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The influence of institutionalization on the perception of autonomy and quality of life in old people

A INFLUÊNCIA DA INSTITUCIONALIZAÇÃO SOBRE A PERCEPÇÃO DA AUTONOMIA E QUALIDADE DE VIDA EM IDOSOS

LA INFLUENCIA DE LA INSTITUCIONALIZACIÓN SOBRE LA PERCEPCIÓN DE LA AUTONOMÍA Y LA CALIDAD DE VIDA EN ANCIANOS

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ABSTRACT

Objective: To evaluate the influence exercised by institutionalization on the autonomy and perception of quality of life among the institutionalized elderly. **Method:** The study is quasi-experimental (interrupted time series) and longitudinal. The sample is composed for 104 elderly people who went into a three nursing home in Santander, Spain. To assess the quality of life and dependence two scales were used: the Barthel Index and Lawton Index. **Results:** There was an important relationship between autonomy and independence and their deterioration due to their institutionalisation, such as the physical and social aspects. **Conclusion:** It´s important to point out that the dependence of the elderly is a complex phenomenon, which admits many types of intervention, including the customary ones referring to more classic welfare actions which tend to supplant the absence of autonomy in everyday life by facilitating services and attention to make up for this need, without having to resort to institutionalization.

DESCRIPTORS

Aged
Personal autonomy
Homes for the aged
Quality of life
Geriatric nursing

RESUMO

Objetivo: Avaliar a influência da institucionalização na autonomia e na qualidade de vida percebida entre idosos institucionalizados. **Método:** Estudo quase-experimental (série temporal interrompida) e longitudinal. A amostra foi composta de 104 idosos de três centros residenciais de Santander na Espanha. Para avaliar a qualidade de vida e a dependência foram utilizadas duas escalas: o Índice de Barthel e o Índice de Lawton. **Resultados:** Observou-se uma relação significativa entre autonomia e independência e seu declínio devido à institucionalização, como os aspectos físicos e sociais. **Conclusão**: A dependência dos idosos é um fenômeno complexo, que demanda vários tipos de intervenção, incluindo as ações de apoio comum, que tendem a cobrir a ausência de autonomia na vida cotidiana, sem recorrer a institucionalização.

DESCRITORES

Idoso
Autonomia pessoal
Instituição de longa permanência para idosos
Qualidade de vida
Enfermagem geriátrica

RESUMEN

Objetivo: Evaluar la influencia de la institucionalización en la autonomía y la calidad de vida percibida entre ancianos institucionalizados. **Método**: Estudio casi-experimental (serie temporal interrumpida) y longitudinal. La muestra estuvo compuesta de 104 añosos de tres centros residenciales de Santander, España. A fin de evaluar la calidad de vida y la dependencia fueron utilizadas dos escalas: el Índice de Barthel y el Índice de Lawton. **Resultados**: Se observó una relación significativa entre la autonomía y la independencia y su declinio en virtud de la institucionalización, como los aspectos físicos y sociales. **Conclusión**: La dependencia de las personas mayores es un fenómeno complejo, que demanda distintos tipos de intervención, incluyéndose las acciones de apoyo común, que tienden a cubrir la ausencia de autonomía en la vida cuotidiana, sin recurrir a la institucionalización.

DESCRIPTORES

Anciano
Autonomía personal
Hogares para ancianos
Calidad de vida
Enfermería geriátrica

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INTRODUCTION

Population forecasts for the year 2020 estimate that the number of people over the age of 65 will constitute over a quarter of the population of the European Union[1]. According to the latest outlook report from the United Nations, it is estimated that Spain will be *the most elderly country* in the world in the year 2050[2].

This was the background to the conception of the National Gerontological Plan in Spain[3], whose aims include the objective of becoming a guide to improving living conditions for the elderly, by putting at their disposal a network of resources and by reinforcing their autonomy.

The physical decline associated with old age calls for nursing homes to offer both psychosocial and health care. In Spain there are 2.53 places per 100 elderly people[4]. The changes implicit in the aging process, whether physiological, psychological or social, are apt to generate a greater degree of dependence[5-6] in the elderly, which, in turn imply a series of needs which beg attention[7]. The institutionalisation of an elderly person, which is to say when they are admitted to a nursing home, is also related to a rise in the degree of dependence[8-9] and, according to several studies[10-14] this loss of autonomy is associated to a lower quality of life.

Admission to a nursing home has been referred to using the concept of institutionalisation in order to differentiate it from community care, and to denote the specialized character of the attention. On admission to a nursing home, an able elderly person often stops doing things for themselves as a mechanism of behaviour adjustment, in the same way they might adopt a passive attitude, thus creating dependency. On entering a nursing home for the first time, every elderly person undergoes a period of settling-in and observation lasting 20 days, after which time they are assessed by a technical committee[15]. Dependence is identified in relation to the degree of autonomy with which a person deals with their daily necessities (washing, eating, using the telephone, etc). This is referred to as autonomy to respond to the Basic Activities of Everyday Life (BAEL) or the Instrumental Activities of Everyday Life (IAEL). Although, as mentioned above, it is possible to operationalise detection of dependence, the results of a variety of studies indicate that self-perception, measured by means of subjective quality-of-life indicators, presents a substantially higher rating than those taken from objective indicators[14].

Quality of life is a multi-dimensional concept integrating a series of different areas, and must be circumscribed to certain personal and contextual variables. Various gerontological studies have focused on analysing what is quality of life and its repercussions in the process of *successful aging*[16-17]. Several studies associate a decrease in autonomy in the elderly institutionalised population and a perception of health and quality of life, significantly correlated to these modifications[13,18].

Better knowledge of the factors influencing the loss of autonomy among the institutionalised elderly allows Nursing professionals to programme sessions on health education and promotion, preventing loss of autonomy and how to recuperate lost functions, lessening and slowing dependence among the elderly, and encouraging their autonomy and improving or maintaining their quality of life. These competencies, related to Nursing in nursing homes, are set down by the Spanish Society of Geriatric and Gerontological Nursing[19].

The 6th European Conference of Health Ministers also called for autonomy to be recognized as an essential factor in personal dignity[17].

The objectives of this research are two: to evaluate the influence exercised by institutionalisation on the autonomy and perception of quality of life among the institutionalised elderly and to discover the perception of quality of life and the degree of autonomy among the institutionalised elderly one year after going into a nursing home, and to analyse the differences and/or coincidences between the assessment made on arrival and after 20 days in said institution (after the settling-in period).

METHOD

The design of the study is quasi-experimental (interrupted time series) and longitudinal. The sample is composed entirely of the elderly people who went into a three nursing home in the city of Santander between the years 2012 and 2013 (20 months). The assessment carried out 20 days after entering the nursing home was performed on 104 subjects. The assessment carried out one year later was performed on 97 subjects (seven people died). Criteria for inclusion. Being over 60 years of age, able on arrival (according to the Barthel Index), and admitted to said nursing home during the prescribed period. Not having any organic or psychological pathology which would impede their giving adequate responses to the questions posed during the fact-finding interview.

Initially, a preliminary study is carried out whereby measurements are taken on several variables in only one group at two different times. That is to say, pre- and post-intervention measurements are taken, the intervention at this point being time. The study is based on the first measurement and, subsequently, the modification is introduced (institutionalisation after the period of settling-in) and the second measurement is taken. The study continues as a third measurement is taken one year after the settling-in period.

Dependent variables:

a. *Dependency.* The methodology of functional assessment is carried out by means of diverse measurements and scales, those used herein, as described in detail in the Instrument section, being two: a) The Barthel Index: Allowing measurement of the degree of dependence or

independence of the elderly subject when carrying out the basic activities of everyday life (BAEL). b) The Lawton Index: Assesses the degree of dependence or independence of the elderly subject when carrying out the instrumental activities of everyday life (IAEL). The global range varies between 0 (complete dependence) and 100 (complete independence)[20-22].

b. *Perception of quality of life.* Quality of life may be measured by means of objective indicators, such as health and income, and by subjective indicators. The study focuses on the subjective view of quality of life. Based on studies made by Fernández- Ballesteros[23] and applied to the elderly population, various sections are used which break down the components of quality of life by means of structured interview questions covering 9 components[24]: health, social integration, functional abilities, activity and leisure, environmental quality: Satisfaction with life, education, income, public health service.

With a view to collecting pertinent data, and with reference to the above, a questionnaire is drawn up on Quality of Life in the Elderly, based on diverse instruments of proven reliability and consistency, adapted to form questions whose responses are collated using four- or five-point Likert-style scales. Items covered by the Questionnaire: Personal characteristics, Family characteristics, Social relationships and friendships, Social integration, Activity and leisure, State of physical health (perception of physical discomfort, aches and pains, chronic illnesses, worrying about current state of health) and mental health (loneliness, feelings of uselessness, depression, irritability, helplessness) as perceived by the subject, and Impression of the nursing home

Independent variables. Admission of the elderly person to institutionalisation: It is considered that the variable factor which might or might not modify the different spheres under study surrounding the elderly subject, their perception of their own health and degree of autonomy, is precisely the fact of being admitted to an Institution. The project was approved by the ethics committee at the general direction of the entity (Madrid).

The statistical analysis is carried out using the Windows SPSS V.20 program. The test applied is the non-parametric test or the distribution-free two-sample test (Wilcoxon test), given that the conditions for normal distribution are not met. This is also known as the signed rank test, as the differences between two measurements taken on the same population at different times may be positive or negative. In order to compare two proportions resulting from dependent variables 20 days after admission and one year after admission, the McNemman matched-pairs test is used. In all cases, levels of probability lower than 0.05 are considered significant. The data is represented graphically using the Office 2012 program with Excell.

RESULTS

The general characteristics of the population under investigation, with reference to the socio-demographic variables, are reflected in Table: 1. 48.7% of nursing home residents taking part in the study are between 75 and 79 years old, another 31.5% are over 80 and only 19.8% are aged between 70 and 74, with nobody in the study group under the age of 70. The proportion of men and women shows a higher number of men, with specifically 57.1% over 42.9% women present in the study. It is of interest to mention that 63.2% of the participants came from an urban setting, whereas 31.6% came from rural areas.

Regarding the analysis of the family characteristics, 73.2% of the subjects have children, 22.3% of these describing their relationship with their children as *bad*. 32.6% say they have nobody to turn to, and of these 71.2% are men.

Focusing on the variable of whether or not the subjects live alone, over half of them, 62%, responded in the affirmative. With reference to their marital status, a vast majority, 73.2%, are widows and widowers, of whom, if the gender variable is introduced, 85.71% are women. 26.3% of the subjects state family conflict as their reason for going into the nursing home, of whom 80% are male; while 21.1% state that they were lonely.

Table 1 - Socio-demographic variables - Santander, Spain, 2014

Variables		Percentages
Age	70-74	19.8
	75-79	48.7
	>80	31.5
Gender	Male	57.1
	Female	42.9
Martial Status	Single	73.2
	Married	12.5
	Widow/er	41.1
	Separated	25.1
Origin	Urban	63.2
	Rural	31.6
	Other	5.2
Lived alone	Yes	62
	No	38
Reason for admission	Family conflicts	26.3
	Loneliness	21.1
	Dependence on children	15.7
	Other	36.9
Education	Illiterate	36.8
	Literate	36.8
	Primary	26.3
Income	<300 euros	10.5
	300-600	78.9
	>600	10.5

The measurement of the functional situation or degree of autonomy once the first 20 days have passed after admission, corresponding to the settling-in period, by means of the Barthel Index (basic activities of everyday life BAEL), reflects an average 92.36 points obtained with a DS:6.3 from a total index score of 100 (Table 2). However, 12 months after admission the measurement obtained by means of said index decreases, to reflect a value of 84.21 with a DS:9.89 (Table 2), falling to a minimum total mark of 65 in 10.5% of the cases. This can be classified as slight dependency and presents a situation unseen in the previous measurement.

Table 2 - Descriptive statistics Barthel Index - Santander, Spain, 2014

	N	Minimum	Maximum	Median	SD
Barthel Moment 1	104	85.00	100	92.37	6.31
Barthel Moment 2	97	65.00	100	84.21	9.89

One of the activities which has deteriorated from the quantitative point of view in the second measurement on the scale is *mobility*, changing from 21% of the residents who need help, to 73.7% who have changed from being totally independent to needing help. Activities including eating, personal hygiene, dressing and undressing have not changed and all the subjects involved in the study were still within the range of total independence. In the test comparing measurements of paired samples, the difference of range gives p=0.002, which is statistically significant and demonstrates a deterioration of residents' autonomy to undertake the basic activities of everyday life after a period of 12 months of institutionalisation. It is very significant that the data obtained by means of the Lawton Index, referring to the degree of autonomy in carrying out instrumental activities in everyday life, that the first measurement, taken after the settling-in period in the nursing home, present an average value of dependency in carrying out these activities of 3.57 points. This allows for a typical deviation of 1.16, whilst measurements taken 12 months later fell to 2.31, with a typical deviation of 1.05, thus reflecting a notable rise in the dependency of the elderly subjects in said activities.

In addition, it is interesting to note that, although at Moment 1 (measurement after the settling-in period) none of the residents showed total independence in the IAEL, and that 100% of them required some type of help, at the second measurement 100% of the residents continue to require help, with this dependency rising 15.8% , signifying that they need additional help. In the test comparing measurements of paired samples, the statistical significance appears as p< 0.05, pinpointing a deterioration in the autonomy of the residents in carrying out instrumental activities after institutionalisation.

On analysis of the instrumental activities according to Lawton, the following data is obtained: in general all of the elderly subjects have suffered a deterioration in their autonomy except in *preparing food*, where they were totally dependent at both Moment 1 and Moment 2. This is a logical consequence of the in-house rules which forbid any kind of food preparation in the rooms, whether or not residents are able to do so.

Regarding the evaluation of the nursing home itself, on arrival 73.2% have a *very good* opinion of it, whereas after one year this percentage has fallen to 61.4, where 21.3% have a *bad* opinion, 82.1% of these being women.

A detailed analysis pinpoints the following items which refer to various dimensions of the quality of life of the elderly subject covered in the Survey into Quality of Life show in Table 3. For example, a fall in physical tone in 37% of cases at Moment 2, where responses to this question go from *moderate* to *very slight*. When asking about everyday activities the elderly subjects generally admit to having more difficulties; importantly, at Moment 1 10% declared they had *no difficulties at all*, whereas at Moment 2 all the responses oscillate between *a little difficulty* and *difficulty in everything*. *I cannot do anything*. Focusing on the section on mental health and *feelings*, it can be seen that anxiety and irritation are more present among the elderly residents after institutionalisation, where 15.8% responded with *quite* at Moment 1 and 42.1% gave this answer at Moment 2. The same occurs with the response *intensely*, where 21.1% choose this response at Moment 2, whereas nobody had chosen it at the first questioning.

Table 3 - Some relevant items about changes in Quality of Life in the two moments – Santander, Spain, 2014

	M 1	M 2
Physical health		
Optimun	5%	2%
Moderate	68%	61%
Very slight	27%	37%
Daily activities		
No difficulties	10%	6%
A moderate difficulty	69.2%	58.2%
Difficulty in everything	20.8%	35.8%
Mental health		
Anxiety		
No present	12%	0
Little	13%	11%
Moderate	59.2%	25.8%
Quite	15.8%	42.1%
Intensely	0	21.1%

An important element which appears in the dimension of carrying out social activities with friends, family, etc., is the deterioration in said activities over the 12 months after admission as a consequence of the normal problems of living together in a centre which is not their own home and with people who, up until then, were strangers. 58% of the elderly subjects admit to finding quite a lot of limitations when wanting to pursue these activities, whereas after 20 days in the nursing home (the settling-in period) only 16% noted this.

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If the results are differentiated by gender, then it can be seen that the women have noticed more limitations to their social activities, as 71.4% of the total number of female subjects note *quite a lot of limitation* when questioned at Moment 2. On being asked about the changes in their health 79% referred to not having experienced any change over the last fortnight of the settling-in period; a response which decreases substantially to only 26.3% after 12 months of institutionalisation, when the majority of the responses are now *slightly worse* or *much worse*. The greatest change can be appreciated in the latter response which now appears in 26% of the cases. It is interesting to note here a striking fact which appears when this item is cross-referenced by gender: 87.5% of the subjects who respond saying they feel slightly worse are men. A further point which is closely linked to the previous question is the question referring to their current state of health. At Moment 1 none of the residents qualified their general health as being bad; though after one year in the nursing home this affirmation is expressed by 31.6% of residents. Figure 1 shows the changes which have occurred between Moment 1 and Moment 2. With reference to the sociodemographic variable Gender, and its relation to this section, 57.2% of the female subjects express the opinion that their state of health is bad (the worst result possible), whilst only 16.6% of the men choose this same response.

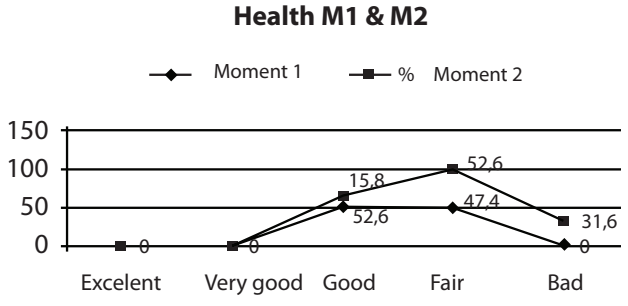

Figure 1 - Health percentage in the two moments - Santander, Spain, 2014

DISCUSSION

The organizational and professional aspects of a nursing home lead the elderly to perceive it as a quality alternative to their own home. The results obtained in this study do not pretend to make a generalisation regarding the elderly population institutionalised in nursing homes, as it is important to recognise the limitations of the reduced sample under observation.

It is possible to state that the results of the study confirm facts to be found in the literature written on the subject, which indicate that the type of elderly person who is institutionalised has a similar socio-demographic profile[25]. When referring to the level of education of the subjects, the results of this research are similar to those found by other researchs[26], where a large percentage of the residents present a low level of education. Regarding origin, the majority of the residents come from urban backgrounds, and here the percentage of men is higher, being men who live alone. This fact is curious if one is to observe that the majority of residents present clearly female traits. In general, with regard to the object of this study, the results show the existence of an important relationship between autonomy and independence in elderly people, and their deterioration due to their institutionalisation, as amply reflected in other researchs[27-28]. Several symptoms appear such as a rise in the number of disorders, a worsening in the deterioration or decrease in self-esteem. There is even talk of a syndrome specific to institutionalisation which is characterised by symptoms such as apathy and indifference, a decrease in cognitive capacity, difficulties in expressing feelings, loss of autonomy, etc. [29] as well as the importance of a perception of control and the negative effect during the settling-in period of a sense of lack of personal control on one's surroundings[13,17].

With reference to the functional abilities (Barthel Index) after the settling-in period (20 days after admission), it can be observed that they are highly satisfactory. Almost 40% of the subjects described themselves as being totally independent – a fact which may be explained by the fact that a principal criterion of admittance to the nursing home is being able-bodies, and 20 days is not long enough to develop any deterioration caused by institutionalisation. The activities on the Barthel Index which have suffered the greatest functional deterioration amongst the residents are mobility and going up and down stairs[30]. A plausible reason for this might well be that the residents find themselves in an unfamiliar space, the nursing home being alien in its physical characteristics, architectural and organisational, and the residents only becoming familiar with the communal areas such as the dining room, infirmary and their assigned bedroom. On the other hand, activities where residents care for themselves, such as feeding themselves, are hardly affected, even after a year in the nursing home, as has been identified in other studies also using the Barthel Index[30] to measure these activities.

At the same time (and by means of the Lawton Index) an important functional decline has been observed in the instrumental activities in everyday life, in that twelve months after arriving in the nursing home the elderly subjects have suffered a regression which, when translated into numerical data, supposes a jump from a maximum of 6 points for the first measurement, and only 4 at the second.

By means of the Survey into Quality of Life differences in the measurements taken at different times have come to light on measuring the functional state of the different dimensions of quality of life, including the health of the subject, and their physical and social activities. This change could be explained as the consequence of the aging process itself, where a decline in the functional abilities appears to be something obvious, in spite of the fact that not every aspect – the social variations or the subject's perception of their own health – can be explained simply as part of the aging process. The residents taking part in the study presenting the greatest difficulty in carrying out physical activities are those who have the worst perception of their health. Undoubtedly, physical activity is a factor which has a direct and significant link to feelings of satisfaction. With reference to everyday activities, all the residents suffered a decline, as well as this affecting their mood, as can be seen in their responses to questions related to feelings such as anxiety, depression, sadness or apathy. The elderly subjects refer to feeling *intensely* bothered by emotional problems such as loneliness or sadness after a year living in the residence and away from their own homes. This feeling brings to the fore the relationship between aging and emotional support. One fact which stood out from the analysis of results was the data referring to the way in which the women perceived their worsened state of health, where the majority of residents complaining of *being in bad health* are female[13].

It is worthwhile to highlight the fact that all residents, both men and women, suffered a worsening in the perception of their own health between Moment 1 and Moment 2; bearing in mind that the fact of being institutionalised in a nursing home, added to the loss of functional abilities, has an influence on feeling more or less healthy. It is likewise significant that the majority of residents who qualify their general health to be *bad* are widows and widowers. Apart from the source of stress which living in a nursing home supposes, the loss of autonomy and the loss of a loved one – the spouse – has a direct effect on the increase in emotional problems and the decrease in control over their own health. In the long run this leads to a physical and psychological decline brought about by a lack of activity, in the same way there is a decline in manual dexterity due to lack of exercise.

CONCLUSION

The objectives of this research were to evaluate the influence exercised by institutionalisation on the autonomy and perception of quality of life among the institutionalised elderly and to discover the perception of quality of life and the degree of autonomy among the institutionalised elderly one year after going into a nursing home. The results obtained show a clear relation between the institutionalization and a decrease in autonomy and quality of life in some aspects.

We can conclude that the dependence of the elderly is a complex phenomenon, like many others, which admits many types of intervention, including the customary ones referring to more classic welfare actions which tend to supplant the absence of autonomy in everyday life by facilitating services and attention to make up for this need, without having to resort to institutionalisation. Needless to say, the use of standardized, validated instruments such as those used in this study in order to carry out the Comprehensive Geriatric Assessment, has allowed, amongst other things, for a rapid and simple identification of the global state of the elderly participant. However, other interventions are essential when dependent behaviour is the result of a conforming to stereotypes, an underestimating of available resources, of environmental contingencies or of a non-facilitating physical environment. In order to ensure that the elderly reach an advanced age enjoying what has come to be known as successful old age, policies are needed to deal with prevention, training, advertising campaigns, support material for caregivers and as whatever facilities necessary in order to foster patterns of autonomy.

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