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## Perceptions, knowledge and attitudes of elderly people about old age vaccinations

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### Abstract

*Purpose: The research was conducted to determine the state of perception and level of vaccination in the elderly living in their own homes and not dependent on daily basic functions. In addition, this study aims to inform and raise awareness about immunization in advanced age. Methods: The study was conducted from 1-30 October 2017 as a case study of qualitative research methods. The study's working group formed individuals, determined by an easily accessible case study, over 65 years of age who were living in their own home and were not dependent on day-to-day activities. The research data were collected using in-depth interview with 25 elderly individuals who agreed with the study criteria and agreed to participate in the study. Collection of research data was terminated after reaching the saturation point. Interview records were deciphered by the researchers and analyzed for content. Results: The data obtained from the semi-structured interview were examined under five main themes. These are the themes; the views and attitudes of participants to protection from advanced age diseases, the awareness of the participants about advanced vaccination, the ways of reaching information about the immunization of elderly individuals, the thoughts about the necessity of vaccination of the participants in advanced ages, and the thoughts about the reasons for vaccination in advanced age. Regarding the level of vaccination, research showed that participants routinely performed influenza vaccination and pneumococcal vaccination, respectively. Very few of the participants had received Hepatitis B vaccination, and one participant had received dialysis treatment, and nearly all of the participants were found to have tetanus vaccination only as a result of the injuries. Other vaccines, such as herpes zoster, have not been identified by advanced aged individuals and are therefore considered to have no awareness of these vaccines. Discussion: In this qualitatively designed study, the perception, knowledge and attitudes of the elderly individuals regarding the issue of vaccination were determined and solutions for the problems were presented. The elderly individuals participating in the study were informed after their perception status and vaccination levels were determined. Information issues*

*contain; why immunization is important in the old age, what diseases can be protected by immunization, ways to reach immunization services and which vaccinations are recommended.*

Keywords: *Aging, old age vaccination, attitude , knowledge, qualitative research.*

## **1.Introduction**

The world population is getting older and life expectancy is rising all over the world. Today, 8.7% of the world's population is the elderly population (United-Nations, 2015). The top three countries with the highest elderly population were Monaco with 31.3%, Japan with 27.3% and Germany with 21.8%. Turkey ranks 66th out of 167 countries in this ranking (TÜİK 2016). According to TÜİK, the proportion of elderly population (65+) of Turkey as of 2016 is 8.3%. According to the results of life expectancy for the year 2015, Turkey has been 78 years for the general population, 75.3 years for men and 80.7 years for women. Generally, women live longer than men and the life expectancy difference at birth is 5.4 years. It is estimated that the proportion of population aged 65 years and over will be 10.2% in 2023, 20.8% in 2050 and 27.7% in 2075 in Turkey, which is 8.3% in Turkey in 2016 (TÜİK 2016). All over the world, there is a decrease in mortality and morbidity due to infectious diseases, whereas the incidence of chronic diseases increases day by day. Decreased immune response at later ages increases susceptibility to infections. Frequent chronic diseases lead to increased complications due to infections and more severe infections. The World Health Organization (WHO, 2013) has reported that 2.5 million deaths are prevented each year by vaccination, which is the main way of protecting them from infections. WHO has defined the term "decade of vaccines" to draw attention to this situation between 2011-2020.

Today, health services are based on preventive services. There is a general and region-specific immunization options for sixty-five years and older group in the world and Turkey. Today, the most important reason for the practice of advanced age immunization is to protect from the situations or undesirable effects of mortality (morbidity) and morbidity (disease) in this age group. While many diseases are preventable with vaccination, vaccination programs are still being neglected for various reasons. Especially in developing countries, vaccination is expensive and neglect of vaccination is the leading cause of disruption (Aslan, 2011). Published in 2016 during old age in Turkey Adult Immunization Guide made specifically recommended three vaccines; pneumococcal, influenza and herpes zoster vaccines. In addition, vaccination of individuals who are close to the elderly is recommended so that the elderly can be protected from diseases and complications (Erişkin Bağışıklama Rehberi Çalışma Grubu, 2016). Adult immunization is an application that does not reach its goals even in developed western countries according to childhood routine immunization programs. This is why adult immunization is not the primary goal of community health authorities and is less important than child immunization. In developed countries, 59-75% of influenza vaccination rates in the population over 65 years of age are reported (Abramson & Levi, 2008). International studies have reported that inadequate information, false attitudes and beliefs of physicians about the subject, and the priority given to elderly groups in both physician and patient treatment

services, the vaccination levels are below the desired levels in the elderly population (Zimmerman RK , et al. 2004). Despite the fact that our country is in a very good position in terms of childhood immunization and attaining the target, there are problems in evaluating the need for adult vaccine due to registration problems. Studies on vaccination habits of the elderly population in our country are limited. a medical school hospital pulmonologist vaccination rates in patients with chronic obstructive pulmonary disease outpatient clinic has been identified as influenza and pneumococcal respectively for 33.3% and 12% in Turkey (Bülbül Y, et al. 2010). Bilgili and his colleagues conducted a study on the persons aged 19-63, investigating knowledge, attitudes and attitudes about vaccination of adult population and stated that 41% of the participants did not have any adult vaccination. Participants were found to have the highest (43%) tetanus vaccine, but the most commonly known vaccine was influenza vaccine (Bilgili, Çakmak & Aşık, 2013). In a study of adult-onset immunosuppression in chronic obstructive pulmonary disease (COPD) in 2010, 129 patients between 41 and 85 years of age who were diagnosed with COPD; The frequency of influenza vaccination was 37% and the frequency of pneumococcal vaccination was 15% (Özsu, et al, 2011).

This study was conducted to determine the state of perception and level of immunization in the elderly living in their own homes and dependent on daily basic functions. In addition, this study aims to inform and raise awareness about immunization in advanced age.

## 2. Materials and Methods

This study is a qualitative research. The most important characteristic of qualitative research is that it is natural that people, assets and events are examined in the natural environment (Punch, 2005: 65). The subject of the research was examined in a natural environment in accordance with the phenomenological (phenomenological) research pattern of qualitative research methods. The phenomenological pattern advocates the search for consciousness that is not in essence. Because questions and problems are related to the portrayal of essences. This is also the study of perception. In a different way, the representation of the consciousness is the main field of research of phenomenology. Phenomenological studies define the common meaning of several people's experiences of a phenomenon or concept. (Sönmez & Alacapınar,2014:88; Creswell, 2013:77).

The research was carried out on October 2017. The study group of the study constitutes retired cafeteria residents of Antalya Konyaaltı Municipality who serve over 65 male and female retirement age. In the selection of the sample, it constitutes individuals older than 65 years who are living in their own home and are not dependent on daily basic activities determined by sampling of easily accessible situation. The research data were collected using in-depth interviews with elderly individuals who agreed with the study criteria and agreed to participate in the study. Participation willingness has been taken into consideration. The data collection technique of the research is individual interview. Stewart and Cash (1985) described the interview as "a process of mutual and interactive communication based on a questioning and answering style for a pre-determined and serious purpose". According to Siedman (1991), the main purpose of using the interview technique is not usually to test a hypothesis; on the contrary, to try to understand the experiences of other people and how they make sense of

these experiences. For this reason, the focus is on the stories, descriptions and thoughts of other people, in other words the cultural categories in the mind of the person. The interview was conducted using a semi-structured interview form. Semi-structured interview form was prepared by constructing a conceptual framework, taking the work of the interview and taking the opinions of the experts after the preliminary interviews. The most important advantage of the semi-structured interview technique to the researcher is that it provides more systematic and comparable information because the interview is carried out according to the pre-prepared interview protocol (Yıldırım & Şimşek, 2006: 283).

In the form, personal information and literature are searched and the questions prepared by researchers are included. After a brief preliminary information was given for elderly individuals, interviews were held. These questions are; what participants think about what they have to do to protect themselves from disease in the future, what the participants have knowledge about advanced vaccination, what are the ways in which advanced age individuals access information about immunization, what participants think about the necessity of vaccination in advanced age, and why participants are vaccinated in advanced age. The Sub-Questions varied according to the flow of the viewers, and tried to provide answers.

### 3. Results

In this section, the results of the descriptive analysis conducted to determine participants' perceptions, knowledge and attitudes about vaccination were presented. Of the 25 participants who participated in the research, it was determined that eleven of the 25 participants were male, the nineteenth was male, the nineteen were in the age group of 65-74, the six were in the age group of 75-84, the five were literate, the seventh was elementary school graduate and the fourth was middle school graduate. Eleven of the participants did not work in any job, five were farmers, and nine were retired. Seven of the participants were widows, the nineteen were married, the two divorced, both were single.

The data obtained from the semi-structured interview were examined under five main themes. These are the themes; the views and attitudes of participants to protection from advanced age diseases, the awareness of the participants about advanced vaccination, the ways of reaching information about the immunization of elderly individuals, the thoughts about the necessity of vaccination of the participants in advanced ages, and the thoughts about the reasons for vaccination in advanced age.

#### 1. Participants' views and attitudes towards disease prevention in advanced age

Working in the "participants' opinions and attitudes regarding the prevention of diseases in old age" of all examined "good nutrition", "morale high retention", 19 / 25's to take good care, 14 / 25's of weather conditions suitable dressing, 8 / 25's regular visiting a doctor, 20 / 25's to stay away from stress, 11 / 25's was defined as the vaccination.

"I'm healthy. I eat good food, nothing to worry about. I do not mind my head. I am easily sick and easy. Why do I need vaccination ?"(P6).

"To be protected from the disease, a regular sleep is essential. Of course, it hurts too much. But the morale is also affecting sleep. It affects both our sleep and our resistance. I do not need to be all over the head. As you get older, you understand the value of your health "(P18).

"I regularly inspect my surveys. I follow my doctor's advices. I do not neglect the vaccinations for the elderly. Not recommended unless it is important "(P21)

"I do not believe everything. What I know is the person's ointment is itself. You will take good care of yourself. You should dress appropriately and be careful about sweating. I change my clothes immediately when I sweat. Or if I go out in the cold, I will take measures against weather. Then morale is very important for health "(P9)

## 2. Awareness of participants' vaccination aging

When the study examines "state of awareness on advanced vaccination"; The fact that 7/25 had regular influenza vaccination every year, 6/25 did not believe in the vaccine effect, 3/25 had negative experience about vaccination, 5/27 had an ill effect In the opinion, it was determined that the perception of vaccination on 12/20 was negatively influenced by negative opinion, 10/25 of tetanus vaccination and 5/25 of hepatitis vaccination.

"What if I were vaccinated after this age? I don't experience anything different, in any case I have influenza every year. "(P12).

"To be clear, I do not know much or I can say that I know something in my own way. For example, I have low blood values betimes. Sometimes I have an injection for them. "(P17).

"I do not know about vaccine things. I know about influenza vaccination. But I don't remember the name "(P11)

"I do not know vaccinations' names, only I know is influenza vaccine. I have it annual when the weather gets cold. "(P22)

## 3. Access to information on immunization of elderly individuals

When studying ways of accessing information about immunization of elderly individuals in the study; it was seen that the participants expressed their definition in 5 sub-themes. This identification of participants 5/25 routing of the family members of 2/25 of surrounding individuals positive / negative lived experiences, 5/25 peer recommendation, 9/25 of the health information received from professional, 3/25 of about immunization access to information via the internet, 14/25 is not informed about vaccination. It is important to note that participants who have knowledge of immunization in the study have multiple ways of accessing information.

"Not that I know it, but because my son said, I do not be vaccinated." (P1)

"I am doing it because my family doctor recommends it. If it is not beneficial for me, why does he recommed me to do so ? "(P13)

"My daughter, I always have influenza so I know flu vaccine. I heard it from the doctor." (P17)

"They said that one of my familiar died because he did not have tetanus vaccination. The doctors said: 'If he would be vaccinated, he wouldn't die.' For this reason I tell my children: 'Do not ignore me, let me have the vaccinations' " (P4).

"I read about the importance of vaccination in the elderly from the Internet. I like to research from the internet when I'm hooked on something about health issues "(P10).

#### 4. Thoughts on the necessity of vaccination in advanced age

When examining the views of participants in the study on the necessity of vaccination in advanced age; the idea that 4/25 is ineffective is the idea that 5/25 is an overpopulation of money, the idea that 2/25 is too damaging to the benefit of vaccine, 11/25 is the effective way to protect against the diseases, 10/11 believe that the need for vaccination is defined as the idea that vaccination is necessary in childhood and old age. It is worth noting that almost half of the participants in the study do not believe that it is necessary to vaccinate more.

"We have less power to protect ourselves. So we have to be vaccinated. Like children, we are now becoming somebody who needs to be protected ". (P24)

"In the past I had flu vaccination every year. I give in for 4-5 years. I did not see the benefit of it "(P5)

"Did you say vaccination? I dont have an injection or vaccination. My remedy is inside me. I am an old stager, I do not need new inventions ."(P8)

"No need for vaccination when you get older"(P8)

When you get older, you do not want to do anything. So I think it's unnecessary to be vaccinated (P16)

"I do not like the doctor and the injections. I did not need it until now "(P16)

#### 5. Thoughts on reasons for vaccination at advanced age

When the participants' thoughts on the reasons for vaccination in advanced age were examined; it appears that the definitions made have formed five sub-themes. Almost all of the vaccinated participants were commonly used to define grafting and fear of death. It was determined that 9/25 of the participants were vaccinated with the pressure of the family members, 2/25 with the idea of acting together with the peers in the periphery, and 7/25 of the health workers were informed of the vaccination.

"It's built to gain immunity. Protect from death and disease. Doctors say vaccinations are important. I am serious about the importance of vaccination because I was a nurse in the past"... (P4)

"As you get older you fall from the power of old strength. The tendency to become sick is increasing. For example I have to be vaccinated every year for this very common flu. Being a vaccine is not an incredibly troublesome thing anymore. After a certain age it is actually very necessary and useful..." (P2)

“Apart from the age when it is necessary you should be vaccinated. In the past, for example, there was ‘h1n1 influenza a’ , then we were vaccinated. Besides I have a disease called vertigo. When it comes, I go to the hospital and have serum...” (P25)

#### 4. Discussion

In this qualitatively designed study, the perception, knowledge and attitudes of the elderly individuals regarding the issue of vaccination were determined and solutions for the problems were presented.

When the survey participants' opinions and attitudes regarding the protection from disease in advanced age were examined, it was found that one of the notable findings was that the participants preferred "good nutrition", "high morale", the majority of them preferred to stay away from struteness, take good care of themselves and dress appropriately according to weather conditions. Less than half of the participants expressed their attitudes towards going to a regular doctor and getting a vaccination. Our findings regarding the inadequacy of the vaccination status are consistent with the findings that Zeybek and colleagues found that adults in the age group of 65 and over did not have the recommended influenza, pneumococcal, and tetanus vaccines (Zeybek et al, 2004). It has been determined that the participants are not informed about the vaccines to be applied for this age group and have not been vaccinated based on this information, which is often incomplete and often incorrect. It has also been determined that these vaccinations are not covered by any health insurance and that vaccinations are avoided due to the fact that they have to pay the vaccinations by paying them. According to the research findings, participants generally stated that their attitudes towards protection from diseases have the ideal behaviors such as good nutrition, adequate rest and sleep, keeping morale high, and taking good care of themselves. It is seen that this finding of our study overlaps with the national research findings. Turkey Health Survey (2014) is based in Turkey, the share of those who never used alcohol in the 65-74 age group, 71% and 81.7% in the group above 75 years of age(TÜİK, 2015). Likewise, Yilmaz and Çağlayan's study of the effects of healthy lifestyle on the quality of life in the elderly found that 27% (n = 103) of participants had healthy lifestyle habits. Participants were found to have ideal behaviors in healthy lifestyle habits with a maximum of 87.7% and no signs of excessive alcohol consumption and 70.2% sleeping at least 7 hours a day (Yilmaz and Çağlayan, 2016).

When the state of awareness on advanced vaccination is examined as a result of the research, the notable finding is that there is no knowledge of the vaccination of more than half of the participants. This finding is consistent with the findings of Akman and colleagues that participants found no influenza, pneumococcal and tetanus vaccination at the commonly recommended frequency, and that the highest vaccination rate was 26.5% with influenza vaccination(Akman et al, 2014). Other findings of the study are as follows: some of the participants did not believe in the vaccine effect, experienced negative experiences about the vaccination, thought that the vaccine caused the illness, vaccination was neglected because of negative influence on the vaccination. This finding of the research revealed that rumors spreading among the people with the work of immunization named Öztürk (Öztürk, 2012), statements and writings almost all of which are not based on blood, causing a negative image

about the vaccines (causing deaths of many people) has been moved to the agenda of the public in various ways, especially in the web environment, and as a result, the public has increased some of the reservations about vaccinations. The adult vaccination program should be covered by the national vaccination program and supported by the Ministry of Health. In this regard, health professionals should be trained before and after graduation. Citizens must be informed through written and visual media. It is important to increase vaccination rates through awareness raising and awareness raising.

When the ways in which advanced age individuals reach information about immunization are examined; the vast majority of the participants expressed that most of the knowledge of vaccination was obtained from the health professionals and then by the members of the family. These findings are consistent with the findings of Erer et al. Erer and his colleagues reported that 72% of the participants attended to the vaccination information, 14% were from friends, 6% from pharmacies, 4% from medias and 4% from other patients. In the study of Akoğlu and colleagues, 32 (37.6%) of the vaccine patients were diagnosed as 13 (% 40,62). 12 (37.5%) were hospitalized; (15.62%) from the media, and 3 (9.37%) from the neighborhood (Akoğlu L.,et al 2013). In the study of Taşbakan et al., 56.9% of the patients were informed about the vaccination information, 27.5% were in health institutions and 15.6% were in the media (Taşbakan et al., 2007). Family physicians who manage the clinical process, especially with holistic approach and comprehensive care principles, should be sensitive to this issue and follow the vaccination status of their patients by suggesting appropriate vaccinations for their age and risk situation to their patients, which will greatly contribute to the increase of vaccination rates.

When examining the need for participants to vaccinate in advanced age in the study, one of the remarkable findings was that they did not believe that more than half of the participants needed vaccination. This finding is based on our country's first National Vaccine Workshop report; the fact that the knowledge of the diseases and vaccines which can be protected by the vaccination of the adult individuals for the interest of the adult vaccination to the adult vaccination is very limited and that the beliefs and attitudes about the vaccination may be wrong and that the belief "is for vaccinated children" is widespread and adults are not informed about the unit and authority (National Vaccine Workshop Report, 2014) Another outcome highlighted in the National Vaccine Workshop report is that physicians have limited knowledge of adult vaccination, even knowledge, but do not turn vaccination into behavior for themselves. (National Vaccine Workshop Report, 2014). The workshop emphasized the necessity of long-term planning for adult vaccination and giving priority to the training of health workers. In a recent meta-analysis, clinician reminders and education and patient outreach involving personal contact were all identified as factors that have been observed to improve coverage of pneumococcal vaccination among community dwelling adults (Lau D. et al, 2012). One of the positive developments in our country has been the payment of influenza, pneumococcal and hepatitis A vaccines to risk groups designated in 2014 (National Vaccine Workshop Report, 2014).

When the participants' thinking about the reasons for vaccination in advanced age were examined, almost all participants who believed in the necessity of vaccination (11 participants)



defined vaccination as fear of death and protection from diseases. Participants acquire the vaccination behavior to minimize the risk of infectious disease. A 2007 meta-analysis of the relationship between risk perception and vaccination behaviour among adults found that an individual's perceptions of risk, and perceived severity of the disease are both associated with vaccination behaviour (Brewer et al, 2007). The finding of Brewer and his colleagues is similar to the findings of the study.

## **5.Conclusion**

In order to increase the immunization rates of elderly patients, it is suggested that social media should be used effectively in order to promote the vaccines as well as written and visual media, and to increase awareness by emphasizing the precepts. In this sense, there is also a duty to the relevant non-governmental organizations. Particularly, it is considered that family physicians who manage the clinic process with holistic approach and comprehensive care principles should be sensitive to this issue and offer their patients appropriate vaccinations for their age and risk situation, thereby contributing to the increase of vaccination rates and awareness of patients.

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## **Conflict of interest**

The authors declare that there is no conflict of interest.

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