

# Influence of the physical activity level on the life expectancy

## Abstract

In Brazil, the index of elderly people is growing a lot if we compare with the previous centuries. Aiming at this increase of the greater age in the country, we aim at the study to understand if physical exercise may be necessary to have an increase in our life. We will also seek to bring plausible information if leisure and eating can also influence our longevity and whether we need to maintain this for a long time. In this article, we will observe and interview 6 people with or over 70 years. We chose these people for their own experiences that we deemed necessary for the study results. We will do these interviews with a pre-prepared questionnaire to keep everyone's outline resembling one another. We will also discuss the family environment, work, education, leisure, health and food of the interviewees, aiming to know how their childhoods and adolescents were, in order to better understand the difference of life of the old days.

**Keywords:** longevity; lifestyle; aging, physical exercise, family environment, work, education, leisure, health, food

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Eduardo Bueno Carneiro,<sup>1</sup> Flávia Angela Servat,<sup>1</sup> Julio Cesar Lacerda Martins,<sup>2</sup> Pablo de Almeida,<sup>1</sup> Carlos Ricardo Maneck Malfatti,<sup>2</sup> Luiz Augusto da Silva<sup>1</sup>

<sup>1</sup>Faculdade Guairacá, Colegiado de Educação Física, Guarapuava, Paraná, Brazil

<sup>2</sup>Academia Militar das Agulhas Negras – AMAN, Resende, Rio de Janeiro, Brazil

**Correspondence:** Luiz Augusto da Silva, Faculdade Guairacá, Colegiado de Educação Física, Rua Simeão XV de Novembro, n. 7050, 85010-000, Guarapuava, Paraná, Brazil, Tel/Fax +55-42-3622-2000, Email lasilva7@hotmail.com

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## Introduction

In Brazil, the index of elderly people is growing a lot if we compare with the previous centuries. With this increase, the elderly population tends to seek better health and keep their bodies in the best possible state.<sup>1</sup> As mentioned in the last update of the National Household Sample Survey (PNAD, Brazil 2017), the elderly had a growth margin of 16% from 2012 to 2016, being that the estimate of the Brazilian population would be 205.5 million, this means that about 29.6 million people in the country are elderly. According to studies by the Brazilian Institute of Geography and Statistics<sup>2</sup> in 14 years, the elderly will surpass 41.5 million in Brazil, reaching 66.5 million in 2050. With this large increase, the country will have to demand new priorities in the area of public policies, mainly by improving the health fields where the focus is on the elderly. According to Camargos<sup>3</sup> the elderly tend to become sicker and weaker when they reach age 60, this age may be different according to their past experiences, this would be the beginning of a poor self-perception of health. In the study by Fiedler<sup>3</sup> it was shown that in the municipality of Joaçaba SC, 35% of the 370 elderly people over 60 years of age present inadequate functional capacity and need help to perform up to three activities.

“Since in later ages the visual, auditory, motor and intellectual limitations, as well as the appearance of chronic-degenerative diseases intensify, causing dependence on daily activities”.<sup>3</sup>

We must also consider the life expectancy with and without diseases, with and without disabilities, with and without functional disability, with good or bad health perception, always considering the individual characteristics of each individual.<sup>4</sup> According to Camargos<sup>4</sup> it is shown that women after the age of 60 have a life expectancy of up to 15% more than men, but this is a disadvantage because most of these lived years are considered a poor health self-perception for them.

In order to have a healthy aging, physical activity is recommended as a way of maintaining physical fitness in the elderly.<sup>3</sup> Life expectancy in 1900 was no more than 35 years old, in 1950 it was 43 years old,

and in 2000 it was expected to be 68 years old. It is speculated that in 2025 the Brazilian life expectancy reaches 80 years.<sup>3</sup>

Knowing then the proper level of activity, and its importance to keep the body healthy, makes the practice of physical exercise essential to the daily life of the human being, and even more important for the elderly. Thus, the overall objective of the study will be to analyze the influence of the level of physical activity on life expectancy. As specific objectives, we seek to understand which physiological mechanisms are influenced to maintain longevity; to quantify the time of physical exercise performed by the participants.

## Methodology

We opted for a qualitative study so that we could know more about the life of individuals, how much exercise and nutrition influence the prolongation of life and see the lifestyle of the elderly that have led them to reach that age. The influence of stress, anxiety and quality of life was also evaluated. In this article, we conducted a retrospective descriptive observational study, we opted for this method, since we believe it to be the most likely to bring more accurate results and with more detailed data on the presented theme. In this article, 6 people with or over 70 years old were observed and interviewed. Where the interviews were made in person regardless of where the interviewees were. We chose this type of group because their past experiences can be used as reference for the answers we seek.

We chose individuals with this age group with no restrictions on behavior, sex or disease, if the subject did not have the capacity to answer the questions, we would choose to obtain the answers with their relatives or some person close to him in question, the subject of the interview and his next of kin must be together so that the interview can be held.

We sought the participants' understanding and confidence so that they could open up more to us and talk more about their lives so far. An interview was conducted seeking to understand the quality of exercise, nutrition and lifestyle of these people. Thus, an

interview containing some pre-prepared questions was used so that the interview questions were similar to each other, in order to obtain different answers on the subjects pointed out and compare them. In interviews, let us ask ourselves about the life the individual has had up to now, what he did in his childhood, what he ate in his daily meals, how he spent his daily life to adulthood, if he did type of manual work, among other questions to know how these individuals reached that age. According to the project, a letter of introduction has been sent to the owner of the bodybuilding gym so that he has permission to conduct the interview with practitioners who are interested and fit the research. Immediately afterwards, the informed consent form (ICF) was applied. The research will have absolute confidentiality of the participants' name as authorized by the TCLE. The project was approved by the ethics committee of UNICENTRO (COMEP) for opinion No. 2,850,084 / 2018.

We used a categorization technique to better organize the interview, and categorization is divided into two stages: inventory and classification. Where the inventory isolates the members of the study and the classification serves to organize the messages thus obtained.<sup>5</sup> In categorization, the process used reduces the text and words significantly so that the key answers that will make the study render can be better observed.<sup>6</sup> It also ends up making a process of raw data for organized data, categorization simplifies this data without neglecting the excess or rejection of the material obtained, always trying to simplify this raw data.<sup>7</sup>

## Results and discussion

Of the six people interviewed, four were men and two were women, the age range ranged from 70 to 79 years. The interviews had a very similar design with each other, all lived in rural areas in their childhoods. For a better understanding of these interviews, we followed the model of Willing et al.,<sup>8</sup> where we divided into six topics explaining the striking features of the study subjects.

### Food

A healthy diet today is difficult to find, so much so that Mello<sup>8,16</sup> showed that obesity increased by 13.9% in the last 20 years and Mondini<sup>9</sup> presented a study saying that carbohydrate consumption of the year from 1962 to 1988 had a great increase in our daily life. For the participants of our study, nothing they ate was bad or bad:

"I used to eat what nature had to offer, cherry, the greens that I and my parents planted, and the meat and egg of the chicken and the animals that looked after us." (Aged A).

"When I made dinner, it was almost always the same, beans and some vegetables my family planted and some rice that I bought from neighbors from time to time" (Elder B).

Even those interviewed enjoying commenting that everything was healthier in their times, nowadays with the advancement of cities and increasing food variation, nutrition in the country is much better than in the past.<sup>9</sup>

### Job

Because they lived in rural areas, they had to work early. The men worked carpentry, plowing the field and tending the plantation, while the women took care of the housework and the younger brothers.<sup>10</sup> The family income came from what was left of their crops, where they sold once a month in the nearest town or when a merchant came to collect the produce.

"We worked with slippers on the farm, did not have the security it has today, it was broken corn in the hand, those hand milkers, took care of the cattle, chicken, pig, everything I said I did with a smile on my face thinking in my family that I was at home waiting for my return" (Elderly D).

"I had to wash, pass, cook, leave everything ready for my flight to get home from work and have everything ready at home. To wash the clothes had to go in the riu near the house and use stones to help clean up the dirt" (Elder B).

With the advancement of technology, the manual labor that was done in the past was replaced by machines, so the young people of today who work on it do not make as much effort as it would have been in the past.<sup>11</sup>

### Cheers

In the matter of their childhood health, they all said that it was very good, they rarely got sick, and when they did not go to the doctor, the medicines they used were teas or medicinal plants that they planted in their backyards. The few cases of the interviewees and their families did not get very sick during their stays in the field, may have been their greater resistance and muscular strengthening, where their diets were of natural products and their strong bodies by the heavy service.<sup>12</sup>

"My mother always knew what was good when I or my brothers were sick, it could be a simple bellyache that she was already going in the yard and picking up some plants and making a little tea, after a while the pain passed and she only had to thank you for having a person as wise as she is around" (Elder F).

Even with the advancement of medicine, respondents still prefer a home remedy because of their past experiences, comment that it is good to have a doctor and well-researched remedies for each disease, but it is still better to have a home-made bed with some plants that they even on duty in the yard following the tradition of their parents and grandparents. It is not indicated that they do this, because without further study, it is not known if these home remedies can bring some kind of side effect on the disease, it has to be studied the forms of collection, way of planting and even the right amount for each case.<sup>13</sup>

### Recreation

The study's seniors commented that they did not have much time to enjoy themselves, that they spent all day working or helping at home, but when they had the time they would go out and have fun in the way they found most enjoyable at the time.

"When I and my brothers left the swollen to rest, we used to play catch-ups, play five marias, hide hards, what we could do to make us entertain ourselves" (Elder D).

"I would do everything inside the house, but when I finished I would like to play with a cloth doll my mother had made, I would spend hours playing alone since I had only brothers around me" (Elder B).

Nowadays you do not see children playing outside or doing any activity that moves the body much. Today, children end up being more sedentary compared to before. What pulls the kids to exercise.

### Education

As shown in the study of Figoli<sup>14</sup> 2006, in the 1970s to the 2000s, education has evolved significantly, and nowadays attending school is

already a mandatory social activity to have a future. We were able to note with participants in this study that it was not so easy in the old days because they lived far from school and their parents did not have enough study to teach their children to read and write.

“I just stepped into a school when I was in my twenties. I could not read or write my name, but that did not matter since I did not have to use it to help my family.” (Aged A).

“Since I lived far from everything, I had no way to get out of the house to get education, I learned to read and write with a neighbor of mine who came to my house to make food exchanges with my parents” (Elder C).

The lack of teaching proved to bring many difficulties when the respondents moved to the big city. Since some did not know how to read or write, they ended up not finding good jobs and having to find other ways to survive within the society of the time. This is very common for these cases, where they lived isolated from the cities in childhood and adolescence and then moved to the big city, the study ends up being a basic necessity within a city.<sup>10</sup>

## Family

The participants talked about how good the family environment was in the old days. There was no television or technology to disrupt family moments, they would gather every day to talk and sit together at the table for their meals. Biasoli-Alves<sup>15-17</sup> comments in his study that Catholicism was very large and the concepts of family, a father as head of the household and a mother to take care of all the affairs of the same, was very strong at the time, causing the family to restrict and unite more than today.

“The best part of the day was when we got our whole family together at the table to eat, we talked a lot and it was so fun to see a table full of people who love each other. Now when it comes time to eat, each goes to a corner and watch TV without making a noise” (Elder B)

“When Sunday came, my father would pick up the wagon and get us upstairs, it was seven o'clock and we would be very tight on the wagon, all this to go to church, it was very good to travel to the church, and when we arrived there they all knew each other, it was all cousins and uncles, when Mass was over, we would roast some meat right there and it was the biggest party with the family” (Elder C).<sup>18,19</sup>

The happiness in the faces of the interviewees was clear when they spoke of these familiar moments, they also said that they miss these times, that nowadays everything is more reserved and difficult to reunite the whole family. This comment can be verified with the study of Oliveira<sup>14</sup> which shows that the family grew as a group, having ideas and plans thinking about all, nowadays with the ease of information and a freer society, the family makes it more individualistic, where everyone thinks the best for their future.<sup>20-29</sup>

## Conclusion

As the interviewees mentioned that they had worked in heavy services since their childhood, they ate healthy foods that they planted themselves and also that they did not get very sick, we can say that their bodies presented great resistance and that this helped them to reach the age they are currently. The time of physical exercise in each participant was calculated without specific basis, elaborated with the questions about the work that the participants did and their

leisure activities. So we can conclude that male participants were not sedentary and were physically active because of their manual labor and women for doing household activities every day also had a more structured physique than a sedentary person these days. We concluded that having a healthy habit and maintaining it during their lives can improve the chances of having a longer life, so much that the participants of this study said that because they had a very active childhood and adolescence with work in the rural area, it was necessary to have a stronger and stronger body to this day.

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## Conflicts of interest

The author declares there is no conflict of interest.

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