (75-84) and the oldest-old (85+) (3,4). According to the results of a general census conducted in Turkey, the ratio of individuals aged 65 years and over consisted of 7.1%, 7% and 7.3% of the total population in 2007, 2009 and 2011, respectively. Moreover, it is expected that this number will reach to 9% by 2025 (5). Turkey is now in the trend of aging. Special support services for the oldest-olds are continuing increasingly.

A centenarian is an individual who has reached the age of at least 100 years. In the literature, women are dominant among centenarians. Indeed, the ratio of older women to older men is generally 1.5:1 throughout the world; however, it is 3:1 when considering people aged 90 years or older (6). Currently, the most rapidly increasing age population is 85 years and over. In the US, it is estimated that one fifth of the population will consist of individuals aged 65 years and older by 2020. In addition, the highest populations of elderly individuals reside in developing countries, with Asia accounting for over half, and China comprising one-fourth of the world's elderly (6).

Longevity has been associated with long-lived families and their related genetic material (7).

Although a portion of a centenarian's success can be attributed to their genetic background, genes are not the entire story. Nutrition, life-style, social support all contribute to achieving this centenary period (8). In this regard, this study was designed to question non-genetic factors.

This is a brief study of centenarians from a rural area of a developing country and similar studies are not common in the literature. We aimed to investigate the life stories, and therefore, the aging of centenarian participants. We believe that they have valuable experiences to share.

## MATERIALS AND METHOD

While the present study used qualitative methodology, we have attempted to support these aspects with quantitative data. Moreover, the study used an ethnographic approach. Ethical approval was obtained from the ethical committee of clinical researches of Ondokuz Mayıs University on 6 June 2016.

Being a centenarian was the only inclusion criterion of the study. We asked them if they were willing to be interviewed by young people about what they considered to be the important contributors to their long life? All of them accepted interview. They did not get any compensation for participating. In four towns of Samsun city, northern Turkey, interviews were conducted with eight centenarian participants after obtaining both the participants' and their relatives' permission. We used the data of the Public Health Directorate. That data source gave us names and addresses of centenarians who were detected from a population consisting of 200,000 people residing within the countryside or in mountainous regions.. The visits were conducted in their homes by the research team, between the dates of October 2016 and December 2016.

A total of 19 questions generated from a literature review were directed to the participants. The interviews were conducted in Turkish and subsequently translated into English. The analysis



done on the Turkish transcript. Each interview lasted an average of thirty minutes. The centenarians were asked a range of demographic questions (i.e. age, gender, educational background, marital status, number of children, number of grandchildren and occupation), their history of disease, drug use, major problems, the duration and frequency of smoking/ alcohol consumption, their favourite food and drinks, hobbies, advice, their favourite and saddest day of their life, whether they prefer old age or youth, the thing that they want to do but just cannot and the secret of their long lives. The answers to the questions have been presented in separate paragraphs for each participant.

## RESULTS

### Participant No. 1

Ms. E.B. is a 100-year old woman who is illiterate and a widow with three children, nine grandchildren and a total of 10 great-grandchildren. Throughout her life, Ms. E.B. worked on farms. She has hypertension and difficulty seeing and hearing. She is currently taking calcium supplements and pain killers daily. Her major problem is difficulty seeing and hearing. She has never smoked or consumed alcohol. Her favourite foods and beverages consist of red meat, yogurt, tea and milk, respectively. Her favourite activities consist of enjoying the scenery and praying. When we asked her advice about life, she replied, 'We were always consuming natural foods when we were young. Eat natural foods'. Her favourite day was the day she got married. Her saddest day was the day her son died. When we asked whether she preferred old age or youth, she gave an emphatic answer: 'Youth, of course!'. The thing that she wants to do but just cannot is 'Travelling in Turkey'. She also complained about financial difficulties. She revealed that the secret of her long-life is her home-made organic milk, yogurt and cheese.

### Participant No. 2

Ms. F.K. is a 100-year old woman who is illiterate and a widow. She has 5 children, 19 grandchildren, 30

great-grandchildren, and 3 great-great-grandchildren. She stated that she had no diseases and was only missing teeth. She takes daily vitamin supplements. Her major problem is a lack of appetite. She has never smoked or consumed alcohol. Her favourite foods are bulgur pilaf and yogurt, and her favourite drink is ayran (a local drink consisting of water and yogurt). The majority of her daily activities involve visiting with the neighbours. She advised us, 'Live as you feel happy'. Her favourite day of her entire life was the day she gave birth to her son. Among her children, only her last child was male. Her saddest day was the death of her first grandchild. When we asked whether she preferred old age or youth, she gave the answer of 'youth'. The thing that she wants to do but just cannot is 'Travel a lot'. The secret of her long-life is the consumption of yogurt, ayran and green vegetables.

### Participant No. 3

Ms. Z.C. is a 100-year old woman who is illiterate and a widow. She has 6 children and 19 grandchildren. Her income was farming. She has hypertension and takes daily anti-hypertensive medication. Her major problem is knee pain. She has never smoked or consumed alcohol. Her favourite food is corn soup and her favourite drink is water. She likes travelling and she still travels whenever possible. She advised us, 'Pray to god'. Her favourite day was the day one of her grandchildren got married. Her saddest day was the death of one of her grandchildren. When we asked whether she preferred old age or youth, she gave the answer of 'youth'. The thing that she wants to do but just cannot is 'Pilgrimage/ hadj' (a kind of religious ritual for Islam in Mekke, Suudi Arabia). The secret of her long-life is 'Working hard and a natural diet'.

### Participant No. 4

Ms. D.D is a 100-year old woman who is illiterate and a widow. She has 6 children and 25 grandchildren. Her income was earned by farming. She has no diseases; however, she cannot move her legs effectively. She does not take any regular medication. Her major problems are tremors in her hands and

being diapered because of urine incontinence. She has never smoked or consumed alcohol. She does not have any favourite foods or drinks but rather consumes all foods with same pleasure. She used to knit sweaters and socks during her free time until the previous year, but she is unable to knit anymore. She advised us, 'Do not consume fatty foods and frequently drink ayran'. Her favourite day was when one of her grandchildren got married. Her saddest day was the death of her husband. When we asked whether she preferred old age or youth, she gave the answer of 'youth'. She said that there was nothing that she could not do. The secret of her long-life is, 'Not eating fried food and consuming butter, yogurt and ayran'.

#### **Participant No. 5**

Ms. S.K is a 102-year old woman who is illiterate and a widow. She has 5 children and 15 grandchildren. Her income was earned by farming. She has hypertension, chronic joint pain and decreased vision. She is taking an anti-hypertensive and non-steroid anti-inflammatory drug therapies. Her major problem is decreased vision and knee pain. She has never smoked or consumed alcohol. Her favourite food is soup and her favourite drink is linden tea. She has no special hobbies in her daily life. She mostly enjoys looking at scenery. She advised us, 'Do not eat fried foods, do work, do produce and do pray'. Her favourite day was when she gave birth to her first child. Her saddest day was the death of her first child. When we asked whether she preferred old age or youth, she gave the answer of 'youth'. The thing that she wants to do but just cannot is, 'Pilgrimage/ hadj'. The secret of her long-life is, 'A natural diet and praying a lot'.

#### **Participant No. 6**

Ms. F.Y is a 102-year old woman who is illiterate and a widow. She has 7 children and 18 grandchildren. She was a house-wife and did not have another job. She has Alzheimer's disease and is confined to a bed. Therefore, we gathered information especially from her child during our visit. She does not take any daily medication and she consumes only two or three pain

killers per week. Her major problems are being an invalid and not moving freely. She has never smoked or consumed alcohol. Her favourite food is meatballs and her favourite drink is tea. She mostly prays. She advised us, 'Be tidy and rigorous'. Her favourite day was when she met with her children and grandchildren. Her saddest day was when she became completely bedridden. When we asked whether she preferred old age or youth, she gave the answer of 'youth'. She did not say anything about the thing that she wanted but that she could not do. The secret of her long-life is, 'to be planned and programmed'.

#### **Participant No. 7**

Ms. A.A is a 105-year old woman who is illiterate and a widow. She has 10 children, 24 grandchildren and over 100 great- and great-great-grandchildren. Her income was earned by farming. She has arthritis and she does not take any medication. Her major problem is leg pain. She has never smoked or consumed alcohol. Her favourite food is red meat and her favourite drink is ayran. She mostly helps others with farming. She advised us, 'Have a natural diet and live in plateaus'. Her favourite day was when her husband returned from the military. Her saddest day was when she lost her husband. When we asked whether she preferred old age or youth, she gave the answer of 'youth' and she said, 'I wish i was young and working again '. The thing that she wants to do but just cannot is, 'Pilgrimage/ hadj with her husband'. The secret of her long-life is, 'Having breakfast, drinking corn soup and consuming dairy products'.

#### **Participant No. 8**

Ms. D.K is a 106-year old woman who is illiterate and a widow. She has 6 children, 35 grand-children and over 50 great- and great-great-grandchildren combined. She does not have any known chronic diseases and does not take any medication. Her major problem is decreased vision and limitations of her movement. She has never smoked or consumed alcohol. Her favourite food is red beet jam and her favourite drink is tea. She likes taking care of animals during the day. She advised us, 'Don't fight, make peace'. Her favourite day was when her grandchild



had a grandchild. Her saddest period was when she lost three of her children within a month. When we asked whether she preferred old age or youth, she gave the answer of 'youth' and she said, 'I wish I'm young and working again'. She does not have anything that she wants to do but just cannot. The secret of her long-life is, 'Butter, eggs and homemade yogurt'.

## DISCUSSION

Centenarians are the best example of accomplished aging, most likely due to their genotypes and to unique neuro-immuno-endocrine mechanisms. In most developed countries, while the ratio of centenarians is 1/10,000 individuals, it is 3.5/10,000 in Japan (2). In our study, we found this ratio to be 0.4/10,000 for target towns of Samsun, since Turkey has a young population and the life-expectancy is lower compared to other developed countries. In addition, the life expectancy in the developed world is increasing, as accurate records indicate and continues to rise linearly.

Regarding their general health status, there are certain differences keeping centenarian individuals healthier than those who die at a younger age. In fact, various studies have shown that the majority of centenarians are in surprisingly good health. In addition, while biological (e.g. systemic pathologies) and social (e.g. loss of companionship) factors have a tendency to increase throughout older adulthood, the prevalence of negative mental health symptoms (e.g. depression and loneliness) are comparable or lower compared to that during early adulthood (18-25 year olds) (9).

The proportion of women aged 100 years and over is much higher than men in the literature. The average age of participants in a study conducted by Pinti et al, in Italy, was 100.8 years, of whom 88% were women (10), another study conducted by Bagnara et al, in Italy, reported that the mean age of nine centenarian participants was 100.5 years (11), and Sansoni et al, in Italy, found the mean age of participants to be 100.7 years, of whom 88%

were women (12). The reason for this discrepancy is not clear and variations associated with differential mortality rates in women and men, as well as those related to social, genetic and anthropological factors, may play a role. In the present study, the mean age of the participants was 101.8 years, which is one of the highest age averages in an academic study. All the participants are women and therefore, support the trends in the literature.

The reason for the illiteracy among the participants in this study was residing in rural and mountainous regions, as well as being unable to attend school due to financial constraints. Franceschi and Bonafe have described the lower population of men >100 to more extensive "chronic inflammation peculiar to aging" compared to women (13). Jopp et al. suggested that mental health conditions of oldest old participants were better than young olds or olds in spite of the decreasing level of physical functionality and social support, as well as their age-dependent adaptation abilities are interesting (14). In our study, there was only one participant with a neurological disorder (Alzheimer's disease) and all of the participants were still trying to maintain a social life as well as active life styles except her. It has been established that olive oil, vitamins C and E, berries, dark chocolate, beans, fish, vegetables, nuts, whole grains, garlic, red wine and avocado have anti-aging effects (15). The consumption of fat-reduced milk and dairy products, reducing the amount of salt in meals, not using salt during meals, not drinking beverages, such as tea and coffee excessively and not smoking cigarettes have been suggested to contribute to longevity (16). In a study conducted in Poland, it was found that the life-long consumption of yogurt, skim curd, fish, lean meat products, plant oils and sweets were higher in people aged 100 years and over than individuals under the age of 100 (17). It is important to note that yogurt consumption was found to be quite frequent among our participants. It is known that the probiotic effect of yogurt facilitates healthy ageing as it includes proteins, minerals and vitamins (18). The mental adaptation of elderly people against senility is a significant determinant for healthy ageing. In a study

evaluating the gender differences among centenarian people in Greece, the mean age of the participants was 101.6 years and the ratio of women was 62.7%. According to this study, women were found to be more adaptable than men (19). By considering the positive effects of elderly people who live together with close relatives, providing familial and social support, improving relationships with elderly people and developing home-care projects might extend life. In a qualitative study conducted in Hong-Kong involving six participants, the mean age was 103.5 years with a ratio of 50% women. According to the study findings, a positive relationship with other people, events and happiness, hope for the future and a positive life attitude were the most important constituents of life (20). In addition to these, a positive correlation was found between religion or religiosity and improved health status (21). In a study conducted on 12 patients by Pascucci and Loving, the mean age of the participants was 101.6 years and the ratio of women was 75.0%. They identified that a dependence on god is a strong component of long life (22). Similarly, a number of our participants also thought that religious rituals, such as worship and prayer, were effective for living a long-life and they advised such practices to younger generations.

Unfortunately, problems involving multi-morbidity, systemic function inadequacy, disability and a decreasing quality of life are common in individuals of advanced age. The most common health problems affecting elderly people include hearing loss, musculoskeletal problems, arthritis, hypertension, cataracts and unsafe environments (23). In our cases, the most common problems consisted of

hypertension and musculoskeletal system diseases. Moreover, there were also age-related vision and hearing problems. It is noteworthy that there were no psychiatric problems like depression or psychosis identified among our participants. Approximately 13% of older men and 12% of older women in the UK still smoke cigarettes, and smoking remains the largest cause of premature death (24). In adults, alcohol consumption above the 'safe' or 'sensible' limits is 20% and 10% in men and women over the age of 65, respectively (25). None of the participants in this study had a history of smoking or alcohol consumption.

In the present study, our sample does not include urban or educated women Turkey. Results are generalizable only to the population from which we sampled and for which we site centenarian rates or more generally, the rural population of northern Turkey. Moreover, the absence of examinations, such as biochemical tests, electrocardiography and chest X-ray of the participants is the other limitation. Our study would have benefited from such clinical data; however, the geographic conditions and technical opportunities did not permit such data collection.

In conclusion, individuals who reach the age of 100 years or more generally feel youthful and healthy. The common secret our participants provided for reaching advanced age is a natural diet, avoiding bad habits and living in a peaceful environment. Moreover, members of this limited age group might require additional social and medical support at any time in the future.

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