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The Role of Optimism and Spirituality in Individuals with Tinnitus Complaints

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Abstract: Optimism and spirituality are related to a positive and dynamic perspective, which can lead the individual to face his problem more constructively, using coping strategies to address this problem more effectively, better managing stress and negative life events associated with it.

More optimistic individuals deal better with tinnitus, and that optimism is a predictor of QoL in individuals with tinnitus. Spirituality is an important dimension in QoL, in its relation to health and illness, however, no studies have been found regarding its presence in tinnitus problems.

The objectives of the study are characterizing the optimism and spirituality of individuals with tinnitus and explore their relationship with some sociodemographic and clinical variables.

From the results, we verified that 12.3% of the individuals in the sample (N = 57) had mean values below the cut-off point for optimism scale (LOT-r), and no statistically significant relationships were found the variables studied. For spirituality, 27.6% of individuals (N = 58) are below the cut-off point for the scale. Relationships between spirituality and age were found, with older individuals having higher values on the scale. There was also a correlation between spirituality and schooling, individuals with higher values of spirituality had lower levels of schooling.

These indicators strengthen the perception that spirituality will be an important aspect to explore in therapeutic intervention, which is reinforced by the fact that there is a considerable percentage of individuals who perceive their spirituality as low. Optimism, not presenting values that replicate those found in the literature, should also be considered in a therapeutic intervention for this type of individuals.

Key words: Lot-r, optimism, spirituality, tinnitus

1. Introduction

Optimism and spirituality are related to a positive and dynamic perspective, both in life and in position to health, as reported by several authors cited Morgenstern and collaborators (2011) for whom optimism and spirituality are psychological factors that are associated with the health. This association between spirituality and optimism is also present in the work of Pinto and Pais-Ribeiro (2007) who developed the Spirituality Evaluation in Health Contexts (EAECS), in which one of the dimensions associated with spirituality is the horizontal

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dimension, associated with the search for the meaning of life, which reflects the search for hope and optimism, and with a higher correlation with the individual's QoL. In this line of thinking, we can point to optimism as an indicator of spirituality.

It is important to mention that in earlier studies an approach was made that sought to relate the QOL of individuals with tinnitus and several biopsychosocial variables, where optimism (dispositional) and spirituality are found. In an attempt to systematize the bibliographical research on the subject, in 2012 was searched for articles on PUBMED that deal with optimism and spirituality in patients with tinnitus, and were found four for optimism research, of which two focused on optimism as theoretical construct, and none were found that referred to the evaluation of spirituality in the context of tinnitus. Such data or the lack thereof, was an extra motivation for the accomplishment of this study.

2. Optimism

Since the concept of optimism is a very recent concept, it was Tiger, in 1979 (quoted by Pedro, 2010), the first author to present a conceptual definition, pointing out that it would be a predisposition or an attitude that the individual presents, hoping in a future perspective to receive tribute or advantage of what is your desire. Optimism can thus be defined as the tendency that the subject presents to positively await life events related to psychological, social and physical well-being (Carver, Scheier, & Segerstrom, 2010; Laranjeira, 2008). The optimistic persons are those who present general expectations that involve obtaining a positive result, in opposition to the pessimists, who are generally expecting a negative result (Carver et al., 2010; Scheier & Carver, 1985; Valle & Mateos, 2008).

As stated by Laranjeira (2008), in Psychology, many researchers seek to study positive power to promote or maintain the well-being of the individual. He also points out that a favorable view of life allows some advantage in relation to the management of stress and disease when compared to situations in which negative events are expected. These aspects allow us to perceive the influence of individual positive characteristics on the individual's Quality of Life (QOL), with optimism being one of the positive aspects of his personality (Pedro, 2010).

The theory of behavioral self-regulation is based on the great influence of expectations on the behavior, in a cognitive framework, to which an emotional and motivational dimension is added, being one of the main theories that promote the importance of optimism in QOL and well- being of the individual (Carver et al., 2010; Pedro, 2010; Scheier & Carver, 1985). Individuals who present a more favorable view of life have a greater ability to deal with stress and disease in a more positive way, with more effective adaptive processes, being a stable personality trait that remains even in the most adverse situations, (Carver et al., 2010; Laranjeira, 2008; Pedro, 2010). Carver & Scheier (2002; cited by Carver et al., 2010; Pedro, 2010) show that expectations about the future are central to how people respond to adversity, particularly in solve the situations.

A significant number of studies positively associate optimism with psychological and physical health indicators, such as low levels of depression and anxiety, higher life satisfaction, better immune functions, and less physical symptoms (Vollmann, Scharloo, Langguth, Kalkouskaya & Salewski, 2014).

Scheier and Craver (1985) distinguish the generalized expectation to obtain positive results related to the individual, his behavior or his health as the personal/dispositional optimism, contrasting with what concerns specific aspects of the social or ecological environment, which is referred to as social/situational optimism. However, in the literature consulted, it is not always clear what kind of optimism the authors refer.

Optimists adopt positive behaviors, focusing on solving the problem, seeking to find more information and reformulating the strategies used to obtain better results (Carver et al., 2010; Pedro, 2010). They are usually more resistant to depression, happier with life, presenting more satisfaction with family and social support, which will consequently influence their QOL. Individuals with greater dispositional optimism also have more adaptive coping styles, being more likely to achieve success in the professional, personal and social areas, presenting better physical and mental health (Carver et al., 2010). On the other hand, reflecting optimism as a cognitive component of behavior, optimistic individuals are expected to generalize positive experiences to other aspects of their life, thus having a positive impact on their physical and mental health (Vollmann et al., 2014).

However, to be effective, optimism has to be realistic. Peterson (2000, cited by Pedro, 2010) points out that unrealistic optimism leads the individual to take risks that could further jeopardize the situation, particularly in cases related to the disease.

Pessimists develop depressive symptoms more easily, present greater hostility and anxiety, using fewer effective strategies such as sleeping, eating and excessive drinking (Pedro, 2010). In addition, when situations imply a slow evolution, they doubt the validity of the strategies they are using and easily give up the proposed therapeutic processes (Carver et al., 2010).

A defensive pessimism is a way of acting that shows near-optimistic levels of achievement, since the focus is on the negative aspects of the situation, leading to anticipation of anxiety control, which will not affect the execution of tasks (Valle & Mateos, 2008). The dispositional pessimism is associated with a lower perception of the control of situations, which leads to the feeling of impotence, focusing the individual more on his limitations to perform the tasks, generating more and more anxiety (Carver et al., 2010).

According to Laranjeira (2010), males are more optimistic than females, but Glaesmer and collaborators (2012) found no differences, as did Bastianello, Pacico and Hutz (2014).

When discussing the relationship between optimism and health, we find that individuals with more optimism establish coping strategies that are more effective in resolving or adapting to situations (Carver et al., 2010; Pedro, 2010). The optimistic individual tends to perceive medical conditions as less serious, less appreciating the symptoms and consequences, and finding that they are controllable through the therapeutic process, but also of their own behavior (Carver et al., 2010; Vollmann et al., 2014). Optimism, particularly dispositional, may be important in promoting physical and psychological functioning in situations of high stress, such as dealing with sudden illnesses, chronic diseases and medical interventions, or other serious problems or traumas, such as situations of war (Velden et al., 2007; Vollman et al., 2014). In the optimists, there is also a greater control of the symptoms such as pain and fatigue, being more cooperative in the rehabilitation processes, also presenting greater ease in the management of conflicts, being these important factors in the situations related to health (Pedro, 2010).

Dispositional optimism is equally important in the prevention component, as it enhances the performance of standard behaviors associated with health maintenance (Carver et al., 2010).

In chronic disease situations, the optimists present a greater belief in obtaining positive results for their problem, leading to their better physical health, psychic health and perception of well-being (Carver et al., 2010; Pedro, 2010). They also present better adjustment to the disease, with lower depression and anxiety, presenting, as a rule, greater social support, benefiting from greater inter-relief (Valden et al., 2007).

The use of LOT (Life Orientation Test) has shown a significant relationship between optimism and the presence of difficulties associated with the presence of tinnitus, which also extends to the presence of hearing loss, with emotional reactions due to this loss (Andersson, 1996). In that study, the mean value obtained was 20.10 (SD

= 5.98), and there were significant correlations between LOT values and the age and duration of the presence of tinnitus. However, Glaesmer et al. (2012) found no differences in their sample regarding significant variations in optimism related with age.

Vollmann et al. (2014) found that optimists perceive their tinnitus as being associated with fewer symptoms, not having such a chronic component, with less severe consequences and emotional disturbance, and more valuing the control of the situation through medical treatment than the pessimists. They also found a correlation with depression, showing that the optimists had lower values in this variable, which is correlated with the assessment of the severity of tinnitus.

Bennett (2015) reports that optimism has been underestimated and has never been systematically investigated. He also points out that in modern psychotherapy optimism must be present to help promote personal change in a dynamic and evolutionary perspective. In the area of Positive Psychology, optimism is one of the several themes addressed, and the optimization of optimism is important in the process of investigation and intervention, as refer Marujo, Neto, Caetano and Rivero (2007).

3. Spirituality

From ancestral times, and by the ignorance of what lay behind the "evils" and illnesses that afflicted the person, were the spiritual and religious leaders who had the knowledge to heal these problems (Koenig, 2007). Until the nineteenth century, treatment, particularly of "mental" illnesses was associated with religious orders, so the role of religiosity was of special importance (Koenig, 2007). Hence spirituality and religiosity are confounded in the context of health (Pinto & Pais-Ribeiro, 2007). However, spirituality is a personal and dynamic process, comprehensive and multidimensional, which may or may not be based on religious practice, but that seeks to find the meaning of life, integrating human experience (Barbosa, 2010; Panzini, Rocha, Bandeira & Fleck, 2007; Pinto & Pais-Ribeiro, 2007). These searches for the meaning of life is related to its finitude and to the purpose of life itself, and arise with greater importance in the disease, especially in the moments in which its evolution is perceived by the patient, by his family and caregivers (Barbosa, 2010).

In the twentieth century, in the context of Western medicine, aspects related to spirituality were seen, until not very long ago (1980s) as something without interest for the health of the patient, or even as a reflection of psychopathologies when the individual is leaning on the area of religious experiences (Cassar & Shinebourne, 2012; Koenig, 2004, 2007; Panzini et al., 2007). This perspective has been altered in the light of a more positive approach, and there has been some concern in exploring how spirituality can be an asset for the improvement of patients' QOL, also associated with the mechanisms of hope that are source of spiritual strength (Cassar & Shinebourne, 2012; Narayanasamy, 1996; Panzini et al., 2007). It should be noted that even those who are not religious or have religious faith, present a belief system that underlies their attitude towards life (Barbosa, 2010).

There are also impacts of religion on health care, associated with medical decision-making, the existence of conflicts between beliefs and necessary medical care, which sometimes prevent medical care itself, some spiritual conflicts, in the early stages of pathologies or processes of hospitalization the patient feels abandoned by the entity in which he/she believes, and by its impact in the detection of the problem and in the adherence to the therapy, since having greater social support feels more supported, being the aspects related to the religion/help coping the individual about their problem (Koenig, 2004).

There are several definitions of spirituality. Sawatzky, Ratner and Chiu (2005) refer to spirituality as

something that goes beyond the physical, psychological or social dimensions of life, but is also often associated with an existential quest for meaning and purpose for life, joining a third attribute which relates spirituality to one's personal experiences, but which will not necessarily be expressed through pre-defined behaviors and practices, distinguishing spirituality from religion, since there are people who consider themselves to be spiritual but not necessarily religious.

Spirituality is universal because it is present in all individuals, it is global because it addresses life as a whole, integrates several dimensions, being multidimensional, and personal, reflecting the evolution of the individual through his experiences (Barbosa, 2010).

Some recent studies have shown that individuals with religious faith deal better with stress situations, recover better from depressive situations, and have a lower tendency to negative emotions such as anxiety than less religious people, in a multicultural context (Koenig, 2004). There are also values associated with greater social support, but also better indicators regarding physical health, lower cholesterol, better immune functioning, among other aspects (Koenig, 2004).

About QOL, the WHOQOL Group assumes the importance of spirituality as one of the QOL indicators (Panzani et al., 2007), having developed a specific instrument for its evaluation, WHOQOL-SRPB (2002)[1], to explore more adequately the spirituality, religiosity and personal beliefs of individuals (Fleck & Skevington, 2007). In recent years, several scientific investigations have focused on spirituality (Meneses, 2006; Panzani et al., 2007), suggesting a positive relationship between religion, spirituality, and mental and physical health (Koenig, 2004; Panzani et al., 2007). It becomes particularly important in the presence of a chronic problem, hope being a source of spiritual strength, finding the courage to deal with the problem (Narayanasamy, 1996). Through spirituality, the individual seeks to promote changes in his or her state of health, particularly through coping strategies, developing greater resistance through spirituality (Narayanasamy, 1996; Pinto & Pais-Ribeiro, 2007).

It is pointed out as an important dimension of QOL, spirituality is also another aspect mentioned in the literature that supports research in areas related to therapeutic programming, encompassing any type of illness, particularly in relation to religious/spiritual coping (Panzini et al., 2007). Looking at a paradigm shift in health care, moving from a pathophysiological approach to a more comprehensive and global approach, it is important to consider spirituality as a crucial dimension to investigate (Pinto & Pais-Ribeiro, 2007), although in bibliographical research no study has been found in individuals with complaints of tinnitus. However, Koenig (2004) reported having found more than 60 studies where spirituality, particularly religion, has played a role in the coping of patients with arthritis, diabetes, heart disease, cancer, AIDS, cystic fibrosis, amyotrophic lateral sclerosis, pain among other chronic problems.

It is also worth mentioning that it has been advocated for many years that health professionals, in addition to evaluating/investigating spirituality, provide spiritual (effective) care to their patients (e.g., Narayanasamy, 1996). This allows us to create a closer relationship and trust between the patient and his caregiver, mobilizing hope using various physical, psychological, affective and socioeconomic means (Barbosa, 2010).

There are also proposals within cognitive-behavioral therapy to include spirituality as a way to increase patient motivation and adherence to the therapy (Rosmarin, Auerbach, Björgvinsson, Levendusky & Bigda-Peyton, 2011). However, it will be expected that there may be some resistance and even discomfort in the patients' approach to this subject, which will require a therapist, in addition to specific training, a multidisciplinary

[1] http://www.who.int/mental_health/media/en/622.pdf.

approach and that involve a greater involvement in exploring the experiences of others (Cassar & Shinebourne, 2012; Rosmarin et al., 2011). Barbosa (2010) also refers to the need to motivate and prepare health professionals to address the spiritual aspects of patients.

In this context, the objectives of the present study are: a) to characterize the optimism of individuals with complaints of tinnitus and to explore their relationship with sociodemographic and clinical variables; and b) characterize the spirituality of individuals with complaints of tinnitus and explore their relationship with sociodemographic and clinical variables.

4. Methods

The study population consists of individuals with chronic tinnitus and normal hearing or mild hearing loss (PTA^2 < 40 dB), to avoid the interference of hearing loss as a disturbing factor.

The sequential and convenience sample (Pais-Ribeiro, 2008) consists of 58 adult patients (≥ 18 years old), followed in the ENT consultation of the Hospital das Forças Armadas-Porto, Portugal, with tinnitus complaints for at least six months, in order to be considered chronic.

The study was approved by the Ethics Committee and each participant was informed about the objectives and procedures of the study, and signed an informed consent form.

Of the 58 elements of the sample, 37 (63.8%) were males, mostly married (82.8%), with an average age of 56.6 years (SD = 9.11; 27–66), and average schooling of 6.9 years (SD = 3.71; 2–17), 15 of them were army professionals, 13 salesmen and members of safety and security services, 16 scattered through various activities, 12 housewives, 16 unanticipated retired, 15 full-time employees, and 14 were not working for health reasons.

Regarding clinical aspects, tinnitus complaints lasted for an average of about 5 years (M = 4.96, SD = 7.37; 0.5–40). The form of tinnitus installation was identified as gradual by 37 individuals (63.8%) versus 21 (36.2%) who reported it having been abrupt. In 45 subjects (77.6%) the tinnitus were always present, being perceived unilaterally in 28 cases (48.3%), in both ears in 21 (36.2%), and in the head in 9 cases (15.5%). The average hearing level was 25.59 dB (SD = 6.65; 11.9–40.0).

A sociodemographic and clinical questionnaire developed for this investigation and the Portuguese version of the LOT-r for optimism, translated and adapted by Pais-Ribeiro and Pedro in 2006 (Pais-Ribeiro & Pedro, 2006) were used, and also the Escala de Avaliação da Espiritualidade em Contexto de Saúde (Spirituality Evaluation in Health Contexts), developed by Pinto and Pais-Ribeiro (2007). A tonal audiogram, a standard procedure in the tinnitus protocol of the institution, was performed to evaluate the hearing level.

5. Results

The 57 members of the sample who were evaluated for dispositional optimism (LOT-r), obtained an average of 16.14, and it should be noted that the maximum possible (24) was reached by one element of the sample, with no one with the lowest possible value (0) (see Table 1). Assuming that for a cutoff point of 12 (average value of the scale), 12.3% of its elements are below this value.

[2] As defined by BIAP Recommendation n° 02/1 bis.

Table 1 Descriptive Statistics Optimism (N = 57)

	Minimum	Maximum	M	pd
Total optimism	4	24	16,14	4,385

Regarding gender, although men presented slightly higher results, statistically (Mann-Whitney U test) this difference was not significant (p = 0.712). For the marital status (Mann-Whitney U test, p = 0.613), professional activity (p = 0.443) and professional status (Kruskal-Wallis tests; p = 0.274) also did not find statistically significant differences.

Concerning the other studied variables – age (p = 0.611), schooling (p = 0.453), duration of complaint of tinnitus (p = 0.912), hearing level (p = 0.420), and VAS for tinnitus intensity (p = 0.299), there were no statistically significant correlations between them and optimism, using the Spearman test.

Regarding Spirituality, evaluated through the Health Care Spirituality Assessment Scale, there was an average of 12.67, out of a possible total of 20, with a sample element reaching the maximum value (20), and no one was left with the minimum value (0).

Table 2 Descriptive Statistics Spirituality (N = 58)

	Minimum	Maximum	M	sd
Total spirituality	5	20	12.67	3,305

The values obtained for the spiritual dimension (attribution of meaning/meaning of life), questions 1 and 2 of the instrument, present an average per item of 2.58 (sd = 1.04), while the dimension associated with the hope and perspective of positive life (questions 3, 4 and 5), present an average per item of 2.51 (sd = 0.75). Analysis of the means (paired sample t-test) yielded a value of p = 0.643, corresponding to the absence of significant differences between the means.

There were no statistically significant differences concerning gender (p = 0.660) and marital status (p = 0.075) (Mann-Whitney tests), as well as in profession activity (p = 0.365) and professional status (p = 0.320) (Kruskal-Wallis tests).

The Spearman test also found no statistically significant correlation between spirituality and duration of tinnitus (p = 0.507), hearing level (p = 0.511), and VAS for tinnitus intensity (p = 0.400). However, there were statistically significant correlations with respect to age and schooling (Table 3).

Table 3 Spirituality Correlation/Sociodemographic and Clinical Variables (N = 58)

		Age	Schooling
Total spirituality	rs	0.308	-0.319
	p (2-tailed)	0.019	0.015

6. Discussion

As far as optimism is concerned, the study sample presents only 12.3% of its elements below the mean value of the scale, which allows us to conclude that the results obtained are within positive values, although inferior to those found by Andersson (1996), which stood at 20.10 (sd = 5.98).

As for the relationship between optimism and gender, optimism was greater in men, which confirms the findings of Laranjeira (2008), but without these differences being statistically significant, in line with the results presented by Bastianello and collaborators (2014) and Glaesmer and collaborators (2012). As such, no correlation

was found between optimism and none of the variables studied in this sample of individuals with tinnitus, unlike Andersson (1996), who found correlations with age and duration of tinnitus. The marital status, activity and professional situation, as well as hearing level and intensity of tinnitus, did not show any correlation with optimism.

The average value obtained in the Health Care Spirituality Assessment Scale allows to verify that 27.6% of the individuals in the sample are below the average value of the scale (assumed as a cut value), thus with low values of spirituality, allowing to think that it will be useful to intervene in this area, promoting the spirituality of patients with complaints of tinnitus.

No statistically significant differences were found with respect to gender, although women presented slightly higher values, neither marital status nor activity and professional status, considering the characteristics of the subgroups of the sample for this to have happened, either in spirituality, or in optimism.

However, there were statistically significant correlations about age, and it was found that older the individual was, higher the probability of presenting increased values of spirituality, and the years of schooling, but here with a negative correlation, in which those with lower levels of education had higher values of spirituality.

The duration of tinnitus as well as the level of hearing and intensity of tinnitus do not correlate with spirituality.

7. Conclusion

From what has been previously stated, it is evident that optimism and spirituality are two important dimensions in the approach to the health aspects and in the individual's illness, particularly in a positive psychology context and that may be important for therapeutic intervention, in this case concrete in the presence of complaints of tinnitus. If optimism does not appear to be particularly “affected” in this sample, the spirituality component appears to be relatively low in these individuals.

From the results obtained, in the optimism it is not possible to obtain a profile that allows identifying individuals with a higher probability of presenting values of lower optimism, whereas in spirituality to be younger and more educated may indicate a profile to identify individuals with lower spirituality.

Therefore, it should be considered in the context of a therapeutic approach in patients with tinnitus to give information to health technicians involved in this process to use these two dimensions, using strategies that enable them to be developed in this context, particularly in the context of a multidisciplinary approach.

This aspect seems to reinforce the usefulness of finding a therapeutic instrument that allows to provide information that is cognitively relevant to the understanding of the problem and to provide strategies that the patient can use whenever he is at a worse stage, with more complaints and discomfort related to the tinnitus

It will also be important to replicate this study with a sample of individuals with different degrees of hearing loss, since this variable was controlled in this study, only individuals with normal or subnormal hearing, with a loss not exceeding 40 dB, are included in the sample. And replicate it also after the use of the proposed therapeutic instrument.

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