

Self-Assessment on Quality of Life in Patients with Tinnitus

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Abstract-Tinnitus is a symptom that can have a variety of causes and is not considered to be a disease. Tinnitus is categorized according to its psychoacoustic characteristics such as pitch and loudness, which pertain to the auditory domain and according to its relationship with distress which relates to the psychological domain (Hebert & Fournier, 2017). The purpose of the present study is to analyse a self-assessment on quality of life in patients with tinnitus. A total of 30 participants selected on a random basis in the age range of 40 to 70 years including males and females. A set of 20 closed set (yes/no) questions were prepared and used. Quality of life in tinnitus patients plays an important role in their life. A transcendence level of intervention strategies acts as evidence of success.

INTRODUCTION

Human ears may experience ringing, buzzing, or other noises and the condition is known as tinnitus (Tunkel, Bauer, Sun and Rosenfeld, 2014). Tinnitus usually lasts for a short time or is so mild that most individuals do not notice it. The noise might be intermittent or steady, and its volume can change. It is typically worse when background noise is minimal thus the individual may be most conscious of it at night when attempting to fall asleep in a quiet area.

A comprehensive review from 2016, on prevalence of tinnitus varied from 11.9 percent to 30.3 percent internationally among the studies that were chosen (McCormack, Edmondson-Jones, Somerst and Hall, 2016). There is a surge in frequency between the ages of 60 and 69, according to large population surveys (Møller, 2011). Compared to women, men seem to be more impacted (Møller, 2022). 80–10% of tinnitus patients have normal hearing and 85–96% has some degree of hearing loss (Barnea, Attias, Gold, Shaha, 1990). (Fowler, 1994; Ferrari, 2002). It's fascinating to observe that people between the ages of 40 and 50 are most troubled by their tinnitus (McCormack, Jones, Hall, et al., 2016). Tinnitus is more frequent in elderly adults it is thought that having other health problems lessens the relative impact of tinnitus on their quality of life (QOL).

Tinnitus has financial repercussions as well. When combined with hearing loss, it can decrease productivity and cause serious disability and economic loss. (Steinmetz and Zeigelboim, et al., 2009; Kim (2010); Henry, Dennis & Schechter, M. A. (2005)).

Insomnia, cognitive consequences, anxiety, and psychological discomfort are some of the negative impacts of tinnitus on a person's wellbeing (World Health Organization; 2011) Research from 2010 revealed that according to the Tinnitus Handicap Inventory tinnitus sufferers who hear many noises often have a worse quality of life (Lim, Lu, Koh, Eng, 2010). Anxiety and depression were linked to clinically significant hearing loss in tinnitus patients as a response to hearing loss that could interfere with the effects of tinnitus (McKinney, Hazell and Graham, (1999)). Hiller and Goebel (2006) found a higher intensity and severity of tinnitus on quality of life and found no correlation between age, sex, or duration of tinnitus and the annoyance it causes.

Tinnitus is categorized according to its psychoacoustic characteristics such as pitch and loudness, which pertain to the auditory domain and according to its relationship with distress which relates to the psychological domain (Hebert & Fournier, 2017). Tinnitus is a symptom that can have a variety of causes and is not considered to be a disease. However, it can be said that figuring out the causes of a particular patient's tinnitus is still challenging (Yang & Byun, 2016).

People claim to hear sound in their ears or in their heads, especially when in a quiet environment or after listening to loud music. Tinnitus is the name for these noises or sounds. Tinnitus may indicate underlying pathological conditions and can originate from the auditory system, par auditory structures, or both. It can lower a person's and their family's quality of life, which can cause social and psychological issues.

Tinnitus is the conscious expression of a sound that either spontaneously arises in the owner's head or may seem to do so. Tinnitus is a symptom with numerous causes that can be disruptive to day-to-

day life. The history, physical examination, audiology examination, and evaluation of the patient's quality of life can all be used to help make the diagnosis of tinnitus (Mc Fadden (1982).

The World Health Organization (WHO) has examined how tinnitus may impact a person's health. According to the WHO classification system, tinnitus causes four different features to be impaired as follows: 1) the mind and emotions, 2) hearing, 3) sleep, and 4) focus. If tinnitus affects a patient's primary functions, it may have an impact on a number of their secondary activities.

Tinnitus's impact on quality of life varies greatly from person to person. While many people are unaffected by the phantom noises, some are significantly impacted and may even experience suicidal thoughts in others (Turner, Windfuhr, & Kapur, (2007). Evaluating the intensity of tinnitus or the impairment caused by tinnitus, many questionnaires have been devised. Although these surveys have been cross validated with one another, nothing is known about how they relate to measures of quality of life. However, a consensus among experts has advised using non-tinnitus-specific tools to evaluate quality of life (Langguth, Goodey, Azevedo, 2007). Studies have already been conducted to examine the connection between tinnitus severity and quality of life have very limited sample sizes and employ various metrics to determine how severely damaged quality of life is impacted by tinnitus (Nondahl, Cruickshanks, Dalton, Klein, Klein, Schubert, and Wiley, (2007); Lasisi and Gureje, 2011; Gopinath, McMahon, Rochtchina, Karpa, and Mitchell, (2010); Scherer and Formby, 2019; Bartels, Middel, van der Laan, Staal, and Albers, (2008). 43 percent of patients with tinnitus also reported a poor quality of life, a high degree of distress, or both, according to a study that used the Short Form Health Survey (SF-36) to measure patients' quality of life (Bauch, Lynn, Williams, Mellon and Weaver, (2003)). In addition, sleeplessness is a common symptom of tinnitus, which negatively affects quality of life for many people (Meikle, Vernon and Johnson, 1984).

METHOD

Aim: The aim of the study is to analyse a self-assessment on quality of life in patients with tinnitus.

The study was carried out in 2 phases.

Phase I: Preparation of questionnaire

A set of 20 closed set (yes/no) questions were prepared in order to know the self assessment on quality of life in tinnitus patients. The reference of the questionnaire was taken from the study "Tinnitus reaction index: A Measure to assess quality of life in individuals with tinnitus" conducted by Martin & Sarda (2014). All questions prepared were validated by 10 speech language pathologists who have been working in the field for more than 5 years. The corrections and suggestions by SLP's were incorporated. The final questionnaire is as follows.

1. Do you feel the tinnitus is causing irritation while communicating with others (yes/ no)
2. Is it difficult to carry out a discussion due to the loudness of your tinnitus (yes/no)
3. Do you feel hopeless due to your tinnitus (yes/no)
4. Does tinnitus make you feel frustrated or annoying (yes/no)
5. Do you feel tinnitus is causing you trouble while sleeping (yes/no)
6. Do you think advice from different professionals about your tinnitus problem can make you confuse (yes/no)
7. Is it difficult for you with tinnitus to be delightful in your life (yes/no)
8. Do you feel variation in the loudness of your tinnitus (yes/no)
9. Do you try to avoid participating in functions due to tinnitus (yes/no)
10. Do you know any edible items that reduces or increases your tinnitus (yes/no)
11. Do you think tinnitus has been annoying when dealing with relationship among family or friends (yes/no)
12. Do you think that you can get rid of your tinnitus (yes/no)
13. Do you think tinnitus is irritating in all situations (yes/no)
14. Does listening to light music reduces your tinnitus (yes/no)
15. Are you worried about your tinnitus (yes/no)
16. Do you have difficulty in focusing all activities due to tinnitus (yes/no)
17. Do you visit different professionals regarding the tinnitus (yes/no)
18. Do you take any medicine for tinnitus (yes/no)
19. Do you consider tinnitus as a terrible disease (yes/no)
20. Are you prone to tinnitus more in morning or evening (yes/no)

Phase II: Participants

A total of 30 participants selected on a random basis in the age range of 40 to 70 years including males and females. All participants had a primary complaint of tinnitus for a minimum of 6 months irrespective of their hearing loss. Participants with any known psychiatric or neurological disturbances were excluded from the study based on the detailed case history taken for all the participants.

Stimulus used: A closed set of 20 questions which was prepared and used.

Procedure: The questionnaire was administered on the selected participants. Where participants were

asked to read and understand the questions adequately and appropriately mark responses to the questions.

Analysis: For each item the response was recorded as yes or no and a credit point of one was assigned for yes and zero for no. Further data was statically analysed for frequency and percentage. Data analysis was performed by using the SPSS software (SPSS Inc; Chicago, IL), version 26.0.

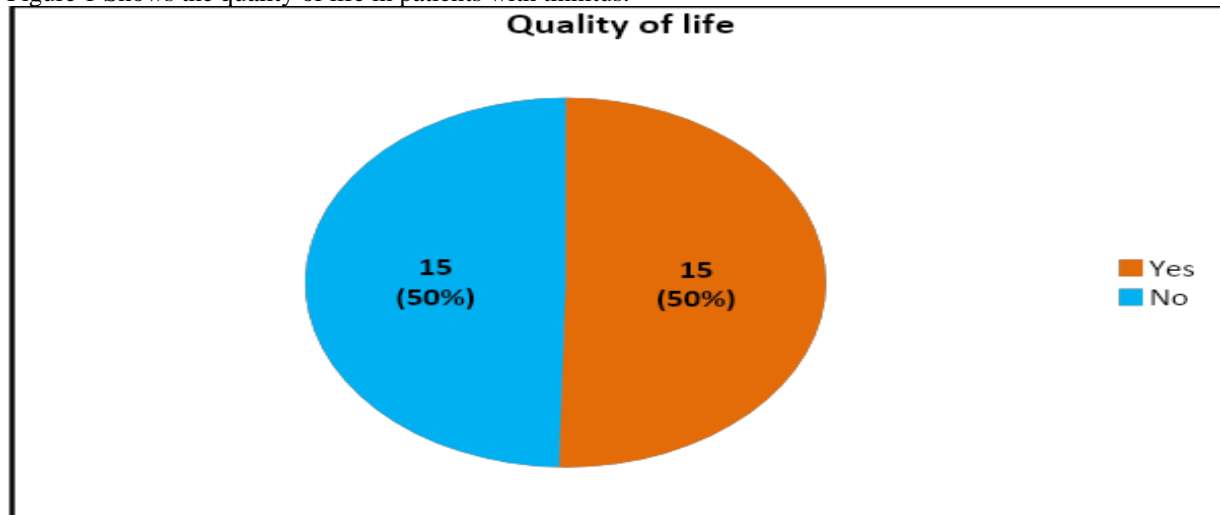
RESULT

The present study was aimed for the self-assessment of tinnitus.

Table 1:Shows the self assessment on quality of life in patients with tinnitus

	Yes		No	
	Frequency	%	Frequency	%
Do you feel the tinnitus is causing irritation while communicating with others	8	26.7	22	73.3
Is it difficult to carry out a discussion due to the loudness of your tinnitus	6	20	24	80
Do you feel hopeless due to your tinnitus	9	30	21	70
Does tinnitus make you feel frustrated or annoying	23	76.7	7	23.3
Do you feel tinnitus is causing you trouble while sleeping	19	63.3	11	36.7
Do you think advice from different professionals about your tinnitus problem can make you confuse	2	6.7	28	93.3
Is it difficult for you with tinnitus to be delightful in your life	13	43.3	17	56.7
Do you feel variation in the loudness of your tinnitus	21	70	9	30
Do you feel to avoid participating in functions due to tinnitus	1	3.3	29	96.7
Did you observe any edible item that reduces or increases your tinnitus	11	36.7	19	63.3
Do you pressurise in relationship with family or friends due to tinnitus problem	0	0	30	100
Do you feel that you can get away from your tinnitus	15	50	15	50
Do you think tinnitus is exasperating in all situations	16	53.3	14	46.7
Do you think tinnitus listening to light music reduces your tinnitus	2	6.7	28	93.3
Are you worried about your tinnitus	14	46.7	16	53.3
Do you have difficulty in focusing on account of tinnitus	13	43.3	17	56.7
Do you pay a visit to different professionals regarding the tinnitus	9	30	21	70
Do you take a pill while experiencing tinnitus	0	0	30	100
Do you consider tinnitus as a terrible disease	0	0	30	100
Are you prone to tinnitus more in morning or evening	16	53.3	14	46.7

Figure 1 Shows the quality of life in patients with tinnitus.



From table 1 we can find out that 26.7% of the respondents say that tinnitus is causing irritation while communicating with others, however, the majority (73.3%) of the respondents are not facing this problem. A smaller number of respondents (20%) say that it is difficult to carry out a discussion due to the loudness of tinnitus whereas the majority of them (80%) do not feel difficulty in it. Most of the respondents (70%) say no to the question, do you feel hopeless due to your tinnitus, on the other hand less number of respondents (30%) says yes to this question. A greater number of respondents (76.7%) feel frustrated or annoyed due to tinnitus, leaving the remaining respondents (23.3%) who are not feeling frustrated or annoyed due to tinnitus. A high number of respondents (63.3%) are causing trouble while sleeping due to tinnitus whereas 36.7% of respondents reported that they don't have any problem while sleeping even though they have tinnitus.

Only a few of the respondents (6.7%) reported that taking advice from different professionals about their tinnitus problem can make them confuse and most of the respondents (93.3%) marked no for the same question. 43.3% of the respondents says that there is a difficulty for them with tinnitus to be delightful in their life however 56.7% of respondents reported there are no difficulties in them with tinnitus. Most of the respondents (70%) feels variation in the loudness of their tinnitus and few of the respondents doesn't feel loudness variation in their tinnitus. Not a lot of the respondents (3.3%) are avoiding functions due to tinnitus whereas most of the respondents (96.6%) reported that they are not avoiding any functions due to tinnitus. A handful of respondents (36.7%) observed that some edible items can reduce or increase their tinnitus and majority of the respondents (63.3%) are not in agreement.

It has been observed that all the respondents (100%) are not agreeing with the question 'Do you pressurise in relationship with family or friends due to tinnitus problem'. Half of the respondents (50%) believe that they can get away from their tinnitus whereas others are not agreeing on it. Larger part of the respondents (53.3%) feels tinnitus is exasperating in all situations and 46.7% of the respondents reported that they are not feeling tinnitus is exasperating in all situations. A few of the respondents (6.7%) with tinnitus believe that listening to light music reduces their tinnitus besides the majority of the respondents (93.3%) disagreeing

on it. More than half of the respondents (53.3%) are not worrying about their tinnitus whereas 47.7% of respondents reported that they are worrying about their tinnitus.

Out of 30 participants, 43.3% of respondents are agreeing that they have a difficulty in focusing on account of tinnitus and more than half of the respondents (56.7%) are disagreeing on it. Few of the respondents (30%) reported that they pay a visit to different professionals regarding the tinnitus whereas majority of the respondents (70%) says no to it. All the respondents (100%) reported that they are not taking any types of pills while they are experiencing tinnitus and they are not considering tinnitus as a terrible disease. A collective number of the respondents (53.3%) agreed on the question 'Are you prone to tinnitus more in morning or evening' furthermore other respondents (46.7%) are not agreeing on it.

DISCUSSION

The present study reported an equal number of responses were obtained through self-assessment done by the patients with tinnitus. The tinnitus sufferers also reported that there was a particular level of discomfort in their daily life. At the same time most of them experienced some level of endearment in their quality of life. A considerable number of sufferers had irritation while communicating with others. Most of the sufferers don't face many issues in discussion which is caused due to loudness of tinnitus. A proportion of sufferers faced anxiety and frustration. They were also having difficulty in sleeping which has caused depression in a few of them. The variation of loudness in tinnitus were perceived by the sufferers. A high number of sufferers were able to identify the pitch of the tinnitus. As a fact, Martnies in 2010 observed that most of the tinnitus sufferers involved in their series are high pitched tinnitus. Based on this result there has been a negative impact on a numerous amount of people which has disrupted their quality of life in small percentages.

CONCLUSION

Tinnitus is a common finding that only a tiny percentage of the people perceive to be problematic. Quality of life in tinnitus patients plays an important role in their life. Therefore, adequate rehabilitation and appropriate measures will help in their betterment of life. A transcendence level of intervention strategies acts as evidence of success.

Therefore, choosing an appropriate measure helps in monitoring the effects of tinnitus.

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