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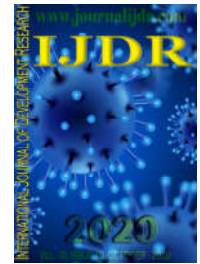
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ANALYSIS OF THE RELATIONSHIP BETWEEN SUCCESSFUL AGING AND SPIRITUALITY IN ELDERLY PEOPLE

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ABSTRACT

The world aging process has shown accelerated growth in the last decades, mainly in developing countries. Research on the successful aging process has been relevant to understand the variables that need to be addressed to maintain and increase old age with quality of life. Many variables deserve to be highlighted during development throughout life. Still, this study will focus on the variables of spirituality and strategies for promoting successful aging. Thus, the present study's objective was to analyze the association between the variables of successful aging strategies and spirituality in older people. The methodological design was quantitative, descriptive, and transversal. The sample consisted of 103 subjects, of both sexes, aged between 60 and 89 years, distributed in two groups: 46 participants in a computer program in the city of Novo Hamburgo, and 57 practitioners of aqua aerobics in the city of Dois Irmãos / Brazil. The instruments used were the SOC Inventory (Selection, Optimization, and Compensation) and the Spirituality Scale. The results were very similar in both groups. The variable spirituality had a mean of 3.33 points, while the variable successful aging promotion strategies reached 7.44 points, with loss-based selection being the most used. In the correlation analysis performed by the Pearson test, the computer group participants showed a correlation between the factor Beliefs of the variable Spirituality with the Successful Aging Strategy (SOC) of Selection based on losses ($r = 0.360$; $p = 0.015$). In the water aerobics group participants, a correlation was identified between Spirituality and SOC ($r = -0.326$; $p = 0.013$). The conclusion is that, although the groups do not differ significantly from the results presented for spirituality and successful aging strategies, there is a difference in the relationship between the variables within each group. The group that practices aqua aerobics resides in a smaller community, has a more stable bond of friendships, and demonstrates that spirituality and especially beliefs are not so relevant when using loss-based selection and compensation strategies for successful aging. However, in the group that performs computer activities and resides in a larger city, there is a direct relationship between spiritual beliefs and the promotion of strategies for successful aging.

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INTRODUCTION

The aging of the population has been increasing a lot both in Brazil and in the world. Data from the World Health Organization (2019) show that the older people over 60 years old was 14.5 million people, an increase of 35.5%; it currently exceeds 29 million, and the expectation by 2060 is an increase to 73 million aged 65 and over, which represents an increase

of 160%. Nowadays, old age is no longer considered a phase of inactivity and regression. It represents a great sense of life, the possibilities of discoveries and achievements. Antunes (2017) reports that aging is not the end, not even a state of idleness, but rather refers to the adaptation and adjustments of new changes, where successful aging resides. Participation in events offers significant results in social interactions for the promotion of the social and emotional well-being of older

people, according to Cachioni *et al.* (2017). Aging is also a condition inherent to human nature, for it is through changes in the biological, psychological, and social spheres that the aging period occurs. However, when there is a low probability of associated diseases, high cognitive functioning, functional physical capacity, and commitment to life, there is what is called successful aging, according to Falcão and Carvalho (2018). Every aging is a loss. However, for older people with healthy living habits, health care, good social relationships, this process is eased, leading to a better quality of life. Old age is the sum of many emotional and social achievements throughout life, teaching how to enjoy every moment of life. According to Souza (2019), healthy or active aging claims for the quality of life and health of the elderly, associated with the maintenance of physical, psychological, and social autonomy. It will allow older people to participate in the various social, cultural, economic, civil, and spiritual issues and not only the ability to be physically active or part of the workforce. These conditions are a new way of understanding and looking at aging. Thinking of the quality of life means thinking about aging and reflecting on the elderly's independence in their personal, familiar, and social life. For Eliopoulos (2019), successful aging occurs through the process of healthy psychological aging arising from the completion of the stages experienced by the individual, that is, through the challenges that need to be faced and the adjustments made in response to life experience, which are part of continuous growth throughout life. Nowadays old age presents a new elderly person, with great social challenges to be overcome, capable of aging with quality of life and dignity. Toledo (2019) points out that the figure of the new old represents healthy aging, that is, being in old age, or growing old is to occupy the place that one really wants to be in; is to overcome prejudices, to guarantee the dignity of the elderly person. Balbinotti (2017) explains that spirituality is present throughout the existential cycle, being part of the individual's behavior through perception, thinking, conceptions, feelings, faith, and beliefs. In harmony with spirituality, aging makes it possible to live life as a symphony, with sensitivity and melody, with intense, exciting, and transforming moments. For the constant search for the art of living, for living with art. In aging, Domingos and Faria (2018) suggest that spirituality is an essential dimension of hope and an element that facilitates improvement in diseases associated with old age. Thus, aging and spirituality are part of a better perception of the quality of life of the elderly. Just as Abrunheiro, Apóstolo, and Pinto (2015) point out, spirituality consists of a much broader concept, with more meaning of self-transcendence, personal fulfillment, and existential significance. Given the present context, this study's objective is to analyze the association between the variables successful aging strategies and spirituality in older people who regularly attend computer activities in the city of Novo Hamburgo and water aerobics activities in the town of Dois Irmãos/Brazil.

METHODS

The research has a descriptive character, and the methodology takes place in a quantitative and transversal perspective. This research was carried out in two different locations: in the city of Novo Hamburgo/Brazil through computer activities, in partnership with the Digital Inclusion Department of the Municipal Administration (SEMAD), as well as in the city of Dois Irmãos/Brazil through the practice of water aerobics in partnership with the Department of Health, Assistance, and

Environment. The contact occurred by telephone or in-person when there was a possibility. All participants signed the Free and Informed Consent Form (TCLE). This study sample was composed of 103 subjects, of both genders, between 60 and 89 years old. The first group consisted of 46 individuals participating in the computer program, and the second group was made up of 57 people practicing aqua aerobics. The following instruments were used to analyze the variables of successful aging and spirituality strategies:

- SOC Inventory (Selection, Optimization, Compensation)- developed by Baltes, Baltes, Freund, and Lang (1999), explains the concept of successful aging. This version consists of 12 items that assess the use of SOC strategies by the elderly. Each item consists of two statements, one describing the behavior reflecting the SOC, and the other offering a reasonable option, but not related to the SOC. The participant must decide which of the two alternatives characterizes his or her behavior.
- Spirituality Scale - The Spirituality Scale was developed by Pinto and Pais-Ribeiro (2007) and validated in Brazil by Chaves *et al.* (2010). It consists of five questions that quantify the agreement regarding spirituality. It comprises five items, whose answers use the likert scale: 1- I disagree, 2- I slightly agree, 3- I strongly agree, 4- I fully agree. The scale has two domains: 1- Beliefs (attribution of sense/meaning to life), relating to a vertical dimension of spirituality, and 2- Hope/Optimism, relating to a horizontal dimension of spirituality. Higher scores on the scale and subscale indicate greater agreement with the assessed dimension.

The study was approved by the Ethics Committee of Feevale University with the opinion number 3.096.990.

RESULTS

The sample consisted of 103 elderly participants, with a mean age of 71.41, ranging between 60 and 89. They were divided into two groups. The first group of older people participating in computer courses offered free of charge by the city of Novo Hamburgo (n = 46).

Table 1. Descriptive analysis of the spirituality variable (n = 103)

Variable	General group (n=103)	Computer group (n=46)	Water aerobics group(n=57)
Spirituality	Mean	3,33	3,32
	Sd	0,536	0,488
	Min	2	2
	Max	4	4
Beliefs	Mean	3,45	3,49
	Sd	0,709	0,586
	Min	1	2
	Max	4	4
Hope/Optimism	Mean	3,26	3,20
	Sd	0,567	0,548
	Min	2	2
	Max	4	4

The second group comprises older people who perform water aerobics activities at least once a week in the city of Dois Irmãos (n = 57). Among the study participants there were 24.5% male and 75.5% female. Regarding education, the study found that 62.7% of the sample has incomplete elementary education, 9.8% complete elementary education, 4.9% incomplete secondary education, 9.8% complete secondary education, 5.9% incomplete higher education, and 6.9% complete higher education. Table 1 shows the spirituality assessment instrument results separated by the total value of the instrument and later divided into its two factors: beliefs and hope/optimism. The data were identified first in the general group of participants and separately in the computer and water aerobics groups. The data showed no significant differences between the groups of older people who participate in computer and water aerobics activities. As they are close municipalities, there is also no cultural difference between the religions practiced.

groups can be identified. The spirituality factors show that the belief is relatively higher than the hope/optimism, maintaining the same pattern in both groups. Beliefs have a mean of 3.40 points in the water aerobics group, and 3.49 in the computer group. Inverting this relationship with the hope/optimism factor, the computer group has a higher mean of 3.33 points and the water aerobics of 3.20. Therefore, despite a small difference, there is a tendency for the elderly in the water aerobics group to have as the essential basis for their spirituality the beliefs, and for the older people in the computer group, the fundamental basis is hope/optimism. Table 2 shows the results of each of the questions of spirituality. The study identified that, in the whole group, the most important thing in spirituality is learning to value the little things in life. In the computer group, this perspective is repeated. In the water aerobics group, faith and beliefs stand out as giving strength in difficult times.

Table 2. Descriptive analysis of the questions of the variable spirituality (n = 103)

Variable		General group (n=103)	Computer group (n=46)	Water aerobics group (n=57)
Spiritual/religious beliefs give meaning to life	Mean	3,42	3,36	3,47
	Sd	0,797	0,942	0,658
	Min	1	1	2
	Max	4	4	4
Faith and beliefs give strength in challenging times	Mean	3,48	3,45	3,51
	Sd	0,737	0,855	0,630
	Min	1	1	1
	Max	4	4	4
Realize the future with hope	Mean	2,96	2,85	3,05
	Sd	0,944	1,103	0,789
	Min	1	1	1
	Max	4	4	4
Feel that life has changed for the better	Mean	3,21	3,34	3,11
	Sd	0,784	0,760	0,795
	Min	1	1	1
	Max	4	4	4
Learning to value the little things in life	Mean	3,61	3,79	3,46
	Sd	0,614	0,414	0,709
	Min	1	3	1
	Max	4	4	4

Table 3. Descriptive analysis of the SOC (n = 103)

Variable		General group (n=103)	Computer group (n=46)	Water aerobics group (n=57)
SOC	Mean	7,28	7,44	7,08
	Sd	2,153	2,084	2,234
	Min	2	2	2
	Max	12	12	11
Elective selection	Mean	1,90	1,97	1,82
	Sd	0,724	0,706	0,743
	Min	0	0	0
	Max	3	3	3
Loss-based selection	Mean	2,08	2,14	2,01
	Sd	,821	0,765	0,886
	Min	0	0	0
	Max	3	3	3
Optimization	Mean	1,65	1,69	1,61
	Sd	0,881	0,840	0,933
	Min	0	0	0
	Max	3	3	3
Compensation	Mean	1,65	1,64	1,65
	Sd	0,889	0,889	0,986
	Min	0	0	0
	Max	3	3	3

However, what differentiates the two groups is the municipality's size, with Dois Irmãos considered small and Novo Hamburgo medium, despite being in the same region. Regarding the general result of spirituality, no change between

The less relevant question, for both groups, was to realize the future with hope. Regarding the question that spiritual/religious beliefs give meaning to life, the study showed that 1.9% of the participants disagree, 13.5% slightly agree, 25%

strongly agree, and 59.6% fully agree. Concerning the question where faith and beliefs give strength under challenging times, 2.9% of the participants disagree, 5.8% slightly agree, 31.7% strongly agree, and 59.6% fully agree. As for looking to the future with hope, 6.7% of the elderly in the study disagree, 26% slightly agree, 31.7% strongly agree, and 35.6% fully agree. When asked if they feel that life has changed for the better, 2.9% disagree, 13.5% slightly agree, 43.3% strongly agree, and 40.4% fully agree. About learning to value the little things in life, 1% of the participants disagree, 3.8% slightly agree, 28.8% strongly agree, and 66.3% fully agree. In the analysis of the comparison of means between the computer and water aerobics groups, using the Mann-Whitney test, the result showed significant differences ($p = 0.007$) in the question about learning to value the little things in life. The result demonstrates that this variable is one of the most important elements for older people who participate in the computer group. But for the water aerobics group, the most relevant aspects are faith and beliefs in challenging times. Table 3 shows the descriptive analysis of the SOC strategy variable - selection, optimization, and compensation. The results demonstrate no significant difference in the strategies adopted to promote successful aging among older people who participate in water aerobics and computer groups. The loss-based strategy was the most used by both groups. This fact demonstrates that the strategy of choice for selecting actions that may help in the successful aging process is more based on previous experiences marked by challenges. In the correlation analysis performed by the Pearson test, a positive correlation between the factor Beliefs of the variable Spirituality and the Successful Aging Strategy (SOC) of Selection, based on losses, was identified in the participants of the computer group ($r = 0.360$; $p = 0.015$). In this group, the study demonstrated that the more the perspective of beliefs that give meaning to life and related to difficult moments is increased, the higher the use of successful aging strategies based on loss-based selection. Spirituality focused on challenging times directs actions towards past experiences. In the water aerobics group participants, a negative correlation was identified between the variables Spirituality and Strategies for successful aging ($r = -0.326$; $p = 0.013$). The same relationship was identified between the factor Beliefs of Spirituality and the SOC strategies ($r = -0.380$; $p = 0.004$). The variable Spirituality ($r = -0.333$; $p = 0.011$) and its Beliefs factor ($r = -0.342$; $p = 0.009$) also showed a negative relationship with the loss-based selection strategy. The variable Spirituality ($r = -0.324$; $p = 0.014$) and its Beliefs factor ($r = -0.338$; $p = 0.010$) also showed a negative relationship with the strategy Compensation. In this group, although the results are similar, there is an opposite result. It is worth remembering that this group showed a significant difference from the other group concerning learning to value the little things in life, which belongs to the Hope/Optimism factor. In this group, the higher the spirituality variable, the lesser the use of successful aging strategies. More specifically, in Spirituality, there is the conclusion that it is the factor Spiritual and Religious beliefs that give meaning to life and strength in difficult times, which decreases the use of Loss-based Selection and Compensation strategies that would provide a better process of successful aging.

DISCUSSION

Aging is part of the process of every human being. It is a natural cycle of life. Furthermore, successful old age does not

deny its losses, but it elaborates and reorganizes the individual in biological, psychological, and social aspects. Strategies for successful aging result in physiological losses, but also social and cultural gains. The representations of aging imply many feelings about this stage of life, loaded with value, oscillate between positive and negative factors of old age (Locatelli, 2017). The study developed by Silva (2019) says that spirituality directly influences the way of acting and thinking. The responses presented on Spirituality, subcategory Beliefs, refer the mean of 3.50 ($sd = 0.939$), and in the subcategory Hope/Optimism, the mean of 2.74 ($sd = 0.642$). These results demonstrate that the sample of caregivers studied is more believing in its spirituality and less optimistic. The research developed by Gomes (2017) was carried out with 36 non-institutionalized older people from a community aged between 65 and 85. In the Spirituality scale, the value obtained was 3.2, with a standard deviation of 0.64. Mean spirituality was observed among the elderly analyzed.

In our study, the results were very similar. They corroborated the research by Silva (2019) and Gomes (2017) since we found an average of 3.33 points on the spirituality scale with a standard deviation of 0,536. The variable Spirituality presented satisfactory results in all areas related to spiritual/religious beliefs that give meaning to life, the feeling that life has changed for the better, and learning the value of the little things in life. Regarding the perception of the future with hope, the difference between the groups was that in the computer group, the result was 2.85, and for the water aerobics group, it was 3.05. These findings show that the water aerobics group can have a better perception of the passing years. That is to say, the future for them is more meaningful and hopeful than for the computer group. The difference that was statistically significant refers to value the little things in life. Although the two groups have a fair aging process because they are active, the group of older people that practices water aerobics and live in Dois Irmãos has a more forward-looking view, and the computer group from Novo Hamburgo gives more value to the present. The research by Gatti, Witter, Gil, and Vitorino (2015) carried out with the elderly, related to the investigation of their life history, brings the reference of the selection, optimization, and compensation (SOC) strategies that they used to have a successful old age. The research also analyzed the contributions of generativity and social participation in the aging process. The authors present part of the eight older people's reports, highlighting that those who were more successful in aging were those who had a welcoming environment that allowed the development of selection, optimization, and compensation strategies. These strategies comprise increasing gains and decreasing losses with medical, physiotherapy, or other health professional monitoring to promote and maintain health to overcome physical weaknesses resulting from age.

Almeida, Stobäus, and Lima Resende (2013) conducted a study with the elderly to evaluate how they act in their daily lives, through the SOC inventory. The authors describe this instrument through the theoretical perspective that evaluates people's adaptation to daily experiential difficulties; in contrast, they help in new perceptions of how the elderly act in their lives. It reflects the concept of selection, attributing the need to choose goals and actions because we cannot seek and/or reach all the opportunities that appear to us, called elective selection. Besides, when losses occur, we need to focus our attention on specific actions to seek new goals or

adapt to new standards, the selection based on losses. The study by Pimentel (2014) carried out with institutionalized and non-institutionalized elderly points out that the SOC represents the ability to assess the elderly's perception about their basic motor skills involved in carrying out activities of daily living. The SOC response implies selecting a SOC behavior, or not SOC, so it is worth mentioning that in the loss-based selection, the proportion of the total gains and losses about the adaptability changes in its ratio as age advances. It appears that the older people are, the greater the need to resort to this type of compensation resources to maintain high levels of functioning. Chaves and Gil (2015) corroborate in this study, evidencing their results that the elderly recognize the importance of spirituality in their lives. Their relationship with old age is also in the capacity to support the limitations, losses, and difficulties inherent to the process, facing the sufferings. The elderly show satisfaction in living life continuously, as there is no intensification in the importance of spirituality, but a maturing and deepening of that experience. Martins (2014) found in his study, carried out with older women, that spirituality is an important tool for the promotion of well-being and protection during the aging process. The researcher concludes that losses from activities previously carried out are inevitable when referring to the aging process. On the other hand, there is a positive perception of this process. The presence of a new meaning to life overcomes aging's difficulties by developing compensation strategies through spiritual beliefs, which give a sense in times of great challenge.

Conclusion

The present study allows us to contribute to a better understanding of the aging process in active individuals. The findings showed a difference in successful aging in older people between 60 and 89 years old. The conclusion is that, although the groups do not differ significantly concerning the results presented for spirituality and successful aging strategies, there is a difference in the relationship established between the variables within each group. The group that practices water aerobics, lives in a smaller community, and has a more stable bond of friendships, demonstrates that spirituality and beliefs, especially, are not so relevant when using loss-based selection and compensation strategies for successful aging. However, in the group that performs computer activities and lives in a larger city, there is a direct relationship between spiritual beliefs and the promotion of strategies for successful aging.

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