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Measurement of Life Events in Elderly Adults in a Mexican Population

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Abstract

Introduction: Life events or crisis are any circumstance or experience in the life of a person or family that generates stress or tension and a change. Aging is an irreversible, decreasing process of gradual losses and transformations at the biological, psychological, and social levels.

Objective: To know the most stressful life events and compare their frequency and impact on older adults in a Family Medicine Unit.

Method: A cross-sectional, descriptive, and prospective study, survey type; in 200 people over 60 years at primary care was done. Holmes and Rahe's scale measuring the impact of life events of the last year with 42 reagents according to the intensity of the event was applied. The assessment was made in SPSS version 25 for Windows. Items were added and when it was higher than 150 it was considered that it may affect the family or health status. A significance of $p < 0.05$ was used.

Results: Older adults experienced 4.2 life events per year, with a minimum of one and a maximum of 10. The most frequent crisis was the illness of a close relative; the most stressful was the death of the spouse and the least stressful the vacation period. The minimum value given to an event was 35. The minimum given by Holmes and Rahe was 10. The maximum value of both was 100.

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Conclusions: The intensity with which older adults in Mexico experience life events is higher than that described by Holmes and Rahe. The impact is also quantified differently. The average score was high and it can affect the health of elderly adults and the family.

Keywords

Crisis; Life events; Elderly; Aging

Introduction

It is difficult to define stressful life events since their conceptualization may refer to the cause of stress (environmental, psychological, and social), or to effects that the stressful circumstance produces on the individual and family [1,2]. Crisis or life event is any circumstance or experience in the life of a person and/or family that generates stress or tension and change [3,4].

Stressful life events produce a set of motor, cognitive, and psychophysiological responses in the person in an attempt to adapt to the situation caused by the stressor [5-8]. Maladjustment causes changes in health and disease onset or worsening of pre-existing. Crises are Regulations or Development, (these are expected at different stages of the development of every person). Non-regulations or accidental (unexpected is all at different stages of personal or family growth). These life events are of varying intensity depending on the impact they cause at that time [7-11]. In Mexican culture, the older adult is the person over 60 years of age [12,13]. The aging period is an irreversible, decreasing process of a gradual loss of vitality, in biological, psychological, and social changes and transformations. It is a life cycle expected and is part of the last cycle life of each person.

By 2050, a global increase of approximately 50% of older adults is forecast. For this reason, interdisciplinary care management is a priority for this growing population, especially critical personal, family, and social events [14,15]. Aging produces significant changes related to the experience of personal and family stressful life events. These events are represented in the scale of Holmes and Rahe and measure the intensity and impact stress they have led in the past 12 months [7,16,17].

Psychologists Holmes and Rahe in 1967 built a scale with 42 items; They collected the most stressful life events in people's lives and gave them a score ranging from 0 to 100: they called it Life Events [7,18,19]. For Holmes and Rahe stress means adaptation to change, so these crises can be both positive and negative for life. A person can be in more than one stressful situation at the same time. The stressful life events described by them are exposed on the scale, ranging from number 1 with a score of 100 to 42 with a minimum score of 10. [7,18,19].

There is little information in the literature on crises being experienced by elderly people. In Mexico, there is not much information on the subject. Given that each culture the score can be modified by the

personal assessment of stress, authors in July 2001 conducted a study and found that the impact of life events in the elderly differs from that described by Holmes and Rahe. According to Holmes and Rahe, if the score is higher than 150 points, it can affect the family or the health status of any of its members. The objective of the study was to know what life events for elderly adults that impact their lifestyle, studied in a primary care unit.

Methods

A cross-sectional, descriptive, and prospective survey-type study was carried out. The study population was 200 adults over 60 years of age, outpatients from a primary care center in northern Mexico from December 2017 to February 2018. Exclusion criteria were adults under age 60 who were hospitalized or submit any harm cognitive level that would limit them to answer instrument questions. Requested written consent of participants and confidentiality of information was guaranteed. A questionnaire including socio-demographic characteristics of participants and the Holmes and Rahe scale, which assesses the impact of crises in the past year was applied.

The Holmes and Rahe scale is composed of 42 items organized from highest to lowest according to intensity. Each item has a score ranging from 100 in the most serious event to 10 in the least relevant. Data were collected and analyzed using the Statistical Package for Social Sciences (SPSS) version 25 for Windows. Descriptive statistics were used with frequencies and percentages for categorical variables and measures of central tendency and variability for continuous variables. For the analysis of the instrument, all reagents were added, a score equal to or greater than 150 was considered that it may affect the family or the health status of any of its members. The chi-square test was used to cross-over demographic variables with a statistical significance of $p < 0.05$.

Results

Socio-demographic characteristics of the population resulted in 112 female patients, 56.0%. The mean age was 68.66 years with a Standard Deviation of 6.78 years and a minimum age of 60 years and the maximum age of 92. Regarding marital status, 60.5% were married, 27.0% widowed. As for the level of education, 44.0% had an incomplete elementary school, with complete elementary school corresponding to 15.5%, and 39% were illiterate.

Working at home accounted for 52.0%, none, with 16.5%. 92.0% had children. Living with spouse and children 39.0%, living alone, with 21.5%. Seniors surveyed, 87.5% were Catholic and Christian representing 10.0%. The income of 58 people was less than the minimum, 29.0%, 95 have no income, with 47.5%. Medical care for elderly people is from government social insurance. Regarding health, 78 considered it was good, 39.0%, 107 fairs, representing 53.5%, and 13 were bad. The most common diseases in older adults surveyed: 43 with hypertension, representing 21.5%. Diabetes Mellitus 34, with 17.0%, 10 with arthritis, 5.0%, and 38 without any disease with 19.0%. They presented one disease 63.5%. Two diseases had 17.5. None of the people interviewed mentioned having more than three diseases.

Holmes and Rahe's scale is composed of 42 items organized from highest to lowest according to

intensity. Each event has a score ranging from 100 in the most serious event to 10 in the less relevant. (Table 1) shows that the impact of crises experienced during this year was different from the value given by Holmes and Rahe. The most overrated crisis by older adults was the death of a partner with the same value on the Rahe scale of 100, divorce valued at 100 and Rahe at 70, reconciliation with the partner at 100 and Rahe at 40, illness or disability 90 and Rahe 60, dismissal from unemployment 90 and Rahe 45, change of job responsibilities 90 and Rahe 35, mortgage or bank loan, debts 88 and Rahe 25, the arrival of a new member of the family 87 and Rahe 30, retirement and retirement 85 and Rahe 40, pregnancy of a family member 85 and Rahe 35, sexual problems 85 and Rahe 35, Christmas vacation season 35 and Rahe 10.

EVENT	RAHE	ELDERLY SCORE
	SCORE	
1. Death of the partner	100	100
2. Divorce	70	100
3. Menopause	60	90
4. Marital separation	60	90
5. Imprisonment	60	0
6. Death of a close relative	60	80
7. Illness or disability	45	90
8. Marriage	45	70
9. Dismissal from employment	40	90
10. Marital reconciliation	40	100
11. Retirement or Retirement	35	85
12. Disease in close relative	35	80
13. Work more than 40 hrs. per week	35	75
14. Changing responsibilities at work	35	90
15. Use of alcohol and / or drugs	35	75
16. Pregnancy of a family member	30	85
17. Sexual problems	45	85
18. Arrival of a new member of the family	35	87
19. Having suffered an assault	30	85
20. Change in financial status	30	85
21. Death of a friend (not a family member)	25	83
22. Change in the number of arguments with the couple	25	85
23. Mortgage or bank loan, debts	25	88
24. Sleeping less than 8 hours	20	75
25. Problems with the in-laws and	25	85

children		
26. Change in living conditions	20	60
27. Outstanding personal achievement	20	80
28. The couple starts or stops working	20	0
29. Change in personal habits	20	0
30. Chronic allergy	15	0
31. Problems with the boss	15	0
32. Change in working hours or conditions	15	0
33. Change of residence	15	80
34. Change of religious activity	15	0
35. Change in social activities	10	40
36. Minor loan	10	90
37. Change in the frequency of family reunions	10	80
38. Insecurity in the neighborhood where you live or work	10	70
39. Son leaving home	10	0
40. Vacation	10	35
41. Christmas holiday season	10	35
42. Minor infractions of the law	10	0

Table 1: Comparison of values Rahe and values of the Elderly.

(Table 2) shows the most frequent life events in the last twelve months in older adults. In descending order: Illness of a close relative (62.0%), Christmas vacation season (60.5%), death of a friend (58.0%), death of a close relative (46.5%), illness or disability (37.5%), family member pregnancy (34.0%), arrival of a new family member (32.5%), sleeping less than 8 hours (19.0%), death of the partner (16.0%), problems with the in-laws (12.0%), use of alcohol and/or drugs (5.5%), marital separation (5.0%), working more than 40 hours a week (4.5%), mortgage or bank loan, debts (4.5%), sexual problems (2.5%) (Figure 1.)

LIFE EVENT	
Illness of a close family member	62.00%
Christmas holidays season	60.50%
Death of a close friend	58.00%
Death of a close family member	37.50%
Major personal injury or illness	34.00%
Pregnancy	32.50%
Gaining a new family member	19.00%

Sleep less than eight hours	16.00%
Death of spouse	12.00%
In-law troubles	8.00%

Table 2: Life events more frequent for elderly people.

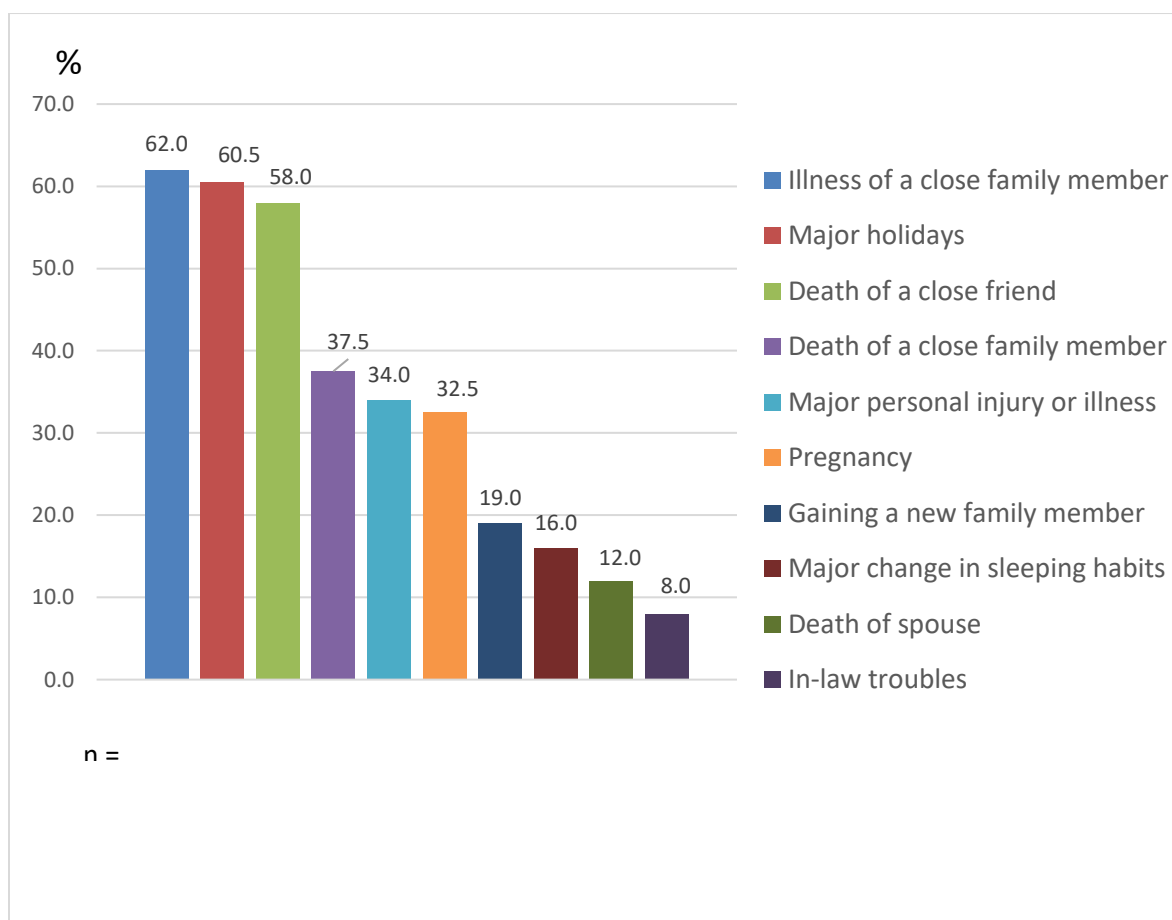


Figure 1: Life events more frequent.

Table 3 shows the impact of the crisis experienced by elderly people over the past 12 months, according to its intensity (Figure 2).

LIFE EVENT	
Death of spouse	100.00%
Divorce	100.00%
Marital reconciliation	100.00%
Menopause	90.00%
Marital separation	90.00%

Major personal injury or illness	90.00%
Being fired at work	90.00%
Major change in responsibilities at work	90.00%
Taking on a loan	90.00%
Foreclosure on a mortgage or loan	88.00%

Table 3: Life events more intense for elderly people.

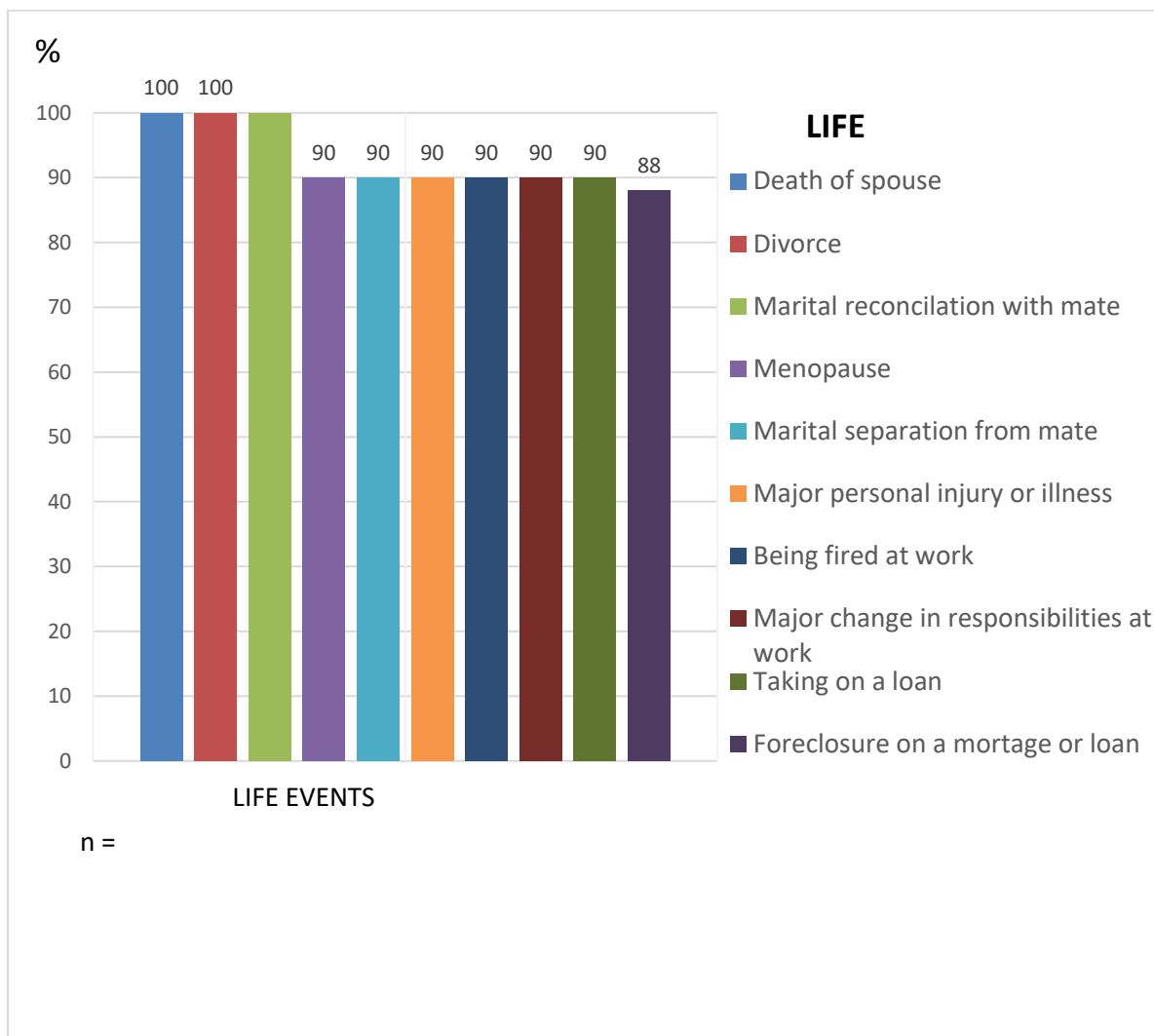


Figure 2: Life events more intense.

Table 4 shows life events in the elderly with the average percentage of patients and the value given by Holmes and Rahe. Life events that did not appear were: the couple stops working, change in personal habits, chronic allergy, problems with the boss, change in religious activity, child leaving home, and minor law offenses (Figure 3).

LIFE EVENT	Values gave for senior citizen	Holmes and Rahe scale
Death of spouse	100	100
Divorce	100	70
Marital reconciliation	100	40
Menopause	90	60
Marital separation	90	60
Major personal injury or illness	90	60
Being fired at work	90	45
Major change in responsibilities at work	90	35
Taking on a loan	90	10
Foreclosure on a mortgage or loan	88	25

Table 4: Comparatives values gave for Elderly people vs. Holmes and Rahe.

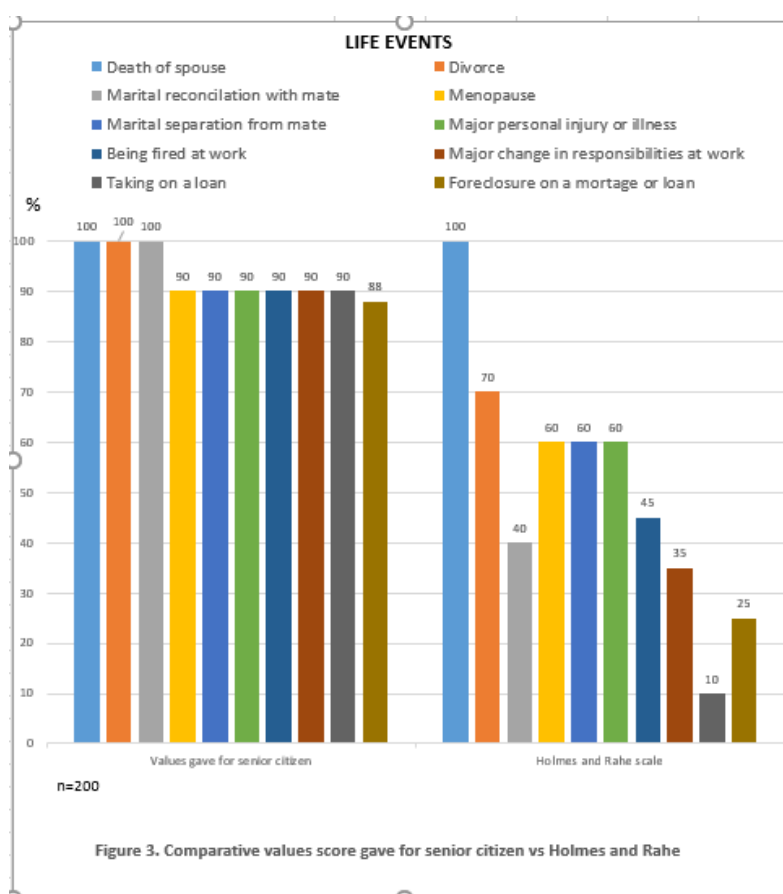


Figure 3: Comparative values score gave for senior citizen vs Holmes and Rahe.

Discussion

From results, it was observed that most older adults were women, married, who work at home, with low education, who profess the Catholic religion, lack income, whose medical coverage is given by the Government Insurance. This profile reflects the older adult reported in the national literature.

19% of older adults were healthy, without presenting any disease. 63.5% of subjects showed any chronic disease, primarily hypertension, diabetes, and arthritis. This explains the poly-pathology of the elderly. The frequency of the crises experienced in the majority of the population studied is different concerning the impact or intensity. The impact of life events differs from the impact found by Rahe. In our study, the intensity is higher. The minimum value given to an event by the older adult was 35 compared to 10 given by Rahe. The maximum value in both was 100. We can say that elderly in our studied community overvalues the impact of events. Most life events mean intense crises for older adults.

We found an average of 4.19 crises per person per year, with a minimum of one and a maximum of 10, which is understandable because in old age there are constant losses that come to be considered true crises.

Findings from other studies differ in the average life events per person per year. A study by Holt et al., found an average of 4 crises being similar to those reported by this study [21]. These may be due to similarities socio-demographic characteristics of participants since the inclusion criteria of Holt et al. included older adults with chronic degenerative diseases, specifically hypertension, which presented problems in adherence to anti-hypertensive treatment. Probably the occurrence of vital events similarly affects populations with the same age range regardless of geographic area.

Other authors found higher means in terms of life events (average = 7.62), possibly these differences are because in the study by Londoño et al. participants have included teenagers, young adults, and middle-aged 17 to 64 years old age. It may be an important factor in terms of crisis per year reported [18].

Major crises encountered in this study were the death of a spouse, divorce, reconciliation of the couple, menopause, and marital separation, compared with findings from other studies that found as major crises were personal illness, injury, death in the family or friend, illness or injury of a family member or friend or no medical events [22].

Other authors found major crises like the death of a friend or relative, changes in health or behavior of a family member [21]. Although age ranges and means crises participants in each study were similar, there are still some important differences in major crises reported. Geographic area, living conditions, family relations, culture, and customs could partially explain variations in several studies.

The average score for the crises was 331.80 and according to Rahe, if this is higher than 150 points, it can affect the family or the health status of any of its members. In another study carried out in rural areas, the average score was 253.14 with a minimum score of 0 and a maximum of 580, unlike our study with a minimum of 70 and a maximum of 710 [20]. As for the study carried out by Holt and col. a higher

percentage of participants obtained means between 150 and 299 [21].

Conclusions

The intensity with which older adults experience crises is higher than that described by Holmes and Rahe. The impact of crises experienced during the year is quantified differently from the value given by Holmes and Rahe. An average score obtained was high, which means putting the elderly or their family at risk. Annually older adults experience an average of 4.19 critical events. The most frequent crisis was the illness of a close relative. The most stressful crisis is the death of the spouse. The least stressful is the vacation period. Some life events did not occur in the population studied. The minimum value given to a crisis was 30 compared to 10 given by Holmes and Rahe. Six crises did not appear and they were menopause, confinement in jail, chronic allergy, clock time change, minor loan, and infractions of the law.

Recommendations

Knowing the frequency and intensity of life events in the elderly, advance guidelines must be carried out to reduce the impact of crises. Replicate the study in other areas.

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