

PROSPECTIVE QUALITY ATTRIBUTES OF NURSING HOME CARE SERVICES

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Abstract. One of the forms of care for the elderly are the nursing homes, long-term care homes. Still, in many countries the low level of quality of such services is still the main criterion for the perception of objects as a final option, in the absence of alternative forms of care for an older person. The aim of the article is to seek answers to the questions about the expected quality of the services offered by nursing homes. The article presents the results of research on the expectations of the society in terms of quality of services, carried out on a sample of 602 Polish citizens. The study allowed to identify the key characteristics that determine the quality of services from the perspective of the future decisions related to the choice of the resort.

Keywords: quality attributes, aging population, nursing home, long-term care home, service, prospective.

JEL Classification: O35; I11; L15.

1. Introduction

In the perspective of the year 2050, compared to 2013, the total number of the population aged above 65 years of age will double from the level of \$ 841 million to 2 trillion (United Nations 2013). The share of this group in the structure of the total population amounts to 21% (Maurizio *et al.* 2015).

The dynamics of the changes will vary between countries, characterized by different pro family policies, the level of economic development, and cultural conditions. The share of older people in Poland increased from 10.1 per cent in 1990 to 14.4 per cent in 2013 (CSO 2014: 134), while in Europe the share of older people increased between 1990–1992 from 13.9 to 18.2 per cent (CSO 2014: 552). The global demographic trend associated with an aging population requires on the one hand taking appropriate action associated with the creation of pro-family policy, and on the other hand ensuring appropriate living conditions for the elderly. The challenge resulting from the aging of the population is taking various actions whose main objectives involve ensuring dignified aging by improving the quality and standard of living and creating conditions for vocational and social activity of older people.

Individual countries, recognizing the growing problem, have already taken action to build national social protection systems. The following forms of care for the elderly were distinguished in the Polish system of care for the elderly:

- Primary health care.
- Specialist outpatient geriatric care.
- Daily geriatric care.
- Domestic geriatric care.
- Round-the-clock geriatric care (MLSP 2013).

In particular, the increasing life expectancy, with simultaneous prolonging of the period of being professionally active in the market cause changes in the family model. Moving away from the model of life, in which one household was inhabited by 2–3 generations, means that a significant proportion of older people remains dependent on themselves. The situation becomes particularly difficult when one of the spouses dies. Lonely people more often need to use the full time geriatric care. Both in the context of the growing expectations of older people and their families, as well as the growing demand for this type of service, quality problems come to the foreground.

Processes associated with the ageing population will result in a steady increase of interest in long-term care services, such as long-term care units or nursing houses (Ouslander, Berenson 2011). Residential care refers to services of care and social support, other than nursing homes, provided in supported living arrangements (OECD 2008). Nursing homes are institutions designed for people who do not qualify for hospital treatment, but because of their old age, illness, family, housing and material conditions, as well as the life situation constant care (Świętochowska 1994).

On the other hand, the increasing demand for services of residential care will be caused by the fact that globally only 40 per cent of older people live independently, that is to say, alone or with their spouse only (United Nations 2013).

Data on the structure of older people living independently alone or with spouse was shown in Figure 1.

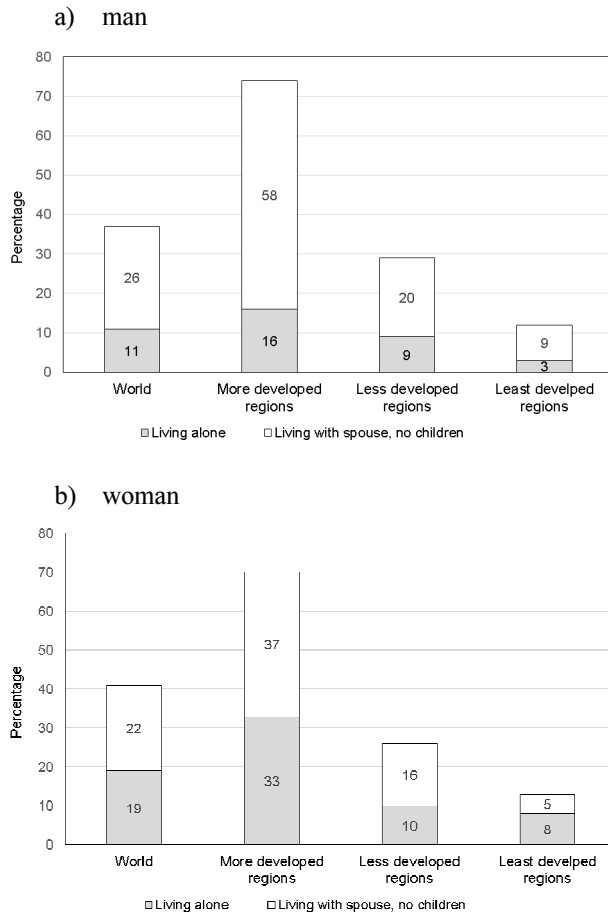


Fig. 1. Proportion of living independently (alone or with spouse only) among persons aged 60 years or over by sex a) man; b) woman (Source: United Nations 2013)

The results of tests carried out on a sample of 250 elderly Poles suggest that in the future, in case of loss of independence, more than 59% of respondents considered the possibility of using home care in the place of residence, more than 32% of respondents declare their willingness to use the services of nursing homes, and only 16% indicates that they will benefit from the help of their family.

In many countries the system of care for the elderly is still dominated by the family model, in which children or grandchildren take care themselves, or using specialized services. Nursing homes are not seen as a place for retirement but rather, as a last resort in the absence of choice.

Rarely older people use the services of old age homes voluntarily.

The aim of the article is to seek answers to questions about the expected quality of the services offered by nursing homes (nursing home, long-term care home). The article presents the results of research on the expectations of the society in terms of the expected characteristics of the quality of services, carried out on a sample of 602 residents of Poland with parents. The study allowed us to identify the key characteristics that determine the quality of service, and allowed the classification of features into 4 groups of factors. The conducted research concerned the expected quality, desired from the perspective of future decisions relating to the selection of the right facility for their parents.

2. The quality of elderly care services

Even at the end of the last century, the research on the quality of services for the elderly showed that the dwellers often lived in conditions of malnutrition, neglect and suffered from pain (IOM 2001) and complained about the problems associated with sharing of a room and bathroom, and the routine of everyday life (Kane 2001; Ward *et al.* 1992). Situations of breaches of the rules of procedures, involving smoking, alcohol abuse, or initiating fights still occur in the facilities of this type (RSPC 2014).

The research on measuring the quality of services associated with providing full time care for the elderly were carried out from the perspective of: residents (Higgs *et al.* 1998; Zinn *et al.* 1993; Lapré, Wright 2013), residents' families (Ejaz *et al.* 2003), facilities' management (Lowe *et al.* 2003) and the national system of quality measurement (Du Moulin *et al.* 2010). In terms of this subject, also specific services such as food (Crogan *et al.* 2004) or the use of free time by the elderly (Borowska 2010) were the areas of interest.

Taking into account the complexity of the problem of measuring the quality of services, the quality of the following should be considered: the expected, desired experienced quality and the standardized quality. In addition, the problem of testing the quality of services offered by a nursing home is complicated by the simultaneous coexistence of several groups of stakeholders interested in the measurement of the quality. These include: residents themselves (the elderly), residents' families, facilities' management, and public institutions (government, local government) conducting supervision over the facilities of long-term care for the elderly. This measurement is also hindered due to

the lack of standardized tools and methods of measurement and lack of compliance in terms of who is a consumer of the services (Zinn *et al.* 1993; Sierak 2015).

The possible combinations in the system of types of quality and consumer groups (Fig. 2) show only the complexity of the level of the services' quality measuring.

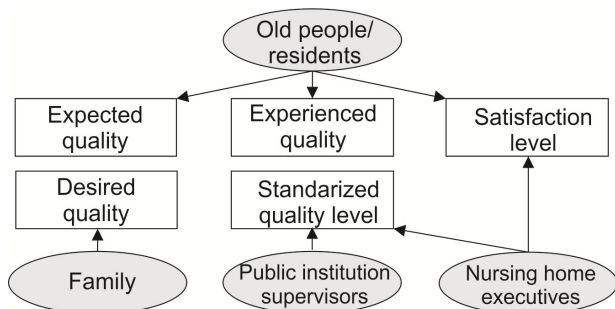


Fig. 2. Relationships between different type of quality and customers (Source: authors)

Measurement of the quality of services performed by the residents and their families appears to be significant because of the rising cost of care and the expected value with respect to the expenditure incurred by them (Ouslander, Berenson 2011). The measurement of quality from the perspective of the family is an important element in making a decision regarding the selection of the facility. The measurement of quality from the perspective of managers of facilities should form the basis for processes of improvement of services and creation of value for customers. Measuring the quality of services can be an important source of information for benchmarking and exchange of knowledge on best practices for improving national healthcare systems. Various objectives of the selected groups of customers are causing, for example, the quality assessment carried out by two groups of stakeholders (older people and members of their families) to be often different (Ejaz *et al.* 2003).

The diversity of quality measurement perspectives resulted in the creation of many measurement models basing on different attributes/criteria for assessing the quality of services provided by a nursing home.

Kane (2001) proposed a model for measuring the quality of life in long term care homes, where the following elements have been subjected to assessment: a sense of security, physical comfort (no pain, normal ambient temperature), the pleasure of staying, building relationships, functional competence (I do what I want), dignity, privacy, autonomy, spirituality, individualism.

The study carried out in the UK on a sample of 377 residents living in 36 nursing homes were designed to assess the level of service quality. The questionnaire contained 36 questions regarding the following areas: relations with employees, autonomy, amenities, privacy and social environment (reflecting the size of the facility). In addition, respondents could identify the best and the worst feature of the services (Higgs *et al.* 1998).

The authors conducted a comparative analysis of the characteristics of services provided by the hospital long-stay wards and nursing homes. Measuring the relationship with the employees concerned such qualities as: kindness, making the residents laugh, intimidation, being polite, the possibility of contact with the doctor according to the needs, paying attention to complaints. Measuring the autonomy regarded: the possibility of wearing own clothes, the ability to do things that one wants, the opportunity to rest when the body needs it, the ability to spend money one's own discretion, the opportunity to be with people with whom one wants to. Assessment of facilities related to the following issues: sufficient amount of food, the taste of the food, neat clothes, no restrictive visiting hours, curfew, suitable temperature in rooms. The measurement of privacy concerned: privacy when using toilet and bathing, the opportunity of having guests, opportunity to be alone. The measurement of environment concerned such characteristics as: interior, cheerful atmosphere, the speed of passing time, quantity and variety of leisure time, the ability to go outside (Higgs *et al.* 1998). Among the most important positive features of the provided services the respondents enumerated: politeness on the part of employees, friendship with other residents, a sense of security, happiness and satisfaction. The negative features included: the impossibility of being at home, loss of independence and isolation and loneliness (Higgs *et al.* 1998).

Measuring the quality of services provided by nursing homes in the United States regarded four areas: medical services, nursing services, the environment and the general level of satisfaction (Zinn *et al.* 1993). Measurement of medical and nursing services referred to the interpersonal skills, reliability and technical skills. Measurement of the environment concerned, in particular, food, surroundings and privacy.

Research conducted by Lapré and Wright (2013) relating to the problem of measuring the quality of services provided by a nursing home covered issues such as: the scope of services, the expectations of residents and their satisfaction with

services. Factor analysis allowed for the emergence of the following service quality measuring factors: respect and empathy; system orientation; responsiveness and attention; professionalism and safety; inclusion and tangibles.

Research on the measurement of quality, but focused on the quality perceived by the family members included such elements as: social services and communication system, direct nursing care for the residents, professionalism of the staff, and the facility management, home and spiritual conditions, food, range of activities, access to the facility and information, noise, autonomy understood as the ability to make choices, additional therapeutic services, laundry, etc. (Ejaz *et al.* 2003).

A separate group of studies consists of the studies carried out since the beginning of the 80s of the last century regarding the validity of the factors/ traits that determine the decision on the selection of nursing homes. According to Rogers *et al.* (1988) the most important features include cleanliness, a sense of security, skills of the staff and availability of the offered services. Froebe *et al.* (1982) found good care, convenient location, appearance, and bed availability the most important attributes. In contrast, the study by Jarboe and McDaniel (1985) confirmed that the medical program, diet, costs and programs supporting independence are the most important features when selecting the facility.

The results of research conducted in the 80s of the last century require verification in the beginning of the new century, when significant changes both of a quantitative (the increasing number of older people) and qualitative (requirements of the elderly, the development of ICT) nature occurred.

In the study conducted by Hill (2001) at the beginning of the new century among the analyzed characteristics determining the decision making process alongside the typical characteristics such as: location, cleanliness, competence of the personnel, costs, new, reflecting the changing expectations of decision-makers features such as quality of life, reputation of the facility, special medical services, activation programs for the elderly will appear.

The changing social expectations and technology development (mainly ICT) was the basic premise for undertaking the subject of research aimed at the analysis of key factors/traits determining decisions about choosing a nursing home by adults having parents residing on the Polish territory again.

The scientific objectives of the study included:

1. Indication of the most important and least important features, which are a factor in choosing the nursing home for the parents.
2. The search for links between the age of respondents and the importance of the selected factors.

The following hypotheses are proposed:

H1: Social attributes seem to be the most important in the context of desired quality of nursing home.

H2: There is lack of statistical significance of differences between perceived quality attributes among different age group of respondents.

3. Methodology

3.1. Data

The data used to achieve research goal of the study was drawn from Polish citizens possessing parents (or parent).

The study was conducted on a sample of 602 citizens of Poland, having at the moment of testing at least one parent. The group of respondents varied on the basis of age. People aged from 18 to 30 years accounted for 32.4% (group 1), people aged 31 to 40 years – 33.1% (group 2), those aged between 51–50 years – 22.1% (group 3), and those aged over 50 years – 12.4% (group 4).

Women accounted for 70.0%, men 30.0%.

3.2. Measures

In this study, a survey method was used to collect data. On the basis of the study of literature and Author's experience, 38 attributes of desired service quality were defined.

The electronic questionnaire, conducted on the basis of confidentiality, was distributed between January 2016 and February 2016. All quality attributes were measured using a seven-point Likert scale to assess the degree to which the respondent assesses the level of importance of particular attributes (1 = irrelevant to 7 = very important). Author used the average score of measures of each criterion for further analysis.

List of attributes is presented in Appendix. For the purposes of research four groups of attributes were distinguished according to the nature of the attributes. These groups are: social, technological, services, environmental and individualization.

Nonparametric ANOVA Kruskal-Wallis H analysis was used for inter age-group assessment:

$$H = \frac{12}{n(n+1)} \left(\sum_{j=1}^k \frac{R_j^2}{n_j} \right) - 3(n+1), \quad (1)$$

where: N – the total number of observations across all groups; n_j – the number of observations in j -group; R_j – sum of the ranks in j -group; $j = 1, 2, \dots, k$.

4. Results and discussion

Initially, assessment of quality attributes importance was made. The most important characteristics, in the respondents' opinion, include: professional and attentive care of the residents (A32), kindness and respect in relation to the inmate and his family (A31), providing a sense of security to inmates (A37), cleanliness, aesthetics of the interiors (A9) and the competence and qualifications of the personnel (A29).

The least important characteristics include: furnishing the rooms with electronic systems for opening windows (A25), furnishing the rooms with electronically controlled shutters, blinds, curtains (A24), the architecture of the facility (modern building) (A6), internet access (A21), attractive location of the home (forest, mountains, water) (A1) and the size of the home (A7) (Fig. 3).

Further analysis concentrated on identification the most important attributes within the individual groups.

Within the group of social attributes two of them were considered as the most important: professional and attentive care of the residents (A32; mean rate – 6.74), kindness and respect in relation to the inmate and his family (A31; mean rate – 6.73). Among the technological attributes, the proximity of the nursing home from a hospital or health centre (A3, mean 5.89) were considered as the most important. Within the group of services,

which reflects diversity of the offered by residential cares units services, the most important attributes include: the range of care services offered by the nursing home (A13; mean 6.45) and the scope of rehabilitation services offered by the home (A14, mean 6.44). Environmental group of attributes reflects to the internal and external features of nursing home perception. From external point of view it's some kind of first impression, and from external point of view is general perception the units by external stakeholders. Among analysed group, the microclimate inside the nursing home (A9, mean 6.59) and cleanliness, aesthetics of the interiors (A8, mean 6.36) were considered as the most important.

The last group of attributes is connected with individualization of the offered services, and include attributes which allow to stand out from other nursing home. Among these attributes, The proximity to the nursing home to the place of my residence (A2, mean 6.36) and flexible and irregular hours of visits (A34; mean 6.20) were considered as the most important.

Comparing the results between five groups of attributes, can be observed that social attributes seem to be the most important. Using seven-point Likert scale importance of all attributes belonging to the social group obtained estimation above 6 (Fig. 3).

In order to verify hypothesis H2 nonparametric ANOVA Kruskal-Wallis H test was used. Results are presented in Table 1.

At the $p < 0.05$ level, statistically significant differences in the perception of quality attributes between four age groups refer to the following attributes: A1, A5, A7, A8, A10, A11, A12, A13, A18, A19, A21, A23, A26, A30, A38 (Table 1).

For purposes of graphical presentation of the level of importance of quality attributes among four age groups box plots were used (Figs 4–8).

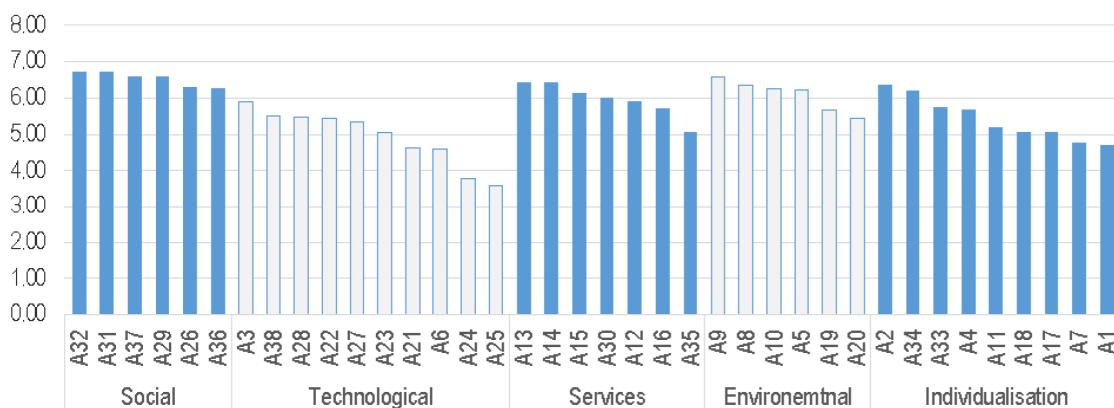


Fig. 3. Importance assessment of service quality attributes (Source: author)

Table 1. Results of ANOVA Kruskal-Wallis Test (Source: author)

No.	H	p	No.	H	p
A1	19.685	.000	A20	4.651	.199
A2	2.314	.510	A21	18.607	.000
A3	3.520	.318	A22	5.920	.116
A4	1.501	.682	A23	9.992	.019
A5	14.034	.003	A24	.943	.815
A6	5.564	.135	A25	1.704	.636
A7	42.367	.000	A26	9.064	.028
A8	16.738	.001	A27	3.801	.284
A9	6.029	.110	A28	2.078	.556
A10	9.928	.019	A29	7.548	.056
11	12.062	.007	A30	26.378	.000
A12	19.024	.000	A31	3.836	.280
A13	14.191	.003	A32	2.095	.553
A14	3.034	.386	A33	3.119	.374
A15	3.067	.381	A34	2.672	.445
A16	1.248	.741	A35	6.416	.093
A17	4.579	.205	A36	2.614	.455
A18	14.378	.002	A37	2.746	.432
A19	13.709	.003	A38	11.899	.008

Note: $p < 0.05$.

In case of three attributes A1 (Attractive location of the home); A21 (Internet access) and A23 (Furnishing the rooms with air conditioning and temperature control devices) their importance is significant for younger groups of respondents, while for people over the age of 50 years, these attributes seem to be less important (Figs 4–6). Noticed differences confirm that the importance of factors from the group of technology attributes (A21, A23) will increase in the future. We can expect, that along with the technology development expectations of potential residents will be growing as well. Achieved results could be very useful from the point of view of nursing home executives in the process of adapting the technology to the changing expectations of the residents.

For people over the age of 50 years following quality attributes play an important meaning: A7 (The size of the home), A8 (Housing condition), A10 (The microclimate inside the home), A11 (The possibility of stand-alone furnishing the room), A12 (Price for the stay), A18 (Allowing for religious practices), A19 (Opinion about the nursing home in the environment), A26 (The system of informing the family), A30 (The number of therapeutic and care employees). Selected attributes are presented on Figures 7 and 8.

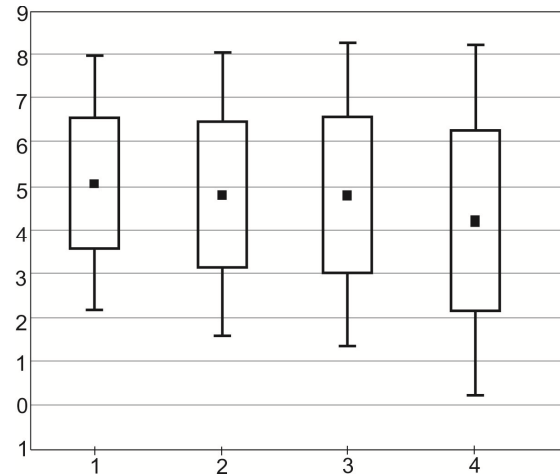


Fig. 4. Importance of quality attribute A1 among four age groups (Source: author)

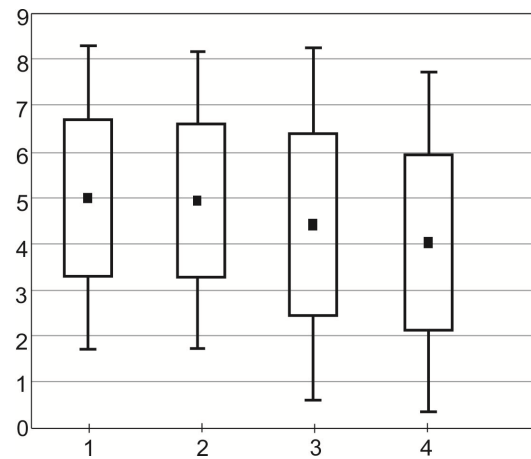


Fig. 5. Importance of quality attribute A21 among four age groups (Source: author)

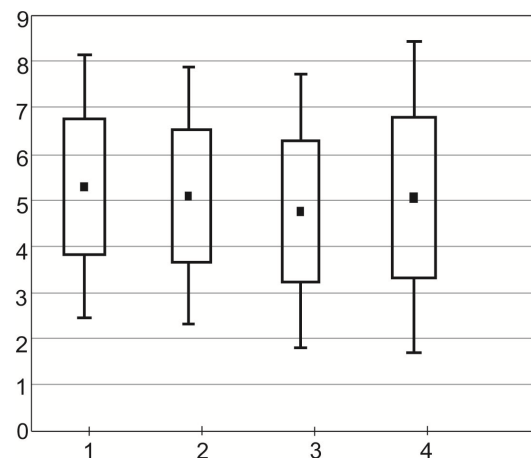


Fig. 6. Importance of quality attribute A23 among four age groups (Source: author)

Mentioned attributes, which are now important for people over the age of 50 years, reflect the fundamental attributes of service quality, which are easy to direct verification (evaluation), based for

instance on the information available on the website or by visiting the nursing home directly. Currently, for this group of people, technological attributes of services quality are not very important, probably due to the lack of awareness, and skills to use such technology in their daily life. Also, expectations of older people are lower than those under the age of 30 years.

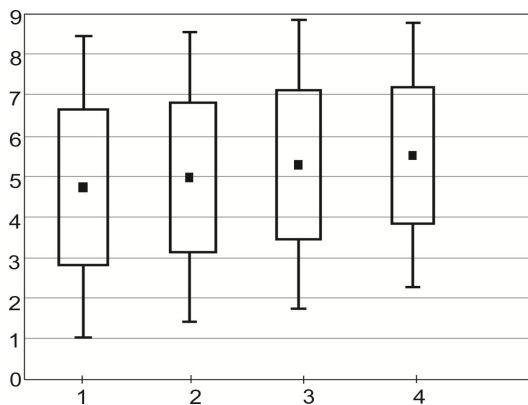


Fig. 7. Importance of quality attribute A18 among four age groups (Source: author)

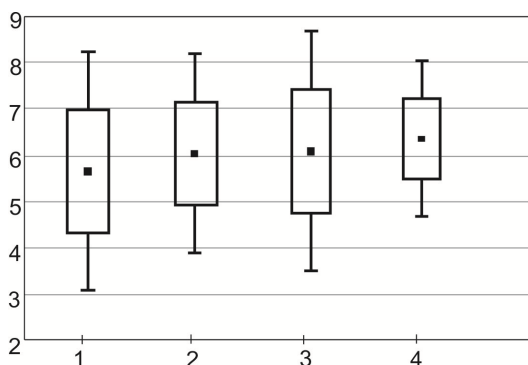


Fig. 8. Importance of quality attribute A30 among four age groups (Source: author)

The conducted research confirmed that in case of the majority of analysed attributes which are characterized by relatively high level of importance, there is no statistically differences between different age group of respondents. For all of them, these attributes are important. Especially, such situation concern highly-rated attributes from social group of attributes (A32, A31, A37) and attributes belonging to environmental group (A9, A8). Noticed differences between age groups of respondents relate to the attributes that have received relatively lower overall assessment in terms of importance.

In relation to other attributes perceiving of their importance is characterized by variability and change among different age group o respondent.

5. Conlutions

The study concerned the so-called desired quality of services provided by nursing homes. Although research on the quality experienced by the residents (the elderly) were carried out by many researchers (Higgs *et al.* 1998; Zinn *et al.* 1993; Lapré, Wright 2013), often the access to the respondents or their state health alone constituted a barrier. One way of measuring the quality may be the method proposed by the author – measurement of the desired quality from the perspective of the surviving children of people who could potentially be the recipients of nursing home services. In particular, the changing family model, the extending period of stay on the labor market may in 20–30 years prevent the children from providing care for their parents. Along with the improvement of access and quality of services provided by long-term care homes, increased interest in this type of services is to be expected. Decisions about choosing the right nursing home must be thought out and based on the possessed knowledge concerning the quality characteristics of facilities.

The vast majority of characteristics determining future decisions, is of measurable nature and can be used for comparative analyzes (multi-criteria) in the decision-making process. The source of data for analysis may be the information contained on websites or one time visits to facilities. Only in relation to such characteristics as: kindness; professional care for the elderly, and staff competence, it is not possible to directly measure them, e.g. during a one time visit to a resort. Respondents confirmed that these characteristics play a crucial for them.

The obtained results may constitute a sort of a list of the desired traits of analyzed facilities and provide the basis for the improvement processes within the organization.

The limitations of the conducted study are due primarily to the relatively small study sample (602 respondents). The weakness of the methodological assumptions is the fact that the respondents answered the questions purely theoretically and it is difficult to predict how they would behave in a situation where they would actually have to make a decision about submitting their parents to a nursing home.

When indicating the future directions of research, efforts should be made to standardize the quality of care services for the elderly, relating to both the technical and infrastructural elements, and the standardization of qualifications and staff competence (Kludacz 2014).

Analysis of the residents expectations regarding service quality in term of technology development could be an important area of future scientific interest.

The unmistakable element of the improvement process may be the internal quality management systems, whose primary element is the measurement of customer satisfaction (residents). It is therefore necessary to perform studies concerning the susceptibility of the implementation of internal quality management systems by the management of this type of facilities.

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Appendix

List of attributes

No.	Attributes
A1	Attractive location of the home (forest, mountains, water)
A2	The proximity to the nursing home to the place of my residence
A3	The proximity of the nursing home from a hospital or health centre
A4	Attractive recreational area around the resort (allowing for walks, relaxation)
A5	Lack of architectural barriers - elevators, ramps, wide doors, handrails along walls
A6	The architecture of the facility (modern building)
A7	The size of the home (cosy, small)
A8	Housing conditions (e.g. 1–2 people rooms with a bathroom)
A9	Cleanliness, aesthetics of the interiors
A10	The microclimate inside the home (pleasant smell, proper air temperature)
A11	The possibility of stand-alone furnishing the room
A12	Price for the stay
A13	The range of care services offered by the nursing home
A14	The scope of rehabilitation services offered by the nursing home
A15	Equipment for rehabilitation, recreation and sport
A16	The range of services related to leisure-time activities (group activities, excursions, recreation, the opportunity to develop their own interests, etc.)
A17	The range of additional services, for example, library, hairdresser, laundry services
A18	Allowing for religious practices by inmates
A19	Opinion about the home in the environment
A20	Recommendation of the nursing home by a friend
A21	Internet access
A22	Furnishing the rooms with ventilation systems
A23	Furnishing the rooms with air conditioning and temperature control devices
A24	Furnishing the rooms with electronically controlled shutters, blinds, curtains
A25	Furnishing the rooms with electronic systems for opening windows
A26	The system of informing the family about the health, well-being, the needs of residents (rapidity of delivering the information, the tool for transferring, the method)
A27	The use of modern technologies related to telecare (e.g. the sensors reacting to various threats such as a motion sensor, temperature sensor, fall sensor, automatic drug dispenser, a pressure sensor)
A28	Application of modern technologies in the field of telemedicine (the ability to obtain information about the status of inmates with the use of the ICT technology, real-time access to information about the health of parents)
A29	The competence and qualifications of the personnel
A30	The number of therapeutic and care employees

No.	Attributes
A31	Kindness and respect in relation to the inmate and his family
A32	Professional and attentive care of the inmates
A33	Individualization of food services (the ability to choose meals, the possibility to prepare their own meals)
A34	Flexible and irregular hours of visits
A35	The scope of the activities organized for family members shared with inmates (fetes, open days, concerts, etc.).
A36	Nice company of residents and homey atmosphere
A37	Providing a sense of security to inmates
A38	The possibility of making electronic payments for services