Financial distress/well-being and living situation in Ecuadorian health workers

Estrés financiero/bienestar y situación de vida en trabajadores ecuatorianos de salud

Estresse/bem-estar financeiro e situação de vida entre profissionais da saúde no Equador

Germán Lobos [1]
Berta Schnettler [2]
Carmen Lapo [3]
María Núñez [3]
Laura Vera [3]

Abstract

The tendency to live alone is a relatively recent phenomenon in Ecuador, but it is expanding rapidly. This study aims to identify factors associated with financial distress/well-being according to living situation (living alone vs. living with a partner) in Ecuadorian health workers. This study examined the construct of financial distress/well-being in a sample of 800 Ecuadorian health workers using cross-sectional data. Living situation was compared using generalized linear model analyses including income, age, children living at home, self-perception of health, depression, anxiety and stress, perceived social support, positive mental health, and hedonistic and austere profiles. Regarding financial well-being, workers living alone ranked lower and workers living with a partner ranked higher. In workers living alone the main sources of financial distress/well-being were income, children living at home, perceived social support, positive mental health, and hedonistic attitude towards indebtedness. In workers living with a partner the main sources of financial distress/well-being were income, age, self-perception of health, depression, anxiety and stress, perceived social support, positive mental health, and austere attitude towards indebtedness. Based on our results, we discuss potential public policy interventions that can be used to improve workers' financial well-being.

Psychological Stress; Health Personel; Social Support

Correspondence
G. Lobos
Dos Norte 685, Region Del Maule, Talca 3465548, Chile.
globos@utalca.cl

[1] *Facultad de Economía y Negocios, Universidad de Talca, Talca, Chile.*
[2] *Núcleo Científico Tecnológico en Biorecursos, Universidad de La Frontera, Temuco, Chile.*
[3] *Universidad Católica de Santiago de Guayaquil, Guayaquil, Ecuador.*

Introduction

A person's overall subjective quality of life has become a subject of research for economists over the last four or five decades. Unlike objective quality of life, subjective quality of life can only be understood based on the individual's perspective. According to Schimmack et al. [1] quality of life includes two components: a cognitive component – or satisfaction with life – and an affective component – or subjective happiness.

The tendency to live alone is a phenomenon that has been observed for several years in high income economies, mainly in the European Union and in the United States. The number of single-person households stayed below 10% until the 19th century. The number increased in the 20th century and more dramatically in the 1960s [2]. The current prevalence of single-person households in high income economies has no historical precedent, in the European Union (33%) and United States (28%) [3]. Even reaching numbers where 60% of the households have only one person in cities like Stockholm (Sweden) or London (United Kingdom) [2]. This trend is more recent in Latin America, influenced by the culture of the Latin American countries that tend to have a prejudicial attitude towards women that live alone – particularly when they have no children at home. This could be due to the greater social and economic vulnerability of women [4,5,6]. In Ecuador, the prevalence of single-person homes grew steadily from 7.64% in 1990 to 12.12% in 2010 [3]. Although "married with children" continues to be the dominant form of coexistence, the single-person household is gaining ground. Cultural patterns in Ecuador have been changing and young adults have favored autonomy and independence to live alone when they feel they are able to support themselves [7].

The "bottom-up" causal relationship assumes that a person's overall subjective quality of life depends on their satisfaction in many concrete areas of life [8], which can be classified into broad life domains such as health, social support, family and social networks, emotional self-regulation, job satisfaction, and financial well-being [9,10]. Thus, although financial well-being is generally understood as a sub-construct of quality of life, there is no consensus yet on the best way to measure it [11]. Some authors have opted for multiple item measures, such as the *InCharge Financial Distress/Financial Well-being Scale* (IFDFW) developed by Prawitz et al. [12]. Financial well-being is a comprehensive, multidimensional concept that incorporates objective measures of financial situation (such as income, availability of cash, net worth, or income stability) and subjective measures (like financial satisfaction, financial behaviors, and financial perceptions), which can only be used as components of a broader range of subjective dimensions [13]. This fact implies that financial satisfaction is only a component of financial well-being, and financial well-being is a subdomain of quality of life [14].

The literature, consistently, reports a positive and significant relation between income and financial satisfaction [11,14,15,16,17], although Frank [18] reported a positive but weak significant relation. This implies that those individuals with a higher income report higher levels of financial satisfaction, whereas those with a lower income are more likely to report lower financial satisfaction. Hansen et al. [16] and Plagnol [17] concluded that older adults tend to report greater financial satisfaction but up to a certain limit, which suggests a U-shaped pattern with those in older age groups. The presence of children in the household also seems to be closely related to financial satisfaction [19]. Larger household size has generally been linked to less financial satisfaction, although some studies have found that – unlike the number of adults – the number of dependent children is associated with increased life satisfaction [20], but not with financial well-being.

Researchers have established relations between financial well-being and physical and mental overall health. For example, Hansen et al. [16] and Stoller & Stoller [21] showed that there are strong positive relationships between health and financial satisfaction. Joo & Grable [11] and O'Neill et al. [22] reported better health for people declaring fewer negative financial events and that overall health improves with greater financial well-being. Depression, anxiety, and stress are a subjective phenomenon. This implies that two individuals with the same levels of income but different depression, anxiety, and stress levels may have different levels of financial well-being. Thus, the relationship between overall physical and mental health and financial well-being is evident; according to Delafrooz & Paim [23], financial well-being is a key component to financial health. Copur & Eker [24] suggest that financial matters affect not only financial satisfaction, but also marital satisfaction and quality of life.

Social support is a psychological and material resource provided by a social network to benefit an individual's ability to cope with stress [25]. While living alone or with a partner are structural factors for social support, assessing one's perceived social support may buffer against financial and emotional stresses [26]. Tamminen et al. [27] suggests an association between living alone and positive mental health.

On the other hand, some attitudes and practices related to financial behavior have been associated with financial well-being [28,29] and quality of life [30]. Joo [13] also suggests that financial behavior can increase financial well-being. According to Denegri et al. [31], individuals conform to two financial profiles: hedonistic and austere. The hedonistic profile corresponds to the consumer with predominantly positive attitudes towards the use of credit and indebtedness; the austere profile is characterized as exercising caution with indebtedness and is oriented to a more traditional management of financial resources based on saving and avoiding credit. According to Adam et al. [28], financial behavior can be learned mainly from parents with the observation and participation in financial experiences.

Personal financial well-being is a multidimensional concept that includes subjective measures of financial satisfaction, financial stressors, feelings of financial well-being, and financial behaviors [13]. According to Prawitz et al. [12], the 8-item IFDFW includes four items that represent a sense of one's present state of financial well-being and four items that characterize one's reaction to their present state of financial well-being. This study aimed to identify factors associated with financial distress/well-being according to living situation (living alone vs. living with a partner) in Ecuadorian health workers.

Methods

In this study we used the satisfaction with life concept as a proxy measure of subjective quality of life and the *Satisfaction with Life Scale* (SWLS) [32] as the instrument to measure satisfaction with life. In this study, we adopted the multidimensional concept proposed by Joo [13] to understand personal financial well-being. The IFDFW [12] was used to measure financial distress/well-being, which was treated as the dependent variable. Living alone was defined as residing in a single-person household, as Negrini et al. [33] suggest.

Sample and procedure

The inclusion criterion for the sample was professionals and technical health workers of both genders, with no physical (functional) or mental (dementia) disabilities and that were able to sign a written informed consent. Only workers that voluntarily agreed to participate were surveyed and the anonymity of the respondents was protected. A power analysis was conducted using the G*power 3.1 program (https://g-power.apponic.com/) [34]. Then, a minimum sample size of 694 participants was set for this study (α err prob = 0.05, effect size Cohen d = 0.25, power (1-β err prob) = 0.95, allocation ratio). For ease of use, the sample was extracted by non-probability convenience sampling (snowball). However, considering the probable loss of data, the sample consisted of 800 health workers from Guayaquil, Ecuador. The Research Ethics Committee of the Catholic University of Santiago de Guayaquil accepted the study protocol. The health workers were contacted at their workplace after coordinating a visit. Trained interviewers administered the questionnaires personally from April to June, 2018. Pilot tests of the questionnaires were conducted with 10 health workers prior to implementation. The pilot test followed the inclusion criteria. The pilot test aimed to evaluate the content and clarity of the questionnaire. The same method of addressing the participants was used in the definitive survey. Since the results from the pilot tests were satisfactory, no changes were required.

Measures

All variables in this analysis are self-reported measures. The health workers answered the seven following instruments.
(1) The SWLS is a short 5-item instrument designed to measure an individual's global cognitive judgments of satisfaction with life and consists of five items grouped into a single dimension. The

respondents were asked to indicate their degree of agreement with the statements using a 7-point Likert scale (1 = strongly disagree to 7 = strongly agree). A Spanish-language version of the SWLS was used in this study, which showed good levels of internal consistency (Cronbach's α = 0.84) in previous studies in Ecuador [35]. A higher score corresponds to higher levels on the SWL.

(2) The IFDFW, developed by Prawitz et al. [12], is an 8-item self-report subjective measure of financial distress/financial well-being. The IFDFW scale provides a score by combining responses to eight individual indicators (scale from 1 to 10); the mean score validly and reliably measures the latent construct of perceived financial distress/well-being [11]. A higher mean score corresponds to higher levels of financial well-being. A Spanish-language version of the IFDFW scale was used in this study, showing good levels of internal consistency (Cronbach's α = 0.96) in previous studies [11]. In this study, IFDFW was considered the dependent variable. Also, the IFDFW variable was converted to an ordinal multinomial variable (four categories), grouping cases with scores below the 25th percentile, between the 25th and 50th percentiles, between the 50th and 75th percentiles, and cases above the 75th percentile. Cases with average scores below 5.43 were classified as 0 (low), cases with average scores between 5.43 and 6.53 were classified as 1 (medium-low), cases with average scores between 6.53 and 7.64 were classified as 2 (medium-high), and cases with average scores above 7.64 were classified as 3 (high). Thus, the IFDFW was used to compare the proportions of health workers living alone and living with a partner.

(3) The *Health-related Quality of Life Index* (HRQoL, developed by Hennessy et al. [36]) is composed of four items of healthy day measures. The first (HRQoL1) explores self-perceived overall health based on a personal assessment of the current health or disease resistance. Self-perception of health is measured by the question: "How would you say your health is, in general?", with a total score from 1 = very poor to 5 = excellent. The second, third, and fourth items refer to the physical, mental and social health state during the past 30 days, respectively. According to Hansen et al. [16], the first item proxies for health care expenditures and ability to earn money. Thus, in this study only, the first item on the HRQoL was used as a measure of the self-perception health. The HRQoL showed good levels of internal consistency (Cronbach's α = 0.87) in previous studies in Ecuador [35].

(4) The short version of the *Depression, Anxiety and Stress Scales* (DASS-21, developed by Lovibond & Lovibond [37]) measures the constructs of depression and anxiety. The DASS-21 measures a set of symptoms that can be differentiated from depression and anxiety as a state of activation and persistent tension [38]. The DASS-21 contains 21 items with four response alternatives on a Likert scale. The rating scale is as follows: 0 = did not apply to me at all, 1 = applied to me to some degree or some of the time, 2 = applied to me to a considerable degree or a good part of time, and 3 = applied to me very much or most of the time. In the DASS-21 the higher score corresponds to higher levels of depression, anxiety and stress.

(5) The *Multidimensional Scale of Perceived Social Support* (MSPSS, developed by Zimet et al. [39]) is a 12-item self-report subjective measure that assesses the perception of social support including three different sources of support: family, friends, and significant others. The respondents were asked to indicate their degree of agreement with the statements using a 7-point Likert scale (1 = very strongly disagree to 7 = very strongly agree). A higher score corresponds to higher levels of perceived social support.

(6) The short form of the *Mental Health Continuum* (MHC-SF, developed by Keyes [40]) consists of 14 items answered on a 6-point Likert scale, which ranges from 1 = never to 6 = every day. Three items represent emotional well-being (hedonic well-being), six items represent psychological well-being, and five items represent social well-being. In the MHC-SF, a high score corresponds to flourishing mental health and a low score to languishing mental health. Keyes [40] found reliability values of Cronbach's α over 0.80 for all the subscales as well as the global scale.

(7) The short version of the *Attitude Toward Indebtedness Scale* (ATIS-8, Denegri et al. [31]) contains 8 items answered on a 4-point Likert scale, which ranges from 1 = strongly disagree to 4 strongly agree. The ATIS-8 includes two independent subscales (hedonistic and austere profiles). A higher score on the hedonistic and austere scales reflects an attitude more inclined to indebtedness and saving, respectively.

We also asked the participants about income level (in USD per month) using five ranges: 1 = 500 or less; 2 = 500 to 999; 3 = 1,000 to 1,499; 4 = 1,500 to 1,999, 5 = 2,000 or more. Other measures included were gender (0 = male, 1 = female), education (0 = third-level, 1 = postgraduate), children living at home (0 = without children, 1 = with children), and age range (0 = 34 years old or less, 1 = over 34 years old). Considering the bias observed in the age distribution of the participants (skewness = 0.8), age was converted to a binary variable considering the median of the data of the sample (median = 34).

Data analysis

A descriptive analysis was performed to compute frequencies (%) for qualitative variables and averages with standard deviation (SD) for quantitative variables. Pearson's chi-square test was used to compare proportions between nominal variables and the Mann-Whitney U test to compare proportions between ordinal variables. Differences of means between health workers living alone and health workers living with a partner were analyzed using a one-way analysis of variance (ANOVA) F test and a t-test for independent samples after using Levene's test for homogeneity of variance. The threshold for statistical significance 5% ($p < 0.05$) was adopted. For the reliability analysis of the results and validity of the scales, the method of internal consistency based on Cronbach's α was used; analysis of the total explained variance was conducted using a principal component analysis.

The relationship between IFDFW and satisfaction with life was evaluated using Pearson's bivariate correlation coefficient. Spearman's rho was used to measure the correlation between IFDFW (ordinal variable) and income. The rationale behind of this relation is supported in the literature review, highlighting the fundamental role of IFDFW as a variable associated with satisfaction with life. Generalized linear models (GLM) were used for the estimations. Thus, we assumed that the dependent variable (IFDFW) has a normal distribution and identity as the link function. To evaluate the second order effects of age on IFDFW, we also tested with age and age squared as independent variables. To obtain the inflexion point of IFDFW the formula was used, where is the age where the inflexion occurs, is the parameter of age and is the parameter of age squared.

Deviance and likelihood ratio chi-square were used to evaluate the goodness-of-fit of the model. In the multivariate analysis, in the final full models, only the variables with p < 10% remained. The variance inflation factor was used to evaluate the multicollinearity of the models generated. The analyses were performed in Stata software, version 15 (https://www.stata.com/).

Results

In total, 842 health workers were approached. The response rate was 95%. Thus, although the minimum sample size required was 694, we collected data from more participants based on the expectation of missing data or error responses. Post hoc analysis suggested that power (1-β err prob) = 0.94 considering α error probability, effect size d, and sample size Group 1 and 2.

Table 1 provides the comparisons of proportions according to living situation for the main sociodemographic variables and qualitative scales included in the study. Out of all participants in the sample (n = 800), 47.9% were male and 52.1% were female. Out of workers living alone (n = 235), 48.9% were male and 51.1% were female; out of workers living with a partner (n = 565), 47.4% were male and 52.6% were female. The comparison of proportions of men and women between the two groups was not significant. Out of workers living alone, only 32.3% had children living at home; whereas workers living with a partner, 60.9% had children living at home. According to the test, the comparison of proportions of workers living alone and with a partner was also significantly different for age, education level, and children living at home.

Most health workers living alone declared an income of USD 1,500 or more per month (56.6%), while only 41.7% of the health workers living with a partner declared an income of USD 1,500 or more per month. The comparison of the income ranges between the two groups was significant . Also, 59.2% of the health workers living alone perceived a medium-low or low financial well-being (or medium-high or high financial distress), while 52.1% of the health workers living with a partner per-

Table 1

Sociodemographic and living situation comparison of the participants.

	Sample (N = 800)	Living alone (n = 235; 29.4%)	Living with a partner (n = 565; 70.6%)	Comparison χ²(df) and MWU	p-value
Gender				χ²(1) = 0.15	0.698
0 = male	47.9	48.9	47.4		
1 = female	52.1	51.1	52.6		
Age (years)				χ²(1) = 12.26	0.001
0 = 34 or less	49.1	58.7	45.1		
1 = over 34	50.8	41.3	54.9		
Education level				χ²(1) = 27.37	0.001
1 = postgraduate	26.7	14.0	32.0		
Children living at home				χ²(1) = 54.23	0.001
0 = without children	47.5	67.7	39.1		
1 = with children	52.5	32.3	60.9		
Income (USD per month)				MWU = 50,565.0	0.000
1 = 500 or less	12.6	23.8	8.0		
2 = 500 to 999	11.3	12.8	10.6		
3 = 1,000 to 1,499	23.9	21.7	24.8		
4 = 1,500 to 1,999	33.9	30.2	35.4		
5 = 2,000 or more	18.4	11.5	21.2		
Self-perception of health				MWU = 56,843.5	0.001
0 = very poor	1.3	0.0	1.8		
1 = fair	4.3	3.0	4.8		
2 = good	32.4	46.4	26.5		
3 = very good	48.5	40.0	52.0		
4 = excellent	13.6	10.6	14.9		
Financial distress/financial well-being				MWU = 58,526.5	0.006
0 = low	26.0	34.5	22.5		
1 = medium-low	25.3	24.7	25.5		
2 = medium-high	23.3	15.7	26.4		
3 = high	25.5	25.1	25.7		

df: degree of freedom; MWU: Mann-Whitney U.

Note: χ²(df) test for equality of proportions to nominal variables and MWU test for equality of proportions to ordinal variables.

ceived a medium-high or high financial well-being (or medium-low or low financial distress). According to the test, the comparison of proportions of workers living alone and workers living with a partner was also significantly different in self-perception of health and financial distress/well-being.

Table 2 shows the comparison of means according to living situation for the main sociodemographic variables and quantitative scales reported in the literature and used in the regression model. The mean age of the participants was 36.5 (SD = 10.0, range = 22-80 years) for workers living alone (mean = 32.4, SD = 6.4, range = 23-61 years), and 38.2 for workers living with a partner (SD = 10.7, range = 22-80 years). In this study, the mean satisfaction with life score was 27.8 (SD = 5.1) for workers living alone and 27.9 (SD = 5.7) for workers living with a partner. No significant differences were observed on the stisfaction with life between both groups of workers. The mean IFDFW score was 6.3 (SD = 1.8) for workers living alone and 6.6 (SD = 1.6) for workers living with a partner. The comparison of means between groups was also significantly different for age, children living at home, financial distress/well-being, positive mental health, and austere profile. The mean DASS-21 score was 7.6 (SD = 9.6) for workers living alone and 7.4 (SD = 9.7) for workers living with a partner. The

Table 2

Descriptive statistics of the variables used in the model regressions and living situation comparison (N = 800).

Characteristics	Sample	Living alone	Living with a partner	t-value	p-value
	Mean (SD)	Mean (SD)	Mean (SD)		
Age (years)	36.48 (9.98)	32.42 (6.42)	38.17 (10.69)	-7.69	0.001
Children living at home	0.79 (0.93)	0.46 (0.79)	0.93 (0.94)	-6.78	0.001
Financial distress/financial well-being	6.53 (1.63)	6.31 (1.76)	6.63 (1.57)	-2.46	0.014
Depression, anxiety and stress	7.44 (9.67)	7.60 (9.61)	7.38 (9.70)	0.29	0.771
Perceived social support	70.47 (12.89)	69.22 (13.68)	70.99 (12.52)	-1.78	0.076
Positive mental health	65.66 (11.49)	64.29 (13.07)	66.22 (10.73)	-2.17	0.030
Hedonistic	9.26 (2.37)	9.30 (2.40)	9.24 (2.36)	0.33	0.738
Austere	20.43 (3.08)	20.05 (3.00)	20.59 (3.11)	-2.27	0.023

SD: standard deviation.

Note: t test for mean equality (t-value). There were 798 degrees of freedom in all t tests.

comparison of means between the two groups of workers was not significant for depression, anxiety and stress, perceived social support, or hedonistic profile.

The variables age and age squared were only statistically significant in the model of workers living with a partner. Thus, the maximum value for age was 43 years old.

With the exploratory factor analysis one factor was detected on the SWLS that grouped the five items (70.05% explained variance), showing a good level of internal consistency (Cronbach's α = 0.88). Regarding the IFDFW, the principal component analysis confirmed the existence of one factor for all items with 66.65% explained variance and an excellent level of internal consistency (Cronbach's α = 0.92). In our study, the Cronbach's α of three (items measuring recent physical health, recent mental health, and recent limitations on activity) out of the four items of the HRQoL was 0.69. In the first question from the HRQoL, most health workers perceived their health as very good (48.5%) or good (32.4%). However, only 50.6% of workers living alone perceived their health as very good or excellent, whereas 66.9% of workers living with a partner perceived their health as very good or excellent. DASS-21 showed one factor accounting for 56.9% of the variance and an excellent level of internal consistency (Cronbach's α = 0.95). The MSPSS showed one factor accounting for 74.5% of the variance and an excellent level of internal consistency (Cronbach's α = 0.96). Finally, the MHC-SF revealed one factor accounting for 62.7% of the variance and an excellent level of internal consistency (Cronbach's α = 0.92). The Pearson correlation between IFDFW and satisfaction with life was 0.570 for workers living alone and 0.338 for workers living with a partner. Spearman's rho correlation between IFDFW (ordinal variable) and income was 0.598 for workers living alone and 0.426 for workers living with a partner.

Table 3 shows the results of the GLM generated. The inclusion criterion of variables in the model aimed to include those whose relationship with IFDFW was reported as significant by the literature considering the living situation of the workers. The model of IFDFW generated for health workers living alone revealed significant independent relationships for income, children living at home, perceived social support, positive mental health, and hedonistic attitude towards indebtedness. The model of IFDFW generated for health workers living with a partner revealed significant independent relationships for income, age, self-perception on health, depression anxiety and stress, perceived social support, positive mental health, and austere attitude towards indebtedness. The fit was significant according to for both models, living alone and living with a partner. Furthermore, and for model of the workers living alone and living with a partner, respectively. A variance inflation factor associated with each explanatory variable close to 1 was obtained, that is, each predictor variable is independent of the rest; therefore, the presence of multicollinearity was discounted in both models.

Table 3

Regression coefficients from linear normal model.

Characteristics	Living alone				Living with a partner			
	β coefficient	Significant variables	SD	95%CI	β coefficient	Significant variables	SD	95%CI
Constant	0.911	$p < 0.10$	0.903	-0.860; 2.682	1.960	$p < 0.01$	0.444	1.104; 2.847
Income (USD per month)								
0 = 500 or less	-1.485	$p < 0.01$	0.286	-2.050; -0.920	-1.181	$p < 0.01$	0.190	-1.550; -0812
1 = 500 to 999	-1.527	$p < 0.01$	0.310	-2.134; -0.929	-1.122	$p < 0.01$	0.170	-1.452; -0.792
2 = 1,000 to 1,499	-0.952	$p < 0.01$	0.267	-1.480; -0.427	-0.780	$p < 0.01$	0.140	-1.045; -0.512
3 = 1,500 to 1,999	-0.479	$p < 0.10$	0.256	-0.980; 0.021	-0.570	$p < 0.01$	0.120	-0.804; -0.334
Age (years)								
0 = 34 or less	-0.148		0.156	-0.455; 0.158	-0.261	$p < 0.01$	0.091	-0.441; -0.083
Children living at home								
0 = without children	0.355	$p < 0.05$	0.159	0.043; 0.667	-0.140		0.090	-0.311; 0.032
Self-perception of health								
0 = very poor			0.533	-1.756; 0.334	-0.612	$p < 0.10$	0.334	-1.270; 0.043
1 = fair	-0.712		0.275	-0.852; 0.226	-0.870	$p < 0.01$	0.230	-1.320; -0.430
2 = good	-0.313		0.253	-0.519; 0.473	-0.827	$p < 0.01$	0.144	-1.110; -0.550
3 = very good	-0.023		0.009	-0.024; 0.012	-0.550	$p < 0.01$	0.123	-0.790; -0.310
Depression, anxiety and stress	-0.006		0.009	-0.024; 0.012	-0.019	$p < 0.01$	0.005	-0.285; -0.101
Perceived social support	0.026	$p < 0.01$	0.007	0.011; 0.039	0.029	$p < 0.01$	0.004	0.020; 0.034
Positive mental health	0.046	$p < 0.01$	0.008	0.030	0.055	$p < 0.01$	0.005	0.045; 0.065
Hedonistic profile	0.003		0.032	-0.060; 0.068	0.090	$p < 0.01$	0.019	0.050; 0122
Austere profile	0.080	$p < 0.01$	0.025	0.030; 0.130	-0.016		0.015	-0.044; 0.013
Deviance full model (D_{fm})		259.155				515.106		
Deviance null model (D_{nm})		728.960				1382.230		
Deviance (D)		0.64				0.63		
Likelihood ratio (χ^2)		243.035 *				557.699 *		
n		235				565		

95%CI: 95% confidence interval; SD: standard deviation.

Note: dependent variable: financial distress/financial well-being (*InCharge Financial Distress/Financial Well-being Scale* – IFDFW). Generalized linear models (GLM) estimates. 5 = more than 2,000: category omitted; 1 = over 34 years old: category omitted; 1 = with children category omitted. 4 = excellent: category omitted. D = (Dnm - Dfm)/Dnm.

* $p < 0.01$ based on Wald statistics.

Discussion

Our results suggest that most participants that live with a partner are aged 34 years. Also, this group presented a higher average age. Furthermore, workers living with a partner have a higher proportion and a higher average of children living at home. These results are in line with what was expected if we consider that young people in Ecuador are increasingly delaying the decision to live with a partner and have children.

The group of health workers living with a partner have a higher proportion of workers at the highest income levels, which could have two explanations. Firstly, this group includes a greater proportion of workers that are older and have graduate studies, which implies a compensation for the greater experience associated with age and the greater investment in human capital related to graduate studies. Secondly, workers living with a partner could be adding to their monthly income part of their partner's wage, and thus declaring a higher income. The health workers living with a partner have a higher proportion of workers in the highest (top) overall self-perception health ranges, which

could be associated with a feeling of greater security and support due to not living alone. Finally, the health workers living with a partner have a higher proportion of workers in the highest financial well-being ranges and also a higher average score of the financial well-being. According to Prawitz et al. [12], the average score of the health workers living with a partner can be described as "good financial well-being/low financial distress" and out of the health workers living alone as "moderate financial well-being/moderate financial distress"

The health workers living with a partner declared lower levels of depression, anxiety and stress and higher levels on the perceived social support and mental health continuum. Likewise, they have a slightly more austere attitude towards indebtedness. The high mental health continuum score makes it possible to classify both groups of workers with "flourishing mental health" [40]; that is, health workers have presented symptoms of high positive affect and high life satisfaction, psychological well-being, they also work in a context that includes social functioning that stimulates personal development. However, an interesting result of our study is that the mental health continuum score was significantly lower for health workers living alone. Therefore, a lower positive mental health could be associated with individuals living alone, which is consistent with the suggestion by Tamminen et al. [27].

Generally, our results are consistent with those reported in the literature. There are some patterns related with perceived IFDFW, such as those suggested by Garman & Forgue [30]. Our findings also confirm the positive and significant relation between IFDFW and satisfaction with life. Therefore, IFDFW seems to be a relevant dimension of an individual's subjective satisfaction with life.

Our results suggest that income is significantly associated with IFDFW for both studied groups. Those workers who declare an income level in the lower ranges have a lower financial well-being than those who declare an income in the range "more than 2,000" (comparison category). This fact confirms the positive and significant relation between income and IFDFW as reported in the literature [11,14,15,16,17]. However, in contrast to what Frank [18] suggested for American citizens, the high correlation and strong causal relationship between IFDFW (ordinal variable) and income may be due to the possibility that many Ecuadorian workers do not yet have their basic daily needs satisfied.

The health workers living with a partner and aged over 34 years have a greater financial well-being than other health workers who are aged 34 years old. Then, workers that belong to the higher age range are associated with a higher IFDFW. Regarding the estimation of the second order effects of age on IFDFW, the results suggest the existence of an inverted U-shaped pattern with a maximum of 43 years. This means a higher IFDFW related to the increased individual's age, limited to 43 years (inflexion point), in line with reports by Hansen et al. [16] and Plagnol [17]. The implicit rationality in this situation is that as individuals approach midlife, they perceive a higher IFDFW because their assets increase and their financial liabilities decrease; but from midlife, individuals must assume new and greater financial commitments related to tangible and intangible factors, with negative effects on IFDFW. The tangible and intangible factors include the health care costs of the nuclear family, maintenance of social networks, children' education expenses, and even the costs related to an increasing risk for limitations or losses in health and competence in parents' old age [41]. On the other hand, age is not significant in the group of health workers living alone.

In this study the presence of children in the household is strongly related with IFDFW, as Ferrer-i-Carbonell [19] suggest, but only for health workers living alone. However, unlike reports by Ferrer-i-Carbonell [20], we found evidence of a significant relation between household size and IFDFW. The positive sign of the coefficient of the variable "children living at home" (0 = without children) suggests that the absence of children in the household implies a greater IFDFW for health workers living alone. This is the same as suggesting that the presence of children in the household reduces the IFDFW in this group of workers; this can be explained by the economic costs associated with raising children (such as feeding, health care, education, and the opportunity-cost of time), especially in a single-parent home. Raising children is time-consuming; as the famous saying goes, "time is money" and time has a constant opportunity-cost.

Self-perception of health and depression, anxiety and stress levels were not significant to explain IFDFW in the health workers living alone group. These variables were significant, however, in predicting IFDFW in the group of health workers living with a partner. This means that the IFDFW of health workers living with a partner is more sensitive to the changes in the overall self-perception of health and mental health, and therefore overall self-perception of health and mental health are

limiting factors for health workers living with a partner in terms of IFDFW. Like Hansen et al. [16], our results show that better self-perception health, which means lower medical costs and a greater ability to earn money, is reflected in a greater IFDFW in the group of health workers living with a partner. These relations confirm the hypotheses of Copur & Eker [24] regarding the relationship between financial issues and marital relationship.

Perceived social support and positive mental health were significant predictors of IFDFW in both health workers living alone and living with a partner. The analysis of the sub-dimensions of the MSPSS allows concluding that friends are perceived as a great source of social support by health workers. Probably because most health workers' available time is at work and it is there where networks of friends are generated and cultivated.

Our results confirm the relation between some attitudes towards indebtedness and IFDFW, as Adam et al. [28] and Rai et al. [29] suggest. For the health workers living alone, the austere attitude towards indebtedness is associated positively with IFDFW, and for workers living with a partner, the hedonistic attitude towards indebtedness is associated positively with IFDFW. According to Denegri et al. [42], this means that health workers living alone are cautious about indebtedness and tend more towards saving and avoiding credit.

The results of this study did not reveal any role of gender in agreement with the literature. This could be due to the greater empowerment and more relevant role of women in confronting the "feminization of poverty" [4], associated with improved self-esteem and the ability to earn income [5], and due to women making greater investments in children's nutrition, health, and education [6].

The results of this study can provide useful insight for the design of public policies related to satisfaction with life and IFDFW of health workers in both the public and the private sectors in Ecuador. Firstly, the departments and units in charge of health workers' well-being could design support programs to improve their emotional, psychological and social well-being. Secondly, a financial education program in virtual learning environments could be implemented, allowing health workers to assume a more rational attitude towards indebtedness.

Contributors

G. Lobos designed and wrote the first manuscript draft. B. Schnettler and C. Lapo guided the statistical analysis and made a critical analysis of the final version of the manuscript. M. Núñez and L. Vera prepared the literature review and approved the final version.

Acknowledgments

Additional informations

ORCID: Germán Lobos (0000-0002-6155-4870); Berta Schnettler (0000-0002-4438-2279); Carmen Lapo (0000-0002-1509-7242); María Núñez (0000-0001-5771-1944); Laura Vera (0000-0001-6286-2659).

References

1. Schimmack U, Schupp J, Wagner GG. The influence of environment and personality on the affective and cognitive component of subjective well-being. Soc Indic Res 2008; 89:41-60.
2. Snell KDM. The rise of living alone and loneliness in history. Social History 2017; 42:2-28.
3. Ospina-Ortiz E. The rise of living alone: how one-person households are becoming increasingly common around the world. Our World in Data 2019; 10 dec. https://ourworldindata.org/living-alone.
4. Chant S. The 'feminisation of poverty' and the 'feminisation' of antipoverty programmes: room for revision? J Dev Stud 2008; 44:165-97.
5. Liu Ch, Esteve A, Treviño R. Female-headed households and living conditions in Latin America. World Dev 2017; 90:311-28.
6. Marchionni M, Gasparini L, Edo M. Brechas de género en América Latina: un estado de situación. Caracas: Corporación Andina de Fomento; 2019.
7. Llanos M. Cuándo vivir solos. ¿Cómo saber si alguien está listo psicológicamente para vivir solo? El Universo La Revista 2014; 9 nov. http://www.larevista.ec/orientacion/psicologia/cuando-vivir-solos.
8. Loewe N, Bagherzadeh M, Araya-Castillo L, Thieme C, Batista-Foguet JM. Life domain satisfactions as predictors of overall life satisfaction among workers: evidence from Chile. Soc Indic Res 2014; 118:71-86.
9. Bowling A, Gabriel Z. Lay theories of quality of life in older age. Ageing Soc 2007; 27:827-48.
10. Pavot W, Diener E. The satisfaction with life scale and the emerging construct of life satisfaction. J Posit Psychol 2008; 3:137-52.
11. Joo SH, Grable JE. An exploratory framework of the determinants of financial satisfaction. J Fam Econ Issues 2004; 25:162-71.
12. Prawitz AD, Garman ET, Sorhaindo B, O'Neill B, Kim J, Drentea P. InCharge Financial Distress/Financial Well-being Scale: development, administration, and score interpretation. Journal of Financial Counseling and Planning 2006; 17:34-50.
13. Joo S. Personal financial wellness. In: Xiao JJ, editor. Handbook of consumer finance research. New York: Springer; 2008. p. 21-33.
14. Hsieh C-M. Money and happiness: does age make a difference? Ageing Soc 2011; 31:1289-306.
15. Grable JE, Cupples S, Fernatt F, Anderson N. Evaluating the link between perceived income adequacy and financial satisfaction: a resource deficit hypothesis approach. Soc Indic Res 2013; 114:1109-24.
16. Hansen T, Slagsvold B, Moum T. Financial satisfaction in old age: a satisfaction paradox or result of accumulated wealth? Soc Indic Res 2008; 89:323-47.
17. Plagnol AC. Financial satisfaction over the life course: the influence of assets and liabilities. J Econ Psychol 2011; 32:45-64.
18. Frank R. Luxury fever: why money fails to satisfy in an era of excess. New York: Free Press; 1999.
19. Ferrer-i-Carbonell A. Income and well-being: an empirical analysis of the comparison income effect. J Public Econ 2005; 89:997-1019.
20. Ferrer-i-Carbonell A. Subjective questions to measure welfare and well-being: a survey. Amsterdam: Tinbergen Institute; 2002. (Tinbergen Institute Discussion Paper, TI 2002-020/3).
21. Stoller MA, Stoller EP. Perceived income adequacy among elderly retirees. J Appl Gerontol 2003; 22:230-51.
22. O'Neill B, Prawitz AD, Sorhaindo B, Kim J, Garman ET. Changes in health, negative financial events, and financial distress/financial well-being for debt management program clients. Journal of Financial Counseling and Planning 2006; 17:46-63.
23. Delafrooz N, Paim LH. Determinants of financial wellness among Malaysia workers. Asia Life Sciences 2011; 5:10092-100.
24. Copur Z, Eker I. The relationship between financial issues and marital relationship. International Journal of Arts & Sciences 2014; 7:683-97.
25. Garey L, Reitzel LR, Anthenien AM, Businelle MS, Neighbors C, Zvolensky MJ, et al. Support buffers financial strain's effect on health-related quality of life. Am J Health Behav 2017; 41:497-510.
26. Chan B, Goldman LE, Sarkar U, Guzman D, Critchfield J, Saha S, et al. High perceived social support and hospital readmissions in an older multi-ethnic, limited English proficiency, safety-net population. BMC Health Serv Res 2019; 19:334.
27. Tamminen N, Kettunen T, Martelin T, Reinikainen J, Solin P. Living alone and positive mental health: a systematic review. Systematic Reviews 2019; 8:134.
28. Adam AM, Frimpong S, Boadu MO. Financial literacy and financial planning: implication for financial well-being of retirees. BEH – Business and Economic Horizons 2017; 13:224-36.
29. Rai K, Dua S, Yadav M. Association of financial attitude, financial behaviour and financial knowledge towards financial literacy: a structural equation modeling approach. FIIB Business Review 2019; 8:51-60.
30. Garman ET, Forgue RE. Personal finance. 8th Ed. Boston: Houghton Mifflin Company; 2006.

31. Denegri M, Palavecinos M, Ripoll M, Yáñez V. Caracterización psicológica del consumidor de la IX región. In: Denegri M, Fernández F, Iturra R, Palavecinos M, Ripoll M, editors. Consumir para vivir y no vivir para consumir. Temuco: Ediciones Universidad de La Frontera; 1999. p. 7-31.

32. Diener E, Emmons R, Larsen R, Griffin S. The Satisfaction with Life Scale. J Pers Assess 1985; 49:71-5.

33. Negrini ELD, Nascimento CF, Silva A, Antunes JLF. Elderly persons who live alone in Brazil and their lifestyle. Rev Bras Geriatr Gerontol 2018; 21:523-31.

34. Faul F, Erdfelder E, Buchner A, Lang A-G. Statistical power analyses using G*power 3.1: tests for correlation and regression analyses. Behav Res Methods 2009; 41:1149-60.

35. Schnettler B, Lobos G, Lapo MC, Adasme-Berríos C, Hueche C. Satisfaction with life and food-related life in Ecuadorian older adults. Nutr Hosp 2017; 34:76-83.

36. Hennessy C, Moriarty D, Zack M, Scherr P, Brackbill R. Measuring health-related quality of life for public health surveillance. Public Health Rep 1994; 109:665-72.

37. Lovibond SH, Lovibond PF. Manual for the depression anxiety & stress scales. 2nd Ed. Sydney: Psychology Foundation; 1995.

38. Crawford J, Henry J. The Depression Anxiety Stress Scales (DASS): normative data and latent structure in a large non-clinical sample. Br J Clin Psychol 2003; 42(Pt 2):111-31.

39. Zimet G, Dahlem NW, Zimet SG, Farley GK. The multidimensional scale of perceived social support. J Pers Assess 1988; 52:30-41.

40. Keyes CLM. The subjective well-being of America's youth: toward a comprehensive assessment. Adolesc Fam Health 2005; 4:3-11.

41. Pinquart M, Sörensen S. Influences of socio-economic status, social network, and competence on subjective well-being in later life: a meta-analysis. Psychol Aging 2000; 15:187-224.

42. Denegri M, Cabezas D, del Valle C, González Y, Sepúlveda J. Escala de Actitudes hacia el Endeudamiento: validez factorial y perfiles actitudinales en estudiantes universitarios chilenos. Univ Psychol 2011; 11:497-509.

Resumen

La tendencia de vivir solo es un fenómeno relativamente reciente en Ecuador, pero que está rápidamente extendiéndose. El objetivo de este estudio fue identificar factores asociados con el estrés financiero/bienestar, según la situación de vida (vivir solo vs. vivir con pareja), en trabajadores ecuatorianos de salud. Usando datos transversales este estudio examinó el constructo del estrés financiero/bienestar en una muestra de 800 trabajadores ecuatorianos en el área de salud. La situación de vida fue comparada usando modelos lineales generalizados, incluyendo ingresos, edad, niños viviendo en casa, autopercepción de salud, depresión, ansiedad y estrés, apoyo social percibido, salud mental positiva, así como perfiles hedonistas y austeros. Los trabajadores que vivían solos estuvieron posicionados más bajo y los trabajadores viviendo con pareja estuvieron en puestos más altos en bienestar financiero. En los trabajadores que vivían solos las principales fuentes de estrés financiero/bienestar fueron ingresos, niños viviendo en el hogar, apoyo social percibido, salud mental positiva y actitud hedonística hacia el endeudamiento. En trabajadores viviendo con una pareja las principales fuentes de estrés financiero/bienestar fueron ingresos, edad, autopercepción de salud, depresión, ansiedad y estrés, apoyo social percibido, salud mental positiva y actitud austera hacia endeudamiento. Basados en nuestros resultados, discutimos intervenciones potenciales en políticas públicas que pueden ser usadas para mejorar el bienestar financiero de los trabajadores.

Estrés Psicológico; Personal de Salud; Apoyo Social

Resumo

A tendência de viver sozinho é um fenômeno relativamente recente no Equador, mas está crescendo rapidamente. O objetivo do estudo foi identificar fatores associados ao estresse ou bem-estar financeiro de acordo com a situação de vida (viver sozinho vs. viver com parceiro) em profissionais de saúde equatorianos. O estudo usou dados transversais para examinar o construto do estresse/bem-estar financeiro em uma amostra de 800 profissionais de saúde equatorianos. A situação de vida foi comparada com análises de modelo linear generalizado, incluindo renda, idade, crianças vivendo no domicílio, autoavaliação da saúde, depressão, ansiedade e estresse, apoio social percebido, saúde mental positiva e perfis hedonistas vs. austeros. Os trabalhadores que viviam sozinhos pontuavam mais baixo, enquanto aqueles que viviam com um parceiro pontuavam mais alto no quesito de bem-estar financeiro. Entre os trabalhadores que viviam sozinhos, as principais fontes de estresse vs. bem-estar financeiro eram renda, crianças vivendo no domicílio, apoio social percebido, saúde mental positiva e atitude hedonista em relação ao endividamento. Nos trabalhadores que viviam com parceiro, as principais fontes de estresse/bem-estar social eram renda, autoavaliação da saúde, depressão, ansiedade e estresse, apoio social positivo, e saúde mental. Com base nos resultados, discutimos o potencial para intervenções de políticas públicas que possam ser utilizadas para melhorar o bem-estar financeiro dos trabalhadores.

Estresse Psicológico; Pessoal de Saúde; Apoio Social