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ORIGINAL ARTICLE

Socio-Gerontological Assessment Tool for the Geriatrics service and development of practical skills among students

Instrumento evaluativo Social-Gerontológico para el Servicio de Geriatría y desarrollo de habilidades prácticas en estudiantes

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ABSTRACT

Introduction: The increase in life expectancy and the aging of the population indicates new social needs and opportunities. The inadequate design of socio-gerontological assessment according to the shortcomings of the elderly in a multidisciplinary team in the context of micro and macro social problems is the main interest of this research.

Objective: To validate a socio-gerontological assessment tool for the Geriatrics Service and the development of practical skills among students.

Material and Methods: Mixed, descriptive and cross-sectional research study conducted in the Geriatrics Service of the "Arnaldo Milián Castro" hospital in Santa Clara (2020-2022). The population consisted of 1 830 older adults, and the sample was composed of 538 individuals that were selected by simple random sampling. A nominal group of specialists was used to validate the content, using the Crombach's alpha statistical method.

Results: The results show that 52% of patients were female, 67.3% aged 60-79 years, 61.3% were involved in out-of-hospital bronchopneumonia at hospital admission, 40.1% were married, 76.4% had 1-2 children, 33.1% were deprived, 28.3% were lonely, 12.9% were unable to care, 8.2% were involved in family conflicts, 2.9% were mistreated, 79% were living at home, 80.1% had adequate social relationships, 81.8% were incorporated into social organizations, 27.1% had caregivers, 78.3% had independent ABVD, 63.4% had independent IADC, 43.3% had a psycho-cognitive state, 33.6% had an affective state, and 23.2% had an emotional state.

Conclusions: This model establishes a foundational framework for cancer centers to delineate the essential components of comprehensive biopsychosocial care from pediatric patients' perspective A tool for socio-gerontological assessment was validated by the multidisciplinary team as a didactic strategy for the development of practical skills in students of the Geriatrics course.

Keywords:
Gerontological and geriatrics hospital service; social assessment tool; development of practical skills.

RESUMEN

Introducción: El aumento de la esperanza de vida y el envejecimiento poblacional indica nuevas necesidades y oportunidades sociales. El diseño inadecuado de instrumentos de evaluación socio-gerontológica acorde a las necesidades del adulto mayor en equipos multidisciplinario en sus necesidades constituye el problema de investigación.

Objetivo: Validar un instrumento de Evaluación social gerontológica para el Servicio de geriatría y desarrollo de habilidades prácticas en estudiantes.

Material y Métodos: Investigación mixta, descriptiva de corte transversal en el Servicio de Geriatría del hospital "Arnaldo Milián Castro" de Santa Clara (2020-2022). Población (1 830) adultos mayores, muestra (538) seleccionada por muestreo aleatorio simple. Se empleó un grupo nominal de especialistas para validar el contenido, fue utilizado el método estadístico Alfa de Crombach.

Resultados: prevaleció el sexo femenino 52 %, de 60-79 años 67,3 %, la bronconeumonía extra-hospitalaria 61,3 % al ingreso hospitalario, casados 40,1 %, 1-2 hijos 76,4 %, carencia afectiva 33,1 %, soledad 28,3 %, incapacidad para el cuido 12,9 %, conflictos familiares 8,2 %, maltratos 2,9 %; viviendo en su domicilio 79 %, relaciones sociales adecuadas 80,1 %, incorporados a organizaciones sociales 81,8 %, con cuidadores 27,1 %, ABVD independiente 78,3 %, AIVD independiente 63,4 %, estado psíquico-cognitivo en el 43,3 %, afectivo 33,6 % y emocional en 23,2 %.

Conclusiones: Se validó un instrumento para la evaluación social gerontológica por el equipo multidisciplinario y como estrategia didáctica para el desarrollo de habilidades prácticas en estudiantes de la asignatura de Geriatría.

Palabras Claves:
Servicios gerontológicos y geriátricos hospitalarios; instrumento de evaluación social; desarrollo de habilidades prácticas.

INTRODUCTION

Aging as a stage at the end of life raises challenges that are intertwined from the point of view of the body, the psyche, the society, and the culture in which this aging is immersed, considering at the same time the phenomenon of current population aging as an important current global situation.[1]

Pythagoras, the Greek philosopher and mathematician, coined this beautiful, unfading phrase: "A beautiful old age is ordinarily the reward of a beautiful life." A generous sentiment that, unfortunately, is a remote reality, a hope hitherto unattainable in modern times. At present, the elderly is considered a heavy burden in the lives of families. In the future, will they continue to be catalogued as such?.[2]

Aging is a multifactorial process that takes place during the last stage of the life cycle, characterized by a progressive functional decline of the body's tissues and organs, as well as the ability to adjust to environmental stimuli. Cuba is a country with an advanced demographic transition in the Latin American context. For more than three decades, fertility has remained at significantly low levels, reflecting values that, since 1978, do not allow generational replacement of the population. General and infant mortality rates are also low and life expectancy at birth is very close to 79 years. International migration has shown negative balances for more than 50 years.[3,4]

The proposal to improve social policy for the elderly through intersectoral cooperation is the result of a work carried out by the Population Dynamics Attention Group of the Villa Clara province, attached to CITMA (Ministry of Science, Technology and Environment of Cuba), which was tasked with adapting the national policy approved to address population aging, as well as the characteristics and possibilities of the province.[5]

The provincial government has recognized the need for a social policy to care for the elderly. This group of population dynamics continues to work along those lines. The instrument that has been created for the social evaluation of the elderly is part of the contribution made by the author of this work.[5]

Facing these challenges enforces the aging care versus university model and clinical service that links teaching, research and economic and social practice, addressing demographic dynamics in national and international networks (migration included as a social or legal status).[6] Hence, Cuban universities are called to project the teaching-learning transformation processes from the undergraduate and postgraduate curricula to create their own cognitive capacities that respond to the social needs and real possibilities of pre-professional training. In this sense, the improvement of Geriatrics teaching is a priority in scientific research.[7]

In this sense, it should become essential not only the role of health professionals, family doctors and Geriatrics but educators, multidisciplinary groups working with aged people, geronto-teachers, gerontologists, geriatricians that give people the opportunity to live a healthy and prolonged old age through their care, thus helping them feel useful even at that stage of life. This is an issue that involves the entire society, as more than old age itself are the problems of society and unfavorable environments that lead people to live old age in.[7]

The bibliographic analysis carried out allows us to confirm that there is a theoretical and methodological lack in relation to the formation of knowledge intended for the care of the elderly, specifically in the studies aimed at the Social Evaluation of the Comprehensive Program for the Elderly in general, and in particular in the subprogram at the secondary level in an integrated and systematized manner.

Villa Clara, as the rest of the country, needs socio-gerontological assessments, because it constitutes an insufficiency of clinical and practical health services in academic centers and hospitals. It will lead to the improvement of health services and actions oriented towards this population group that presents high levels of social problems, morbidity from non-communicable diseases, and significant disabilities.

When investigating the advantages and importance of an adequate implementation of multidimensional geriatric assessment, the need to renew the design of socio-gerontological assessment according to the shortcomings of older adults, which distinguishes and helps synthesize the interview time, is confirmed. When the patient needs a multidisciplinary health team assistance service, all the micro and macro social problems of the elderly are important data to carry on. The research objective is to propose the validation of a modified Socio-Gerontological Assessment Tool for the Geriatrics Service and the development of practical skills among students.

MATERIALS AND METHODS

A quantitative-qualitative, descriptive and cross-sectional research study was carried out in the Geriatrics Service of the “Arnaldo Milián Castro” hospital in Santa Clara city, from January 2020 to December 2022.”

The population was defined by 1830 older adults cared for by the Provincial Geriatric Service and the sample of 538 was selected through simple random sampling with the help of the WHO EPIDAT 3.1 program, taking into account the population aging of Villa Clara of 25%, reliability of 95%, and precision error of 0.3.

Methods of obtaining information

A bibliographic review of the research problem was carried out to develop the theoretical foundation that allowed the modification of the design of a social geriatric assessment tool.

For validation of the content and constructs, resolution and feasibility, a nominal group was made up of a Second-degree Specialist in Gerontology and Geriatrics, Methodologists, the Head of the Rehabilitation Department, Full Professors and Consultants, a Master of Science in Satisfactory Longevity, and Graduates of Social and Occupational Rehabilitation with more than fifteen years of work experience.[8,9,10] Interviews and documentary analysis of individual medical records were also used to collect primary data.

The variables included within the designed instrument were: Geriatric ages (60-79, 80–89, 90–99, 100+); sex (female/male); diagnostic impression, marital status, education, occupation, number of children, emotional deprivation, loneliness, family inability to care, family conflict, abuse, domicile (living at home, at the children's home, another form of domicile), housing conditions, housing hygiene, ventilation, humidity, animals, social relationships, social organizations, economic problems, support services, caregivers, age of the caregiver, health of the caregiver, evaluation of basic activities of daily living (ABDL),[11] evaluation of instrumented activities of daily living (IADL)[12] and cognitive, affective and emotional status.[13, 14]

The social diagnosis (evaluative conclusion of the instrument) for the development of the construct took into account the final result of the dimensions:

- Social: Housing situations, dysfunctional family relationships, criminal problems, work problems, elderly people alone or living with another elderly person.
- Psychosocial: Psychiatric disorders, mental retardation, alcoholism, wandering, suicide attempt, dementia, Alzheimer's disease.
- Social Physician: Health problems, diseases with social repercussions.
- Socioeconomic: Precarious economy.

Statistical analysis and processing of data were performed; absolute and relative frequencies were used in descriptive statistics; the association between variables of interest was explored with the non-parametric chi-square test of independence and the reliability of the instrument was determined with a pilot sample and then with two random samples of the population with the help of the Crombach's Alpha statistical technique.[15] A reliability level of 95% was set, rejecting hypothesis tests when they were less than 0.05.

The ethical principles established in regulations related to the management of medical records were complied, as well as the parameters determined by the ethical internal regulations of the hospital. The personal and identification data of the patients were not published, following the ethical principles of scientific research of beneficence, non-maleficence, justice and autonomy and the declaration of Helsinki.(16) Informed consent statement was obtained from all subjects involved in the study. The study was approved by the Institutional Review Board (or Ethics Committee) of "Arnaldo Milián Castro" Clinical-Surgical University Hospital (protocol code 2.2.20, approval date 2020)."

RESULTS

The research included 538 older adults, which represented 28.9% of the total population, where 52% (280) of them were female and 48% (258) were male. By geriatric age, patients grouped between 60 and 79 years of age predominated (362; 67.3%), followed by the group between 80 and 89 years (131; 24.3%), between 90 and 99 years (41; 7.6%) and 4 centenarians (0.7%).

Out-of-hospital bronchopneumonia and arterial hypertension were the most frequent diagnostic impressions upon hospital admission, being present in 61.3% and 45.9%, respectively. There was no statistically significant relationship between sex and diagnoses (Table 1).

Table 1. Diagnostic impression and sex of older adults

Diagnostic impression X2=0,4175 pX2=0,7889	Sex				Total	
	Female		Male			
	No.	%	No.	%	No.	%
BNB EH	176	62.9	154	59.7	59.7	61.3
COPD	120	42.9	127	49.2	49.2	45.9
Ischemic heart disease	73	26.1	75	29.1	148	27.5
Anemia	59	21.1	50	19.4	109	20.3
Diabetes	39	13.9	31	12.0	70	13.0
Renal insufficiency	42	15.0	38	14.7	80	14.9

AF: Absolute frequency. Percentage with respect to sex; BNB EH: Extra-hospital bronchopneumonia; COPD: Chronic obstructive pulmonary disease; Source: socio-gerontological assessment tool.

Socio-Gerontological Assessment Tool

Table 2 presents the application results of the sociodemographic dimension instrument. The most frequent forms of marital statuses were: married (40.1%) and widowed (31.6 %); primary and secondary education levels were 38.8% and 27.5% respectively; also, 81.8% of the illiterates were widowed. Secondary, pre-university and university levels of education were more common among married people. There was a significant relationship between education and marital status (X2=141.366 pX2=0.000).

Moreover, 52.8% of them were retired, 18.6% were active, 17.1% were housewives, and 66.7% of those with university education were active. Retirees were frequent in the rest of the educational categories. There was a significant relationship between education and occupation (X2= 171, 241a pX2=0.000)

Of the total of older adults, 33 did not have children (6.1%); between one and two children had at least one child 411 (76.4%) and 94 had 3 or more children (17.5%).

Table 2. Aspects explored in the sociodemographic dimension of socio-gerontological assessment tool

Dimension I: Demographic partner			
Category	**Scale**	**No.**	**%**
Civil status	Single	88	16.4
	Married	216	40.1
	Divorced	64	11.9
	Widower	170	31.6
Scholarship	Illiterate	11	2.0
	Primary	209	38.8
	Secondary	148	27.5
	Pre-university	95	17.7
	University	75	13.9
Occupation	None	14	2.6
	Housewife	92	17.1
	Retired	284	52.8
	Pensioner	48	8.9
	Asset	100	18.6
Number of children	childless	33	6.1
	1-2 children	411	76.4
	≥3 children	94	17.5

Note: AF: Absolute frequency. Percentage of the total, Source: Socio-gerontological assessment tool

Table 3 presents the results of the exploration using the instrument of family situation and cohabitants and domicile.

The evaluated aspects in relation to family situation show the following results: One hundred and ninety-three patients were identified with emotional deficiency (33.1% of the total), 165 with loneliness (28.3%), 75 with family inability to care (12.9%), 48 with family conflicts (8.2%) and 17 with abuse (2.9%). Approximately 50% of older adults in the geriatric age of 60 to 79 years had some affectation, with inability to care (57.3%) and emotional deprivation (53.4%) prevailing. No difficulties were observed in the centenarians. There was a significant relationship between geriatric ages and emotional deficiency (X2= 34.018 pX2=0.000) and loneliness (X2= 44.814 pX2=0.000). Of the total of older adults aged 60-79 years, 103 (53.4%) had emotional deficiencies and 48.5% had loneliness. When exploring the dimension of cohabitants and residence, 425 (79.0%) older adults lived at home, 75 (13.9%) with their children, and 38 (7.1%) in other forms of residence. There was a significant relationship between the geriatric ages and the categories: living in the children's home (X2=13.4358 pX2=0.003) for which, 38 of 75 adults are between 60 and 79 years old and live at home (X2=10.275 pX2=0.013) for which, 299 out of 425 (70.4%) also belong to that age group.

Table 3. Aspects explored in the dimensions of the family situation and cohabitants and domicile by geriatric ages of the socio-gerontological assessment tool.

Explored categories	Age	60-79	80-89	90-99	≥100	Total
Dimension II: Family situation						
Emotional lack X2= 34.018 pX2=0.000	No.	103	64	26	0	193
	%	53.4	33.2	13.5	0	33.1*
Loneliness X2= 44.814 pX2=0.000	No.	80	61	24	0	165
	%	48.5	37	14.5	0	28.3*
Family inability to care X2=5.757 pX2=0.124	No.	43	26	6	0	75
	%	57.3	34.7	8	0	12.9*
Family problems X2= 6.486 pX2=0.09	No.	25	18	5	0	48
	%	52.1	37.5	10.4	0	8.2*
Abuse X2=6.401 pX2=0.094	No.	7	7	3	0	17
	%	41.2	41.2	17.6	0	2.9*
Dimension III: Cohabitants and domicile						
Another form of address X2=3.8574 pX2=0.249	No.	23	14	1	0	38
	%	60.5	36.8	2.6	0	7.1*
Living in children´s home X2=13.4358 pX2=0.003	No.	38	26	9	2	75
	%	50.7	34.7	12	2.7	13.9*
Living at home X2=10.275 pX2=0.013	No.	299	93	31	2	425
	%	70.4	21.9	7.3	0.5	79.0*

***Percentage of the total. AF: Absolute frequency. Percentage calculated with respect to the dimension category. Source: socio-gerontological assessment tool.**

With regard to the dimension of housing conditions, 412 (76.6%) older adults were identified with conditions evaluated as good, 86 (16.0%) as fair, and 40 (7.4%) as poor. In addition, 97 (18.0%) individuals were living with inadequate equipment, 99 (18.4%) with risk of accidents, 85 (15.8%) with architectural barriers, 84 (15.6%) with inadequate kitchens, 65 (12.1%) with incomplete bathrooms. In the exploration of the environmental risks to which older adults were exposed, the hygiene of the home was evaluated as good in 443 patients (82.3%); ventilation was abundant for 463 (86.1%); 373 individuals (69.3%) had animals and only 20 (3.7%) reported humidity (Table 4).

Table 4. Aspects explored in the dimensions of housing conditions and cohabitants and environmental risks of the socio-gerontological assessment tool

Dimension	Explored categories	No.	%*
IV: Housing condition	Good	412	76.6
	Regular	86	16
	Bad	40	7.4
	Other aspects		
	Inadequate equipment	97	18.0
	Accident risk	99	18.4
	Architectural barriers	85	15.8
	Inadequate kitchen	84	15.6
	Incomplete bathroom	65	12.1
	Electrical installation with risk	57	10.6
	Inadequate roof	56	10.4
	Sliding floor	47	8.7
	Improper gas installation	25	4.6
	Poor medication storage	20	3.7
V: Environmental risks	Good	443	82.3
	Regular	69	12.8
	Bad	26	4.8
	Ventilation		
	None	29	5.4
	Abundant	463	86.1
	Limited	46	8.6
	Humidity	20	3.7
	Animals	373	69.3

***Percentage calculated with respect to the total; AF: Absolute frequency. Source: Socio-gerontological assessment tool.**

Table 5 shows the dimension of social relationships; more than 75% of people leave their homes, receive visitors and have an adequate social network; 31 (5.8%) report being a combatant and 14 (2.6%) attend nursing homes; 81.2% belong to some social organization, the most frequent being the CDR (407; 75.7%). Financial problems were identified in 94 patients (17.5%); in 52.1% of men and in 54.3% of the geriatric group between 60 and 70 years old, 146 (27.1%) received care from caregivers, of which 132 were related. Of the total of caregivers, 84.2% were aged less than or equal to 60 years and the health status of 117 was good (80.1%). When the relationship between health status and age of the caregiver was explored, those <= 60 years of age were in good health (109; 74.7%); the three people with poor health were over 60 years old and those with health fear were between the ages of 61-70 years (8; 5.5%); there was a significant association between them (X2=82.243 pX2=0.000).

Table 5. Aspects explored in the dimensions of social relationships, economic situation and social support of the socio-gerontological assessment tool.

Dimension	Aspects explored	No.	%*
VI: Social relationships	Receive visits	464	86.2
	Suitable social network	431	80.1
	Leaving home	409	76.0
	Bickering	31	5.8
	Nursing homes	14	2.6
	Social Organizations		
	None	98	18.2
	CDR	407	75.7
	FMC	24	4.5
	PCC	9	1.7
VII: Economic situation	Economic problems		
	Yes	94	17.5
	No	444	82.5
VIII: Social support	Services received		
	Do not receive any service	358	66.5
	Formal	42	7.8
	Informal	138	25.7
	Caregivers		
	Total of patients without caregivers	392	72.9
	Total of patients with caregivers	146	27.1
	Family-related caregiver	132	24.5
	Unrelated caregiver	12	2.2
	Caregiver age (n=146)*		
	<= 60	123	84.2
	61 – 70	14	9.6
	71 - 80	8	5.5
	81 and over	1	0.7
	Caregiver´s health*		
	Good	117	80.1
	Regular	26	17.8
	Bad	3	2.1

***Percentage calculated with respect to the total number of caregivers. AF: Absolute frequency; Percentage calculated with respect to the total. Source: Socio-gerontological assessment tool**

In Table 6, 421 (78.3%) older adults were evaluated as independent for basic activities of daily living and 341 (63.4%) for instrumented activities. There was a significant relationship between IADL and sex (X2=0.007 pX2=0.933); in the case of those women and men who were independent, there were 177 (51.9%) women and 164 (48.1%) men. A significant association was obtained between the geriatric groups and the evaluations of BADL and IADL, with ages 60-79 being the most represented, 327 for BADL and 287 for IADL. The Psycho-cognitive state was the most frequent, identified in 233 people (43.3%), with no significant relationship between sex or age.

Table 6. Aspects explored in the dimension of physical and psychological functionality of older adults of the socio-gerontological assessment tool			
Dimension IX: physical and psychic functionality	**Explored categories**	**No.**	**%***
Evaluation of functionality	ABVD		
	Independent	421	78.3
	Dependent	117	21.7
	IADL		
	Independent	341	63.4
	Dependent	197	36.6
Cognitive, affective and emotional state	Psycho-cognitive	233	43.3
	Psycho-Affective	181	33.6
	Psycho-emotional	125	23.2

FA: Absolute frequency; Percentage calculated with respect to the total; Source: social gerontological assessment tool.

At the end of the evaluation, 422 (82.2%) of the adults were diagnosed with medical-social, 87 (16.2%) with social, 8 with psycho-social (1.5%) and 1 with socio-economic problems.

Table 7 presents the statistical analysis or result of reliability carried out for the validation of the instrument in a pilot sample and random samples of 538 older adults in the population, obtaining a Crombach's Alpha coefficient of more than 0.7 with statistical significance with the Hotelling's T2 test and intraclass correlation, so it is inferred that the instrument is significantly reliable.

Table 7. Reliability and validity of the instrument (statistics)						
Description	**Of**	**Thrush**	**Hotelling T2 Test**		**ICC**	
	Co	**Co**	**Statistician**	**p**	**Co**	**Q**
Pilot sample	0.743	0.779	436.939	0.000	0.743	0.000
First validation of random sampling	0.739	0.794	193.172	0.000	0.739	0.000
Second validation of random sampling	0.713	0.720	541.526	0.000	0.713	0.000

Aft: Crombach's alpha based on the typed elements; Co: Coefficient; ICC: Intraclass correlation coefficient; p: statistical significance

DISCUSSION

The research shows as aging is also a unique process within the life course; therefore, the gerontological field cannot be approached in isolation from its context and from its multiple intersections, but must include the heterogeneity of present old ages.[17]

The authors decided to develop two tables with the age groups at the time of the study, so as not to lose any data of interest; the changes that occur in these age groups were considered (Table 1 and Table 2). The geriatric age group of 60 to 79 years was higher, representing 60% of patients, coinciding with the results derived from the application of the same instrument as the results from a thesis that opts for the first-degree specialist title in Gerontology and Geriatrics that began to be developed in a health area belonging to the municipality of Santa Clara where 73,4% of the total study population were the same age.

Since 1947, when the World Health Organization postulated that health is a state of complete physical, mental and social well-being and not merely the absence of disease, it began to be considered that social risk factors can affect the health status of the individual. Social and protective risk factors influence the health status of older people by affecting both the length of life and its quality. The evaluation of these psychosocial aspects gives us a better understanding of the elderly person and their environment by guaranteeing the optimization of their own resources, those of the family and the community.[18].

Cuba is already one of the oldest countries in Latin America, and it is anticipated that, by the year 2030, a third of the Cuban population will be 60 (or more) years old.[19] An epidemiological-health transition is also occurring throughout the world with a rise in the incidence and prevalence of NCDs, while infectious-contagious diseases (such as tuberculosis) persist, and arboviruses become endemic.

Table 3 presents the data about the diagnostic impression and sex of older adults at hospital admission date, with out-of-hospital Bacterial Bronchopneumonia being the one with the greatest impact (61.3%), followed by Arterial Hypertension (45.9%), and then Chronic Obstructive Pulmonary Diseases which is in the third position (27.5%). Although it is not the expected result, there are several factors that justify it; firstly, the random sampling, the moment in which the interview was carried out, and the professional who carried it out.

Pneumonia is one of the most common and important health problems in the elderly.[20] It represents the fourth cause of death, and the first infectious cause of death, in this age group. Pneumonia is often the terminal event of prolonged serious illnesses and has been called "the friend of the elderly." Community-acquired pneumonia (CAP) is a major cause of morbidity and mortality in the elderly.[21]

Nosocomial pneumonia is common among hospitalized elderly people, especially those undergoing thoracic or abdominal surgery, mechanical ventilation, or tube feeding. Lower respiratory infection is a common medical problem in the elderly with significant morbidity and mortality. The main risk factor for the appearance of pneumonia in the elderly is the presence of other serious diseases.

Clinical particularities are associated with all of the above: it can appear in a variable form such as falls, mental confusion, sensory deterioration, tachypnea, unexplained fever, worsening of the underlying pathology, less leukocytosis, although with left deviation, sometimes non-specific auscultation, delayed radiological signs due to dehydration, poor quality and masking due to regular medication.[22] Similar results were presented by Estrada-Brizuela when he concludes that mortality is higher in groups of patients with circulatory and respiratory diseases, with a clear predominance of acute coronary syndrome and bronchopneumonia. The male sex and ages between 75 and 89 years are more frequently associated with mortality.[23]

Reyes matches our research results in the Internal Medicine Service at Calixto García hospital. There he concludes that mortality events occurred more frequently in patients between 70 and 89 years of age, white males, with a hospital stay of more than 10 days. The main direct causes of death were bacterial bronchopneumonia, pulmonary thromboembolism and oncological diseases, with lung neoplasia predominating.[24]

Table 4 represents the marital status and sex of the sample taken where the married marital status predominates in the female sex (117; 41.8%). However, in Cuba, the proportion of divorced or separated people, along with widowers and singles at the end of 2020 was 41.6%, that is, a considerable proportion of older people did not have any partners. The lack of this important emotional bond in old age can influence not only the feeling of loneliness but also the state of health of the people.[25]

Hence the importance that the author gives to reflecting in Table 5 the marital status and education of the elderly who participated in the study, where there was a significant relationship between the variables, with primary and secondary being the most frequent levels of education in the study. Age and social factors such as a low educational level, not having completed primary education or living in rural areas were not considered as relevant variables. But the fact that patients do not follow correct pharmacological treatment was identified as a strong criterion. This is explained by the lack of understanding or the understanding of how to follow a schedule, specific doses.[26]

The people aged 60 years and above are expected to rise by 56% worldwide, from 901 million to 1.4 billion between 2015-2030. By 2050, the global population aging is expected to be more than double, reaching nearly 2.1 billion. The data from World Population Prospects: the 2017 Europe is currently having 25% of its population aged 60 years and above and this number is estimated to be 35% in 2050 and 36% in 2100. The global increase in population aging is likely to be 65% in Asia, 14% in Africa and 11% in Latin America and the Caribbean from 2017 to 2050. The current global scenario projects that people aged above 80 years are going to increase from 137 million in 2017 to 425 million in 2050, reaching nearly to 909 million in 2100.[27] (p.15).

The increase in the elderly population worldwide is accompanied by another concomitant phenomenon, that of the need of help. Due to various circumstances, elderly people suffer from some degree of disability, which is why they require the help of their family to face their situations. The need to receive support has been studied from their social networks. Those who live alone have smaller networks and receive less social support.[28]

Damanpreet Kaur *et al*[27] commented that the process of aging is characterized by numerous changes in the body which have an overall negative effect on the health and lifestyle of the elderly. Nutrition deserves special attention as an individual reaches old age. It plays a vital role in affecting the quality of life, including physical, mental and social health. The physiological decline in food intake is very common among older age and this results in nutritional deficiencies.

In table 6, the occupation of the studied samples and its relationship with schooling is shown, where 52.8% of the total were retired, 18.6% were active and 17.1% were housewives; also, 66.7% of those with university education were active.

Retirement is that social protection provided by the state upon the cessation of working life, remunerated within the labor market of the worker and/or professional, whether salaried or self-employed, to move on to a phase of rest that is also remunerated. With retirement, family income decreases and these economic consequences can become another element that makes it difficult to satisfy family needs, hence the evaluation of this aspect is unfavorable.[29] For Cuba, aging constitutes one of the most significant challenges. For this reason, the public policies that the nation has promoted for more than 60 years need to be improved, the implementation of proactive policies that are more effective than traditional ones, so that they result in better benefits and, therefore, in better quality of life services.[30]

Table 7 illustrates, in brief detail, that of the total of older adults. The family, as a social support network, increases its importance with the aging of its older members, conditioned at this stage of life by the reduction of their social activity, which increases the value of the family space for the elderly, which will always be the irreplaceable support. Despite the fact that, family problems become more complex with aging, among other factors, there is an overlap between several generations with different needs, demands and different regulatory systems. Hence the need to face the problem of old age from the family space.

That is why in Law 156 of the family code in its article 2 of the Official Gazette of the Republic of Cuba, it is declared that family members are obliged to fulfill family and social duties on the basis of love, affection, consideration, solidarity, brotherhood, sharing, cooperation, protection, responsibility and mutual respect.[31] This research discusses the impact of the care of these patients when they are admitted to hospitals without adequate support from a family member who ensures comprehensive care. Sometimes the caregiver is an older adult with the same or worse conditions as the patient, preventing them from complying with all the tasks that are oriented to them during the visit, which provided they are not fulfilled, they lead to the emergence of other entities that threaten the health of the elderly.

The aspects evaluated in the family situation were more frequent in the geriatric ages from 60 to 79 years. A group of 193 patients were identified with emotional deficiency (33.1% of the total), 165 with loneliness (28.3%), 75 with family inability to care (12.9%), 48 with family conflicts (8.2%). and 17 with abuse (2.9%). There was a significant relationship between geriatric ages and emotional deprivation and loneliness.

Vicente Madoz Jáuregui in[32] has described loneliness as the conviction of being excluded, of not having interactions and lacking company to carry out activities. This biopsychosocial factor, as it is considered, is classified into two types: objective (pleasant feeling) and subjective (unpleasant feeling).

The feeling of loneliness represents a prevalence of 20% to 40% in the elderly population, an unfavorable situation that can have negative repercussions. Some authors describe it as a lack of exchange with others, from which feelings of sadness, fear, and anxiety are generated, which in older people can be considered an imposition that is difficult to address.[33,34]

The increase in the prevalence of loneliness is representative of older people; there are some conditions that can contribute to its appearance, for example, loss, abandonment, grief, and change of roles. It is mentioned by Rodríguez Martín who states that there are causal factors of loneliness, such as a crisis of identity, autonomy and belonging.[32, 35]

CONCLUSIONS

A modified socio-gerontological assessment tool was validated to be used by the multidisciplinary team and as a teaching strategy for the development of practical and didactic skills among students when performing an important comprehensive diagnosis of the elderly during the study of the Geriatrics subject.

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