

Stability and change in prospective measures of life satisfaction in older adults: Fibra Study

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Abstract

Objective: The purpose of this study was to identify the incidence and variables associated with stability and change in life satisfaction (LS) between baseline and 9-year followup, in community-dwelling-older adults. Method: A prospective longitudinal study of baseline (BL; 2008-2009) and follow-up (FW; 2016-2017) data from the Frailty in Elderly Brazilians Study involving 360 individuals aged 71.7±5.0 years at BL, 68.9% women, was conducted. Associations of sociodemographic and psychosocial variables, and objective and subjective health indicators measured at BL with the incidence of stability and change in LS between BL and FW were investigated. Results: Nine years after the BL collection, the following results were observed: higher incidence of stability (61.1%) than of worsening (26.4%) or improvement (12.5%) in LS; lower incidence of worsening of LS in the ≥80 age group than in the 70-79 years group; higher incidence of change than stability of LS among the participants with multimorbidities and scores > 6 for depressive symptoms; higher incidence of LS worsening among participants with low self-rated health (relative risk; RR=2.26) and low satisfaction with memory (RR=2.33). Conclusions: The incidence of stability in LS was more frequent than that of worsening or improvement. Subjective indicators of physical health and satisfaction with memory may serve as indicators of deterioration in wellbeing over time and the presence of depressive symptoms may suggest instability in self-assessments, possibly accompanying a reduction or increase in LS over time. There was considerable heterogeneity in the manifestations of LS among the older adults assessed.

Keywords: Aged. Personal Satisfaction. Memory. Depression. Longitudinal Studies.

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INTRODUCTION

Life satisfaction (LS) is defined as the evaluative-cognitive aspect of subject wellbeing. This reflects the individual's perception on the degree to which life as a whole meets their expectations based on internal and external standards¹. The measure can encompass specific domains, such as physical and mental health, functional ability, family relations and social support, which are relatively independent from one another and from the global construct¹. Life satisfaction and satisfaction for domains changes over the life span, becoming weaker or stronger over chronological time of cohorts and over biological time of adults and older people².

Surveys carried out in over 160 countries show that LS is high early in adult life, declines towards the end of this phase, stabilizes and increases from 55-60 years¹, and to decline again from 75 years and older. Life satisfaction is influenced by age-related changes in health status and functional ability³⁻⁵, rather than by the elapsing of time. Data from the 3 waves of the Health and Retirement Study⁶ (2006, 2010-2012, 2014-2016) involving 12,998 North-Americans aged 50 years and older showed that individuals with higher LS scores had lower risk for pain, less limitation in physical functioning and fewer chronic diseases. This high LS group also showed high scores for self-rated health, health behaviors and psychosocial indicators. These individuals had low risk for depression, hopelessness, negative affects, perception that social opportunities are restricted, and loneliness. A study with a similar design, but involving Chinese oldest-old (aged ≥80 years)⁷ showed more robust positive associations between LS, selfrated health and cognitive status. Stronger negative correlations were observed between satisfaction and self-rated health and instrumental activities of daily living (IADLs), and between satisfaction and self-rated health and depression. Strong positive associations were found between LS and gender, education, place of residence and other economic indicators.

The field of research on LS is rich in data, but a large proportion is derived from cross-sectional studies, whose validity can be compromised by the fact that they draw on comparisons between groups of successive ages tested at the same historical point of life of the society they belong to. Although less common, longitudinal studies with repeat measures and a mix of longitudinal and cross-sectional sequences which allow historical and biological time to be compared, yield more meaningful data on the heterogeneity of the trajectories of satisfaction.

Research results which exemplify this quality were provided by the study of Headey and Muffels⁸. Trajectories of life satisfaction trajectories of 2,473 German adults and older individuals were examined in the form of responses given over 25 consecutive years (1990-2014) to the German Socio-Economic Panel. Long-term stable trajectories were exhibited by 64% of the sample and worse or better trajectories were observed in 24% of participants. The remainder had a pattern of instability over the long term. The authors proposed that changes in values, priorities and behavioral choice less seldom occur and explain long-lasting changes in life satisfaction. However, transient instabilities can result from the influence of everyday life events and of feedback from occurrences in the life course. In other words, LS is essentially stable throughout the life span and heavily influenced by personality, emotions and attitudes. Satisfaction with life varies in response to unexpected, temporary events such as diseases and accidents, but when the impact of these events has been absorbed by the individual, satisfaction returns to basal levels1.

There is considerable heterogeneity in trajectories of LS in aging, as reported by Korean researchers, who identified 5 different trajectories over an 8-year period of a longitudinal study⁹. Four trajectories were characterized by instability (high, mediumhigh, medium, low-medium) and 1 by improvement (medium-to-high). The trajectories of stability predominated in individuals who were older, higher educated and more financially secure. Medium

stability trajectories were more prevalent in older individuals who had poorer health status, lived alone and experienced financial stress. The individuals who showed improvement were younger and had worse mental health at baseline than those who had a rising trajectory.

To the best of our knowledge, there are no Brazilian studies investigating stability and change in LS in aging associated with satisfaction for specific aspects of life, such as health, memory, sociability and emotional wellbeing, which contribute to global satisfaction. Studies of oldest-old (age ≥80 years) are rare, despite this representing the fastest growing age strata in the older population¹0, associated with a large burden of unmet economic, health and educational needs. Greater knowledge on these assessments and identifying variables associated with them paves the way for devising effective procedures for promoting health and behavioral changes that are important for the global wellbeing of older adults.

The objective of this study was to investigate the incidence of stability and change in life satisfaction based on measurements collected 9 years apart, evaluating physical and mental health conditions, social engagement, self-rated health and satisfaction with memory domains and support at baseline.

METHODS

A prospective longitudinal study drawing on data derived from the Estudo da Fragilidade em Idosos Brasileiros (Fibra Study) was conducted. The Fibra is multi-center, multi-disciplinary, population-based survey of 6762 Brazilian community-dwelling older adults performed in 2008-2009. A total of 17 cities located in Brazil's 5 geographic regions with different human development indexes were chosen based on convenience criteria¹¹. From each city, individuals aged 65 or older were selected using probabilistic sampling by sex, age, population density of older adults, based on the 2000 Brazilian Demographic Census¹⁰. Four public universities were involved in training interviewers, together with data collection and storage¹¹.

This survey had additional stages, such as the second wave of measures or follow-up of the baseline

study, conducted by research centers within the 4 universities, according to the availability of teams and financial resources. For example, in the city of Campinas, São Paulo state, and in Ermelino Matarazzo, a subdistrict of São Paulo city, a follow-up study was conducted in 2016-2017 involving survivors from the baseline study.

At baseline (BL), a total of 1,284 older adults comprised the sample selected by simple random sampling of urban census sectors of the 2 locations (90 in Campinas and 62 in Ermelino Matarazzo). For the 2007 survey of these locations, quotas were estimated of men and women aged 65-69, 70-74, 75-79 and ≥80 years, representative of the older population, with a further 25% for possible sample losses. Participants were recruited at households and in areas with a high flow of older adults. Inclusion criteria were: aged ≥65, residing permanently at the household located in the city and census sector, and being able to understand and follow the instructions. The exclusion criteria were: severe visual/hearing or cognitive deficits; neurological and motor complications due to stroke; severe stage or unstable Parkinson's disease; being bedridden; wheelchair user; cancer; undergoing chemotherapy treatment and harboring terminal stage disease¹¹.

At BL, the older adults participated in a single data collection session carried out at community centers, schools, churches and primary health centers, at times and dates pre-established during recruitment. Graduate and undergraduate students and community health workers, as pairs, were trained to perform recruitment and data collection. Measurements were made for sociodemographic, anthropometric, clinical (blood pressure and oral health) variables, frailty phenotype and mental health. Mental health served as a selection criterion for the second stage of data collection, which included variables of interest for the current study. Older adults who scored above the cut-off, after adjusting for years of education, less 1 standard deviation, relative to the mean for their group^{12,13}, were selected, while those scoring below the cut-off were rejected. Cut-off scores adopted were 17 for illiterate individuals and those with no formal schooling, 22 for individuals with 1-4 years of education, 24 for 5-8 years and 26 points for those with ≥ 9 years of formal education¹⁴.

For the follow-up (FW), data collection was carried out at households. The scales measuring sociodemographic, clinical, anthropometric and frailty used at BL were reapplied, and all respondents scoring below the cut-off score on the mini-mental state exam (MMSE) were again excluded.

In 2015, the database containing the records of the older adults surveyed at BL were used to compile the list of recruitable subjects or the FW. The addresses were checked by trained personnel, who made 3 attempts to locate the individual. Participants found at the addresses were invited to take part in the FW study (n= 549); 192 had died and 543 were lost to follow-up. Thus, the data for this study were derived from the BL database (2008-2009) and FW database (2016-2017) of the Campinas and Ermelino Matarazzo Fibra Study. Of the 549 interviewed at FW, 130 were excluded for scoring below the cut-off on the cognitive screening exam. Of the remaining 419, a further 59 were excluded for not having records of MMSE application at BL and/or because they held no records for satisfaction or the other variables of interest in the FW. Thus, the final sample comprised 360 older adults with data on the same variables at BL and FW.

The dependent variable was stability or change in life satisfaction, assessed by the question "How satisfied are you with your life?" (not very satisfied x moderately x very satisfied). To measure the change between BL and FW, negative, null or positive differences between them were calculated (deltas) corresponding to worsening x unchanged x improved (life satisfaction).

The independent variables whose association with stability and change in LS over 9 years was assessed were: (a) objective health: number of noncommunicable chronic diseases/multimorbidities, depressive symptoms and partial or total dependence for performing Instrumental Activities of Daily Living (IADLs); (b) subjective health: response to single item for self-rated health; (c) social engagement in Advanced (or complex) Activities of Daily Living (AADLs); (d) satisfaction for memory and social support, instrumental and affective domains; and (e) sociodemographic variables.

The number of non-communicable chronic diseases was obtained by tallying the diagnosed

medical conditions from a list of nine (coronary heart diseases, hypertension, arthritis/arthrosis/ rheumatism, stroke, osteoporosis, diabetes mellitus, depression, lung diseases, and cancer)14, answered with a yes or a no. Respondents who answered with a yes for 2 or more diseases scored for multimorbidities¹⁵. Depressive symptoms were selected from the 15 yes/ no items of the Geriatric Depression Scale¹⁶, indicating the presence or absence of dysphoric moods: 6 or more responses confirming these items scored for depression. Partial or total dependence for IADLs was assessed by applying the Instrumental Activities of Daily Living Inventory¹⁷, containing 7 descriptive items of activities of daily living. Older adults who reported needing total or partial assistance to carry out one or more IADL scored for dependence.

Self-rated health was measured by an item scored on scale which asked the subject to rate their own health by assigning one of the following categories: very good, good, regular, poor and very poor, subsequently reduced to two: very good x regular. poor or very poor. The level of social engagement was represented by involvement in AADLs¹⁸ contained in a 14-item inventory, ranging from the simplest to most complex, relative to managing social life, with response "never done" x "stopped doing" x "still do". Older individuals who responded with "still do" to a total of AADLs that exceeded the median value were scored as having high social engagement¹¹.

The measure of satisfaction for domains included a dichotomous satisfaction item on memory and 3 others on satisfaction with support received (of instrumental nature, when ill, of social nature when needing company, and affective nature when needing emotional support and comfort). Sociodemographic variables included gender (male and female), age $(65-69, 70-79 \text{ and } \ge 80 \text{ years})$, education (none, 1-4 and $\ge 5 \text{ years}$ of formal studies), living alone (yes and no) and marital status (with or without partner), with information collected by self-report.

With the aim of assessing selection bias in the subsamples of older individuals found and reinterviewed, deceased or lost, comparisons among them were made using Pearson's chi-square test. Those with a value of p > 0.05 were deemed statistically similar.

Descriptive analyses of the variables at BL and FW were then performed. Subsequently, cumulative incidence (%) of changes in LS (worsening and improvement x stability) was calculated between BL and FW for the independent values. Associations were checked using Pearson's chi-square test, with a p <0.05 adopted as statistically significant. Lastly, analysis of multinomial logistical regression was performed to estimate the relative risks (RR) and respective 95% confidence intervals (CI) for effects of improvement or worsening of independent conditions on LS. On the multiple model, independent variables exhibiting p<0.20 were included in the bivariate analysis. In the final regression, variables with value of p<0.05 were retained. Age was maintained to adjust the model, irrespective of level of significance obtained on the bivariate analysis. Data analysis was performed using the Stata statistical software package version 15.1 (StataCorp, College Station, USA).

The baseline project was approved by the Research Ethics Committee of the State University of Campinas on 22/05/200710 under permit 208/2007, and on 15/12/2014 under permit 907.575. The follow-up project was approved on 23/11/2015 under permit 1.332.651. All participants were informed about the study goals and procedures and regarding their rights and obligations, and signed the Free and Informed Consent Form.

RESULTS

The comparative analysis of the subsamples of older individuals reinterviewed, deceased and lost, revealed similarities and differences in the distribution of the sample losses, which were more numerous among younger elderly and in those living alone (p<0.05). The results on the chi-square test proved similar (p>0.05) for all the other comparisons (data not shown in Table).

A total of 360 older adults aged \geq 65 years at BL were analyzed, all of whom answered the scale assessing LS at both BL (2008-2009) and FW (2016-2017). The sample at BL comprised predominantly women (68.9%), individuals age \geq 60 years (62.2%), with no formal study or 1-4 years of education (74.4%), living alone (84.7%) and who were married (55.4%).

Mean age was 71.7±5.0 years at BL and 80.3±4.6 years at follow-up. Most respondents were clinically diagnosed with 2 or more chronic diseases (62.5%) and rated their health as regular or poor (57.5%). Approximately 70% performed ≥5 AADLs, 77% were totally independent for carrying out IADLs, and 17.8% scored above the cut-off for depressive symptoms. Over half of the participants were satisfied with their memory (57.2%) and with the instrumental support received from friends and relatives when sick (59.4%), needing company (57.1%), and emotional comfort (69.9%) (Tables 1 and 2).

The incidence of stability of satisfaction between BL and FW was proportionally greater than worsening or improvement. The incidence of worsening LS was lower in individuals aged ≥80 years than in the other two age groups, while lower incidence of improvement was found in the 70-79 years group (Table 1).

The incidence of change in LS was greater than that of stability in individuals with multimorbidities and among those scoring >6 for depressive symptoms. Participants who self-rated their health as regular/poor and those reporting low satisfaction with memory had a higher incidence of worsening LS and lower incidence of stability. No significant association with the LS measure was found for the other variables (Table 2).

At BL, 64.7% of the older adults were satisfied with life, 28.0% moderately satisfied and 7.3% dissatisfied. At FW, 79.4% were satisfied, 16.7% moderately satisfied and 3.9% dissatisfied with life. Most of the participants (61.1%) showed stable satisfaction between BL and FW. Negative change was found in 26.4% of respondents and positive change in 12.5% (Figure 1).

The results of multinomial logistic regression analysis showed that depression was the variable most strongly associated with change in LS: respondents who scored above the cut-off on the scale screening for depressive symptoms had a 3.77 times greater relative risk of improved LS (p=0.001) and 2.74 times greater relative risk of worsened LS (p=0.002). Low self-rated health (RR=2.26; p=0.004) and low satisfaction with memory (RR=2.33; p=0.001) were also significantly associated with a worsening in LS (Table 3).

Table 1. Incidence of changes in global life satisfaction over 9 years, according to sociodemographic variables. FIBRA study, older adults, Campinas and Ermelino Matarazzo, São Paulo state, Brazil, 2008-2009 and 2016-2017.

Variables	n (%)	Global satisfac	Global satisfaction with life (%)			
		Worsening n= 95	Stability n= 220	Improvement n= 45	p-value*	
Sex						
Male	112 (31.1)	26.8	60.7	12.5	0.993	
Female	248 (68.9)	26.2	61.3	12.5		
Total	360	26.4	61.1	12.5		
Age group (years)						
65-69	136 (37.8)	24.3	57.3	18.4	0.009**	
70-79	196 (54.4)	30.1	62.2	7.7		
≥80	28 (7.8)	10.7	71.4	17.9		
Education (years)						
0	54 (15.0)	24.0	59.3	16.7	0.493	
1-4	214 (59.4)	27.1	59.3	13.5		
≥5	92 (25.6)	26.1	66.3	7.6		
Living alone						
No	305 (84.7)	26.2	62.0	11.8	0.596	
Yes	55 (15.3)	27.3	56.4	16.3		
Marital status						
With partner	199 (55.4)	25.6	62.3	12.1	0.851	
Without partner	160 (44.6)	27.5	59.4	13.1		

^{*}p-value of Pearson's chi-squared test. ** p-value of Fisher's Test.

Table 2. Incidence of changes in global life satisfaction according to objective and subjective health conditions, social engagement and satisfaction for memory and perceived social support domains. FIBRA study, older adults, Campinas and Ermelino Matarazzo, São Paulo state, Brazil, 2008-2009 and 2016-2017.

		Global satisfa			
Variables	n (%)	Worsening n= 95	Stability n= 220	Improvement n= 45	
Objective health status					
Multimorbidity					
None (0 or 1 disease)	135 (37.5)	20.7	69.7	9.6	0.037
Present (≥2 diseases)	225 (62.5)	29.8	56.0	14.2	
Depressive Symptoms					
Without symptoms (score < 6)	296 (82.2)	23.0	66.5	10.5	< 0.001
With symptoms (score ≥ 6)	64 (17.8)	42.2	35.9	21.9	
Performance of IADLs					
Total independence	276 (76.7)	26.8	61.2	12.0	0.834
Partial/total dependence	84 (23.3)	25.0	60.7	14.3	
Subjective health status					
Self-rated health					
Very good/good	152 (42.5)	16.5	71.7	11.8	0.001
Regular/poor/very poor	206 (57.5)	33.5	53.4	13.1	

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Continuation of Table 2

		Global satisfa	_			
Variables	n (%)	Worsening n= 95	Stability Improvement n= 220 n= 45		p*	
Social engagement			'			
AADLs performed (<5)	117 (32.8)	33.3	53.0	13.7	0.072	
AADLs performed (≥5)	240 (67.2)	22.9	65.0	12.1		
Satisfaction with domains						
Memory						
High	206 (57.2)	18.0	67.5	14.5	< 0.001	
Moderate/low	154 (42.8)	37.7	52.6	9.7		
Support received						
Instrumental						
High	211 (59.4)	24.2	64.4	11.4	0.297	
Moderate/low	144 (40.6)	29.9	56.2	13.9		
Social						
High	241 (67.1)	26.1	62.7	11.2	0.532	
Moderate/low	118 (32.9)	26.3	58.5	15.2		
Emotional						
High	251 (69.9)	26.3	61.4	12.3	0.992	
Moderate/low	108 (30.1)	26.9	61.1	12.0		

^{*}p-value of Pearson's chi-squared test; IADLs: Instrumental Activities of Daily Living; AADLs: Advanced Activities of Daily Living.

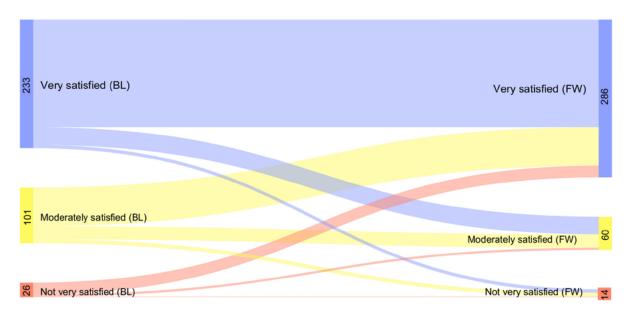


Figure 1. Changes in life satisfaction between baseline (BL) and follow-up (FW) after 9-year interval. FIBRA study, older adults, Campinas and Ermelino Matarazzo, São Paulo state, Brazil, 2008-2009 and 2016-2017.

Table 3. Relative risks and factors associated with changes in life satisfaction in older adults, at 9 years, estimated using a multinomial logistics regression multiple model. FIBRA study, older adults, Campinas and Ermelino Matarazzo, São Paulo state, Brazil, 2008-2009 and 2016-2017.

	Global Satisfaction with Life							
Variables	Worsening			Improvement				
	RR*	95%CI**	P***	RR*	95%CI**	p***		
Self-rated health								
Very good/good	1				1			
Regular/poor/very poor	2.26	1.30-3.93	0.004	1.23	0.62-2.44	0.543		
Depressive symptoms								
Without	1			1				
With	2.74	1.44-5.21	0.002	3.77	1.73-8.23	0.001		
Satisfaction with memory								
High	1							
Moderate/low	2.33	1.40-3.90	0.001	0.76	0.38-1.53	0.451		

^{*}Relative risk;**CI: Confidence Interval; ***p-value of Wald test if >0.05.

DISCUSSION

The objective of the present study was to identify factors associated with stability and changes in a prospective measure of life satisfaction in community-dwelling older adults. Nine years after baseline measurements, the following was observed: there was a greater incidence of stability of LS than worsening. A lower incidence of worsening was found in the ≥80 years age group than in the 70-79 years group. A higher incidence of change than instability of LS was observed in individuals with multimorbidities and higher scores for depressive symptoms. Lastly, a higher incidence of worsening of LS was found in respondents reporting low self-rated health and low satisfaction with memory.

These findings corroborate the results in the related literature on the subject. For example, the study of Witley et al.¹⁹ investigating associations between objective dimensions of successful aging (absence of disease and disability, good physical/cognitive functioning and good interpersonal/productive social engagement)²⁰ and aspects of subjective health, satisfaction with health and satisfaction with health for age. All positive dimensions of successful aging were found to be associated with better self-rated health and satisfaction, irrespective of age, gender,

manual or nonmanual occupations, and personality. The authors concluded that self-rated health was strongly associated with LS due to mediation by objective health conditions²¹. These data are consistent with those of the Health and Retirement Study⁶ and of the Chinese Longitudinal Health Longevity Survey⁷. This latter survey in particular, highlights the primacy of subjective assessments over objective ones and of stability over change, which greatly favors older individuals.

Stability or improvement of LS and its domains, even in the presence of disease and disability, is a phenomenon widely recognized by researchers, and denoted the "age and subjective wellbeing paradox" ^{21,22}. There are 4 theories explaining this form of adaptation, which was also evident in the present study. The first theory points to emotional-cognitive resources, such as accommodative coping strategies, resistance to frustration based on past experience of deprivation or suffering, or minimization of cognitive dissonance through social and temporal comparison strategies. For the second explanation, LS is stable for age and declines caused by major events are transient, where older adults quickly adapt with satisfaction returning to basal levels9. A third theory regards this information as a result typical of cross-sectional type observation¹. The

fourth explanation is that the reduced perspective of future time which accompanies aging confers older adults with higher levels of self-regulation and socioemotional selectivity²³ which, in turn, are protective and help them attain better LS.

In the present study, changes characterized as worsening or improvement of LS proved highly heterogeneous in nature, i.e. there were differences in distribution of the trajectories of worsening, stability and improvement in LS and in memory across age groups. Depressive symptoms were associated with both worsening and improvement of LS, suggesting instability of assessment over time. The effect of stability and change was not uniform for all domains of LS²⁴. These findings are similar to those of the study by Hansen and Slavsgod²³ involving 3,750 Norwegians aged 40-85 years. These authors showed that overall LS did not translate to equal satisfaction for all domains. Older individuals may be dissatisfied with their own health, yet satisfied with their family relationships. Negative affects changed during the course of aging, whereas positive affects and depression worsened in older age. Loss of health and partner were the main causes of decline in subjective wellbeing in older age, whereas spirit of partnership and intimacy were the main contributors to satisfaction in the younger old²⁵.

Despite being a group more exposed to declines in objective life conditions, in the present study, the 80 years age group had lower incidence of worsening and higher incidence of stability in assessments of satisfaction at 9 years, than the younger age group. This result suggests accommodative and compensatory strategies were adopted by the oldestold when comparing desired health with actual health conditions. However, there was a higher incidence of change to a worse state in respondents with 2 or more diseases and with scores >6 for depressive symptoms. This result technically and intuitively supports the notion of a correlation between LS and negative objective conditions of physical and mental health. The incidence of worsening LS was higher on the assessment of subjective health, possibly influenced by associations with objective conditions of worsened mood²⁵⁻²⁷. The lower incidence of worsening or

instability found on the assessment of memory and depression was probably due, in part, to the "it could be worse" attitude.

This study has some limitations. Firstly, individuals presenting cognitive impairment were excluded, a procedure which on the one hand ensured data reliability, but on the other may have contributed to selection bias. Secondly, although studies with long intervals between two observations are not uncommon, those applying more repeated measures spaced closer together tend to produce more robust results. Lastly, although similarities in the composition of the subsamples were observed, fewer losses to follow-up would have been more favorable. Strengths of the study include the sample of older adults which contained a large subsample of octogenarians, and also the analysis of changes in life satisfaction associated with the variables objective and subjective health, satisfaction for domains, and sociodemographics, based on measurements made after a 9-year follow-up period.

CONCLUSIONS

The subjective conditions had primacy over objective conditions and stability predominated over change, particularly among the oldest-old, a group which showed less worsening of LS. A large contingent of the respondents reported being satisfied with life, despite disease and losses in aging. The trajectories of stability and change in LS proved heterogeneous across age groups. The associations between depressive symptoms and both worsening and improvement of satisfaction suggest the assessments have some degree of instability.

The results of this study are novel in Brazil, as is the methodology employed. Professionals working with older individuals and engaged in research can benefit from deeper knowledge on the components and correlates of subjective wellbeing and on the benefits of subjective assessment, as well as by recognizing that both older age and aging represent heterogeneous phenomena.

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