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RESEARCH ARTICLE

Analysis of aging self-efficacy in Peruvian older adults

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ABSTRACT

Population aging in Peru poses challenges for public health and the well-being of older people, in this context, self-efficacy for aging is considered an essential psychological and social resource that influences adaptation, autonomy and quality of life in old age. The study proposed to analyze the levels of self-efficacy for aging in Peruvian older adults, identifying differences according to sociodemographic variables. The study was observational, quantitative and cross-sectional. 500 older adults (>65 years old) selected through non-probabilistic sampling participated; The Self-Efficacy Scale for Aging was used; the data were analyzed with descriptive statistics and non-parametric tests. It was found that 48.6% of the participants presented moderate self-efficacy, 34.6% low and 16.8% high; Significant differences were found according to area of residence (higher self-efficacy in rural areas), presence of chronic diseases (lower in those who do not suffer from it) and type of cohabitation (higher in those who live with the partner). It is concluded that self-efficacy for aging emerges as a protective psychological factor associated with autonomy and functional health and should be considered a strategic variable in public policies and community programs aimed at healthy aging in Peru.

Keywords: Aging self-efficacy, sociodemographic variables, older adults, well-being

1. Introduction

Population aging in Peru is a psychosocial, economic and political problem generated by vulnerability, increasing risks of discrimination, social and health problems, as well as socioeconomic inequalities, which can affect intergenerational coexistence [1], therefore, it poses growing challenges for public health and social policies, which require promoting psychological resources associated with well-being in old age [2].

According to official reports from the National Institute of Statistics and Informatics of Peru, the country has more than 4.1 million older adults, with a predominance of women and a sustained increase in octogenarians, implying greater needs for support, care and healthy aging policies [3]. In addition, the WHO's decade of healthy ageing [4] promotes capacities and environments that enable "ageing well" to be a strategic priority for systems and communities.

According to the definition of self-efficacy, it is understood as the belief in one's own ability to organize and execute actions required in future situations; These beliefs guide goals, efforts, persistence, and recovery in the face of adversity [5].

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While in the gerontological field, self-efficacy for aging implies the perception of future control over aging processes, health, cognitive functions, emotional adaptation, and psychosocial well-being [6,7], including expectations of success in the face of specific tasks of aging, as well as the regulation of motivation, effort and persistence in the face of the losses or limitations of old age [8].

From the perspective of social cognitive theory [9], self-efficacy for aging refers to the perceived confidence to face physical, cognitive, and socio-emotional changes associated with old age, and has been related to subjective well-being, causing less depressive symptomatology and greater collective participation.

Likewise, the relevance of self-efficacy is also supported by psychosocial models of successful aging; Rowe and Kahn's model conceive it as the conjunction of low disease/disability, high physical-cognitive function and active commitment to life, in this scheme, the beliefs of efficacy favor health behaviors and sustained participation [10].

In addition, the Baltes and Baltes model [11] describes how older people adjust goals, maximize resources and compensate for functional losses, understanding that self-efficacy facilitates the competent use of selection, optimization and compensation strategies in the face of the demands of aging.

The review of previous studies indicates that beyond the psychometric study developed by Caycho-Rodriguez et al. [6], national evidence remains scarce and cross-sectional; Most studies found associations between self-efficacy in aging and life satisfaction, as well as resilience, supporting relevance as an indicator of healthy aging in community contexts [12,13]. Likewise, relationships with humorous coping and cognitive and functional functions have been explored, with convergent results regarding the protective role of self-efficacy [14].

However, theoretical gaps persist, due to the scarcity of studies with large and heterogeneous samples, limited comparison of sociodemographic subgroups and absence of designs that allow inferring causal effects on health, functionality and well-being, these considerations are critical in a country with rapid demographic transition and marked inequalities.

Therefore, in the Peruvian context, little is still known about how self-efficacy for aging varies between sociodemographic and health groups, this indicator makes it difficult to prioritize psychoeducational and community interventions aligned with the decade of healthy aging and national plans, which emphasize the need to strengthen the psychological, social and functional capacities of this population group, especially in primary health services and community centers of the older adult.

In addition, having local or national empirical evidence on the selected study variable will allow for more focused promotion and prevention programs, favoring the autonomy, well-being, resilience, and participation of older adults in their communities.

Therefore, it was proposed to analyze the levels of self-efficacy for aging in Peruvian older adults, identifying differences according to sociodemographic variables.

2. Method

2.1. Type of study

Observational, descriptive, quantitative, and cross-sectional study, the collection of information was carried out during the period of the first semester of 2025, in a locality in Peru.

2.2. Participants

500 older adults participated, selected through intentional non-probabilistic sampling, sociodemographic variables were considered in order to ensure representativeness in the comparisons, the participants were chosen considering the community centers for the elderly and first-level health facilities, in addition to the geographical distribution, accessibility, availability of older adults assigned to the centers and variability in conditions socioeconomic (centers in high-, middle- and low-income areas).

Within each center, participants were directly invited during community activities or routine consultations, a structured intentional criterion was used prioritizing diversity in age, sex, marital status, and health conditions, with the aim of reducing the overrepresentation of specific subgroups and improving sample variability.

People over 65 years of age were included, with cognitive abilities to answer questionnaires, basic understanding of Spanish and voluntary participation; People with moderate-severe cognitive impairment, acute psychopathology, extreme sensory impairment (vision, hearing) who cannot complete the instrument were excluded.

The G*Power 3.1 program [15] was used to determine the sample size, based on the planned statistical analyses. To detect a small effect of (0.195) with a significance level of α= .05, reliability of .95 and up to 5 predictors, the minimum size was 495; The inclusion of 500 participants guarantees a power of more than 95% and allows comparative analyses by groups according to sociodemographic variables.

2.3. Instrument

The Self-Efficacy for Aging Scale (EAEE), developed by Caycho-Rodriguez et al. [6], was used to assess older adults' perception of their ability to effectively cope with the physical, cognitive, and emotional changes of aging. The structure is made up of 10 items with a four-option Likert format (from 1 = almost not at all to 4 = a lot), where higher scores indicate greater self-efficacy.

In the Peruvian population, the scale showed a one-dimensional structure with good factorial fit (CFI= .97 and RMSA= .052) and high internal consistency (ω= .88). It also revealed convergent and discriminant validity, correlating positively with life satisfaction (r= .56) and negatively correlating with depression (r= -.48), confirming its adequate validity and reliability to evaluate self-efficacy in aging.

2.4. Procedure

The corresponding institutional permits were obtained, and the authorities of each center were informed about the objectives and scope of the study. Subsequently, the selection of participants was carried out according to the established inclusion and exclusion criteria, for this, a small cognitive screening was applied, which allowed verifying the autonomous response capacity.

Then, informed consent was obtained individually, explaining the purposes of the study, participation and confidentiality of the data; The participants signed the corresponding form. And the application of the instrument was carried out in person, through assisted self-reporting.

2.5. Ethical considerations

The study respected the ethical principles of the Declaration of Helsinki and the current Peruvian regulations for health research (Ministerial Resolution 233-2020, MINSA), ensuring confidentiality, anonymity and the right of participants to withdraw without penalty.

2.6. Data analysis

The data were processed with the Jamovi program; Descriptive analyses were performed to characterize sociodemographic variables and self-efficacy scale scores for aging.

The normality of the data was verified through the Shapiro-Wilk tests, since the distribution was not normal ($p < .05$), non-parametric tests were applied [16]. To compare two independent groups, the Mann Whitney U test was used, and for more than two groups the Kruskal Wallis test. Finally, a significance level of $p < .05$ was adopted and effect sizes (r or η^2) were reported following Cohen's recommendations [17].

3. Results

Table 1 Sociodemographic descriptive analyses of the sample were carried out, 500 older adults participated, with a predominance of women (57.6%) and urban origin (70.8%). The majority were married or cohabiting (60.4%), while 22.2% lived alone. In education, 36.8% reached secondary level and 31.2% higher, evidencing a population with medium schooling. The Catholic religion (61.2%) and independent work (62.4%) predominated, reflecting the continuity of work in old age.

On the economic level, more than 60% reported low or very low income, and 72% said they felt satisfied with their lives, even though 60.4% indicated that they had some disease. These results describe a group that is mostly urban, female and economically vulnerable, but with relatively high levels of schooling and personal satisfaction, relevant factors to understand their perceptions of self-efficacy for aging.

Table 1. Sociodemographic variables of older adults

Variable	Indicator	Frequencies	%
Sex	Woman	288	57.6 %
	Man	212	42.4 %
Marital status	Bachelor	83	16.6 %
	Cohabitant	134	26.8 %
	Married	168	33.6 %
	Divorced	68	13.6 %
	Widower	47	9.4 %
Level of education	Unenlightened	45	9.0 %
	Primary	115	23.0 %
	High school	184	36.8 %
	Superior	156	31.2 %
Religion	Catholic	306	61.2 %
	Adventist	26	5.2 %
	Evangelical	43	8.6 %
	Christian	57	11.4 %
	None	7	1.4 %
	Other	61	12.2 %
Origin	Urban	354	70.8 %
	Rural	146	29.2 %
Occupation	Independent	312	62.4 %
	Dependent	103	20.6 %
	No occupation	85	17.0 %

Variable	Indicator	Frequencies	%
Personal satisfaction	Yes	360	72.0 %
	No	140	28.0 %
Income	Very low	150	30.0 %
	Low	162	32.4 %
	Average	158	31.6 %
	High	30	6.0 %
Cohabitation	Children	283	56.6 %
	Couple	56	11.2 %
	Only (a)	111	22.2 %
	Other relatives	50	10.0 %
Presence of chronic diseases	Yes	302	60.4 %
	No	198	39.6 %

Table 2 The level of self-efficacy for aging is described, 48.6% presented moderate self-efficacy, 34.6% low and 16.8% high. This result indicates that most older adults perceive an intermediate confidence in their ability to cope with the physical, emotional and social changes associated with aging, while a significant group manifests difficulties in maintaining this perception of control.

Self-efficacy levels are usually in medium ranges, reflecting the coexistence of personal resources and contextual limitations, it can also be associated with chronic health conditions, low economic income or limited social support, factors that condition the perception of personal competence in old age.

Table 2. Level of self-efficacy for aging

Variable	Level	Frequency	Percentage
Self-efficacy for aging	Low self-efficacy	173	34.6%
	Moderate self-efficacy	243	48.6%
	High self-efficacy	84	16.8%
	Total	500	100.0%

Table 3. The Mann Whitney U test showed significant differences in residence and in the presence of diseases ($p < .05$), with higher self-efficacy scores in rural, older adults and in those without chronic diseases. In this sense, the greater perception of self-sufficiency and daily coping in rural contexts can be explained by the fact that the living conditions in these areas demand adaptive strategies and personal resilience.

No differences were found according to sex or personal satisfaction ($p > .05$). Although the effect sizes were small, the results indicate that health and life context are variables that influence the perception of self-efficacy for aging.

Table 3. U-test to compare two independent samples

Variables	Group	N	Media	U	p	ES
Sex	Woman	288	28.4	30351	0.912	0.005
	Man	212	28.4			
Area of residence	Urban	354	28.2	20125	0.044	0.084
	Rural	146	29.1			
Personal satisfaction	Yes	360	28.4	24471	0.615	0.028
	No	140	28.5			

Variables	Group	N	Media	U	p	ES
Presence of diseases	Yes	302	28.2	17130	0.009	0.092
	No	198	28.8			

Table 2. (*Continued*)

Note. *H_a $\mu \neq \mu$. U = statistical test, N = sample, p = level of significance (.05), ES= effect size.*

Table 4. The results of the Kruskal Wallis test show statistically significant differences only in the variable cohabitation ($p< .05$), while in the variables marital status, level of education, religion, occupation or level of economic income, no relevant differences were observed.

The analysis indicates that older adults who live with their partner have higher levels of self-efficacy to age, compared to those who live with children or other relatives or alone. Although the effect size was small, this pattern indicates that cohabitation influences the perception of autonomy and personal control.

In contrast, no significant differences were found in other sociodemographic variables, indicating that self-efficacy for aging is relatively stable in the face of structural factors such as education or income, but sensitive to family and cohabitation dynamics, which directly affects the sense of autonomy of the elderly.

Table 4. H-test to compare more than two independent samples

Variables	x^2	df	p	e^2
Marital tatus	5.29	4	0.259	0.0106
Level of education	5.75	3	0.124	0.0115
Religion	3.02	5	0.698	0.0060
Occupation	5.35	7	0.617	0.0107
Economic income	2.76	3	0.43	0.0055
Cohabitation	8.68	3	0.034	0.0174
	Groups	N	Media	SD
	Children	283	28.2	4.46
	Couple	56	29.5	4.75
	Only (a)	111	29.2	5.27
	Other relatives	50	27	5.99

Note. *χ^2 = statistical test, df = degrees of freedom, p = level of significance (.05), ε^2 = effect size. N = sample, SD = standard deviation.*

4. Discussion

It was proposed to analyze the levels of self-efficacy to age in Peruvian older adults, identifying differences according to sociodemographic variables, the results show that most of the older adults evaluated have moderate levels of self-efficacy to age (48.6%), with a tendency to low levels (34.6%). This result coincides with what was found by Caycho-Rodríguez [13] in the Peruvian population, where intermediate levels of perceived confidence in the face of the challenges of aging were reported, reflecting the coexistence of personal resources and contextual limitations. Recent studies confirm that self-efficacy tends to stay in the mid-ranges in old age due to the influence of factors such as health, social support, and environmental opportunities [18].

Comparisons in two independent samples showed significant differences according to the area of residence and the presence of diseases; older adults in rural areas showed greater self-efficacy than those in

urban areas, this situation contradicts what has been reported in previous research, indicating that urban older adults have greater access to resources, services and opportunities in cities, however, greater exposure to environments of autonomy and constant coping in the rural context favors the development of adaptive strategies that reinforce self-efficacy. even in the face of adverse conditions [19].

Likewise, participants without chronic diseases obtained higher scores. The data is supported by studies that relate good physical and mental health with a high perception of personal control, motivation, commitment to improving health and functional capacity [20].

No differences were observed by sex or personal satisfaction, indicating that self-efficacy is a relatively stable construct and cross-sectional to gender, as also reported by Ospina-Cano et al. [21]. This could be explained by the fact that beliefs about personal efficacy are based more on life experiences than on gender roles [9].

On the other hand, the Kruskal Wallis test indicated significant differences in the variable cohabitation, with self-efficacy being higher in participants who live with their partner, compared to those who live with children or other relatives or alone. These results suggest that residential autonomy and the perception of independence strengthen the sense of personal control, improving the experience of intimacy [22], they demonstrated that excessive family dependence can decrease the perception of personal competence and psychological well-being. In this sense, recent studies confirm that autonomous cohabitation with one's partner is associated with greater self-esteem, resilience and self-efficacy, improving mental health and general well-being [23].

Taken together, the findings reinforce the view that self-efficacy for aging is a psychological and social resource that modulates adaptation, mental health, and quality of life in old age [24]. From Bandura's social cognitive theory [9], these beliefs guide health behavior and coping with functional losses, explaining why physically healthy or autonomous older adult’s manifest higher levels of self-efficacy.

In addition, the psychosocial theories of successful aging [10] and the selection, optimization, and compensation model [11], point out that the perception of personal control is a key predictor of active aging, especially when combined with supportive social networks.

In the Peruvian context, these results are relevant as they show that self-efficacy depends not only on demographic variables, but also on structural conditions (health, income, environment) and family dynamics, critical factors in countries with high social inequality and limited services for the elderly population. This finding coincides with the National Multisectoral Policy for Older Persons by 2030 and with the WHO Decade of Healthy Aging [4], which specify the need to strengthen psychological and community resources to promote autonomy and well-being in old age.

Therefore, this study provides relevant empirical evidence by demonstrating that self-efficacy for aging not only reflects a personal belief, but a comprehensive indicator of psychosocial adaptation in Peruvian old age. Beyond its relationship with demographic variables, self-efficacy is configured as a transversal protective mechanism, capable of moderating the impact of disease, dependency and inequality on the subjective well-being of the elderly.

Consequently, the study proposes to incorporate the measurement and strengthening of self-efficacy as a key psychological indicator in public policies on aging and community programs, allowing a transition from a care vision to a perspective of empowerment and participation, consolidating a psychology of aging that is more contextual, resilient and socially committed to the Peruvian reality.

From an applied perspective, the results suggest that programs aimed at older adults, especially at the first level of health care and in community centers for the elderly, should include psychoeducational strategies aimed at increasing self-efficacy, reinforcing self-perception of competence, decision-making, and positive coping. Likewise, group interventions based on modeling, feedback, and successful experiences have been shown to be effective in increasing self-efficacy and improving well-being [25]. In addition, the evidence supports the mediating role of self-efficacy between functionality and active ageing, justifying their inclusion as key variables in public policies [26].

Among the limitations, the cross-sectional design is recognized, which prevents establishing causal relationships, and non-probabilistic sampling, which limits the generalization of the results; Future research should use longitudinal designs that allow us to observe changes in self-efficacy throughout the aging cycle, as well as explore its mediating or moderating role between variables such as social support, mental health, and well-being. It is also recommended to evaluate psychoeducational interventions that strengthen self-efficacy in vulnerable urban contexts, following the WHO goals and national guidelines. And an additional aspect to consider is the limitation of the instrument used, the self-efficacy scale for aging used in this study is one-dimensional, although it facilitates its application and presents adequate psychometric properties in the Peruvian population, it does not completely capture the multidimensional nature of the constructed evaluated.

Therefore, future studies should propose multidimensional models that integrate these areas to obtain more complete measurements (physical, emotional, cognitive and social self-efficacy), the incorporation of multidimensional scales or combined approaches to assess self-efficacy for aging, will allow us to identify more precisely the specific domains that require intervention in the elderly population.

Conflict of interest

The authors declare no conflict of interest

References

1. López, D., Huajardo, G., Canturin, E., and Gutiérrez Aguado, A. (2023). Socioeconomic inequalities and health of older adults in Peru: analysis of the Demographic and Family Health Survey, 2014 and 2019.Cuban Journal of Public Health,49(1). Retrieved from http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S0864-34662023000100001&lng=es&tlng=es.
2. Parodi, J. F. (2023). Implementation research in geriatrics: an opportunity to build healthy aging. Medical Horizon (Lima), 23(4): e2580. https://doi.org/10.24265/horizmed.2023.v23n4.00
3. National Institute of Statistics and Informatics (2020). In Peru there are more than four million older adults. Retrieved from https://m.inei.gob.pe/prensa/noticias/en-el-peru-existen-mas-de-cuatro-millones-de-adultos-mayores-12356/?utm_source=chatgpt.com
4. World Health Organization (WHO). (2020). Decade of Healthy Aging 2021–2030. WHO. Retrieved from https://www.who.int/initiatives/decade-of-healthy-ageing?utm_source=chatgpt.com
5. Clavijo, M., Yévenes, F., Gallardo, I., Contreras, A. M., and Santos, C. (2020). General self-efficacy scale: reevaluation of its evidence of reliability and validity in Chile. Revista Médica de Chile, 148(10). Retrieved from https://www.revistamedicadechile.cl/index.php/rmedica/article/view/8017
6. Caycho-Rodríguez, T., Ventura-León, J., Azabache-Alvarado, K., Barboza-Palomino, M., Fergusson-Cárdenas, I., and Rojas-Jara, C. (2018). Initial Psychometric Evidence of the Self-Efficacy Scale for Aging (EAEE) in Peruvian older adults. Psychologia, 12(2): 47-60. https://doi.org/10.21500/19002386.3421
7. Medina-Fernández, J. A., Medina Fernández, I. A., Torres-Soto, N. Y., Suárez-Lara, G. A., and Martínez-Ramírez, B. (2025). Psychological well-being related to self-efficacy for aging in working older adults. Uninorte Health Scientific Journal, 41(1): 36-49. https://doi.org/10.14482/sun.41.01.070.484
8. Grembowski, D., Patrick, D., Diehr, P., Durham, M., Beresford, S., Kay, E., and Hecht, J. (1993). Self-Efficacy and Health Behavior Among Older Adults. Journal of Health and Social Behavior, 34(2): 89-104. https://doi.org/10.2307/2137237

9. Bandura, A. (1997). Self-efficacy: The exercise of control. Freeman. Retrieved from https://www.per-central.org/items/detail.cfm?ID=16100&utm_source=chatgpt.com
10. Rowe, J. W., and Kahn, R. L. (1997). Successful aging. The Gerontologist, 37(4): 433-440. https://doi.org/10.1093/geront/37.4.433
11. Baltes, P. B., and Baltes, M. M. (1990). Psychological perspectives on successful aging: The model of selective optimization with compensation. In P. B. Baltes & M. M. Baltes (Eds.), Successful Aging: Perspectives from the Behavioral Sciences, 1-34. chapter, Cambridge: Cambridge University Press. Retrieved from https://www.cambridge.org/core/books/abs/successful-aging/psychological-perspectives-on-successful-aging-the-model-of-selective-optimization-with-compensation/EAE9389C90617AE014260735DFFCEF82?utm_source=chatgpt.com
12. Guillén Vilchez, Y. A. (2020). Influence of resilience and life satisfaction on self-efficacy for aging in older adults in Lima. Retrieved from https://hdl.handle.net/20.500.14005/10182
13. Caycho Rodríguez, T. P. P. (2021). Life satisfaction, self-efficacy for aging, and resilience in older adults in the city of Trujillo. Retrieved from https://hdl.handle.net/20.500.12727/8225
14. Gómez Pasiche, R. C., and Vargas Benavides, M. S. (2021). Self-efficacy for aging and humor as coping with older adults in the city of Ica. Retrieved from http://hdl.handle.net/10757/656877
15. Faul, F., Erdfelder, E., Buchner, A., and Lang, A.G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. Behavior Research Methods, 41(4): 1149–1160. https://doi.org/10.3758/BRM.41.4.1149
16. Siegel, S., and Castellan, N. J., Jr. (1988). Nonparametric statistics for the behavioral sciences (2nd ed.). Mcgraw-Hill Book Company. Retrieved from https://psycnet.apa.org/record/1988-97307-000
17. Cohen, J. (1988). Statistical Power Analysis for the Behavioral Sciences (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum Associates, Publishers. Retrieved from https://www.scirp.org/reference/ReferencesPapers?ReferenceID=2041144
18. Oh, M., and Park, G. A. (2025). The Moderating Effect of Self-Efficacy on Physical Function, Aging Anxiety, and Active Aging in Community-Dwelling Older Adults. Healthcare (Basel, Switzerland), 13(2): 108. https://doi.org/10.3390/healthcare13020108
19. Aierken, A., Ding, X., Pan, Y. et al. (2022). Association between dependency on community resources and social support among elderly people living in rural areas in China: a cross-sectional study. BMC Geriatr 22: 589. https://doi.org/10.1186/s12877-022-03247-5
20. Ortiz Rodríguez, E., Forero Quintana, L. F., Arana Clavijo, L. V., and Polanco Valenzuela, M. (2021). Resilience, optimism, hope and meaning of life in the elderly with and without chronic disease in the city of Bogotá. Diversitas: Perspectives in Psychology, 17(2): 219-231. https://doi.org/10.15332/22563067.7117
21. Ospina-Cano, S., Quiroz-González, E., Villavicencio-Ayub, E., and Arias Rodríguez, G. M. (2023). Self-efficacy and engagement from a gender perspective. Equity and Development, 41: e1488. https://doi.org/10.19052/eq.vol1.iss41.7
22. González-Celis Rangel, A. L., and Lima Ortiz, L. (2017). Self-efficacy, Perception of health and loneliness, on quality of life in older adults. Between sciences: Dialogues in the Knowledge Society, 5(15). https://doi.org/10.22201/enesl.20078064e.2017.15.62571
23. Huayanay-Espinoza, I. E., Guerra-Castañon, F., Reyes-Diaz, M., Lazo-Porras, M., de la Cruz-Luque, C., Herrera, D. A., and Málaga, G. (2021). Quality of life and self-efficacy in patients with type 2 diabetes mellitus in a Peruvian public hospital. Medwave, 21(2): e8133. https://doi.org/10.5867/medwave.2021.02.8132
24. Mesa-Fernández, M., Pérez-Padilla, J., Nunes, C., and Menéndez, S. (2019). Psychological well-being in non-dependent older people and its relationship with self-esteem and self-efficacy. Ciência & Saúde Coletiva, 24(1): 115–124. https://doi.org/10.1590/1413-81232018241.35302016
25. Orosco Goicochea, C. J., and Lazcano Vázquez, C. (2024). Evaluation of the Effectiveness of Strategies and Programs to Improve Quality of Life and Psychological Well-Being in Older Adults: A Review. Analysis and Behavior Modification, 50(184): 67-78. https://doi.org/10.33776/amc.v50i184.8301
26. Schunk, D.H., and DiBenedetto, M.K. (2021). Self-efficacy and human motivation. Advances in the Science of Motivation, 8: 153-179. https://doi.org/10.1016/bs.adms.2020.10.001