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Misophonia assessment on individuals with various occupations

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Abstract

Most people in the current situation may suffer from misophonia but are unable to identify it because they are unaware of the condition. Misophonia is a condition in which certain sounds can cause an outburst of irritation, anger, or aggression. In this context, the current study sought to assess and confirm the presence of misophonia in people of various occupations. The study included 30 participants ranging in age from 23 to 54 years. All participants were given a developed Misophonia Assessment Questionnaire in Telugu, and the data was analyzed using SPSS 20 and qualitative analysis was performed to check other aspects such as condition and associated problems. According to the findings, homemakers (17%), ASLP (13%), students (13%), teachers (13%), special educators (10%), conductors (10%), correspondents (10%), musicians (7%), and AWT (7%) all participated. Participants reported misophonia in the following situations: stress (30%), shouting (27%), group (23%), dialysis (10%), tiredness (7%), and television (3%). Out of all the participants 47% fall under Subclinical i.e normal, 23% Moderate, 20% Mild and 10% are Severe. ANOVA followed by post hoc reveals that no significant difference found between occupation except for student and correspondent and ASLP and correspondent in age condition where as other factors such as gender and condition showed no significant difference. According to the current study findings, nearly 53% of participants reported mild to severe misophonia based on the misophonia assessment questionnaire, and it was also discovered that stress levels are higher when compared to others. Finally, the authors stated that misophonia may be a part of daily life where most of the people will be addressed and ignored, it must be assessed and treated appropriately before it has an impact on quality of life.

Keywords: Telugu language; Misophonia; Occupation; Selective sound sensitivity; Misophonia Assessment Questionnaire

1. Introduction

[1] proposed a model of decreased sound tolerance in which subconscious connections between auditory and emotional stimuli elicit misophonia symptoms that are maintained by principles and processes governing conditioning (e.g., associative learning and memory).

The term "misophonia" is also referred to as "Selective Sound Sensitivity Syndrome" (4S), which was first used by [2]. They defined it as the intense emotional response experienced by some people to frequent, occasionally hardly audible sounds that most of us would ignore.

[3] reported that 14% of the students are reported misophonia. Triggers are stimuli that cause such a response and can include other sensory modalities (e.g., tactile, olfactory, low frequency vibration; [4]). [5] found that 8.5 to 12.76% of inpatients with depression were diagnosed with misophonia from their study. According to [6], Misophonia is a common

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condition that should be investigated further as a separate diagnostic entity. [7] the authors found that 15.85% with a moderate to severe degree of Misophonia and stated that Misophonia is highly prevalent with no gender difference. [8] stated that 48.27% of the students reported misophonia symptoms and they also found no significant association between gender and the occurrence of misophonia. There is a need to screen individuals with various occupations because the symptoms of misophonia may be overlooked by us [2]. Because there have been no such studies, the current study was designed to assess and determine whether misophonia is present in various occupations and under what conditions misophonia is increased.

2. Material and methods

2.1. Participants

30 individuals with various occupation in the age range of 23 to 54 years was participated in the study. The participants data were given in the table 1. All of the participants were healthy, with no neurological abnormalities and normal hearing. Other neurological abnormalities were excluded from the study, with the exception of two individuals (1-Homemaker and 1-Musician) who reported dialysis, which was used to determine which condition misophonia can be seen in.

Table 1 The list of participants

S. No	Occupation	No. of Participants
1	Homemaker	5
2	Audiologist and Speech therapist	4
3	AWT	2
4	Students	4
5	Musician	2
6	Conductor	3
7	Teacher	4
8	Special educator	3
9	Correspondent	3
Total	Participants	30

2.2. Material

[9] developed the Misophonia Assessment Questionnaire in Telugu (MAQ-T), which had an excellent Cronbach's value of 0.925, indicating that it was highly reliable was used for this present study.

The questionnaire includes 21 questions based on a four-point scale, as well as three additional questions to determine which condition misophonia triggered, the presence of hyperacusis, and other issues.

2.3. Procedure

Informal hearing screening was done to all the participants to check hearing sensitivity which reveals all the individuals were responded well states that normal hearing sensitivity. Researcher was explained about the study and collected consent form. All the participants were instructed to read the questionnaire carefully and select the appropriate option from the rating scale given. The misophonia assessment questionnaire was interpreted using the following severity scale. Subclinical: 0-11; Mild: 12-24; Moderate: 25-37; Severe: 38-50; and Extreme: 51-63. All the responses were recorded and stored for further analysis.

2.4. Analysis

Both percentage and statistical analysis were carried to know the exact cause and percentage of the misophonia by the participants. Statistical analysis such as ANOVA followed by post hoc Bonferroni was performed by using SPSS 20.

3. Results and discussion

3.1. Percentage of participants in various occupations

Figure 1 depicts the percentage of participants in various occupations, namely 17% Homemaker, 13% Teacher, 13% ASLP, 13% Students, 10% Correspondent, 10% Special educator, 10% Conductor, 7% Musician, and 7% AWT (Anganwadi Teachers). Higher percentage was seen in homemaker, teachers, students and ASLP are observed to be equal in number whereas correspondent, special educator and conductor are similar and musician as well as AWT are similar in number.

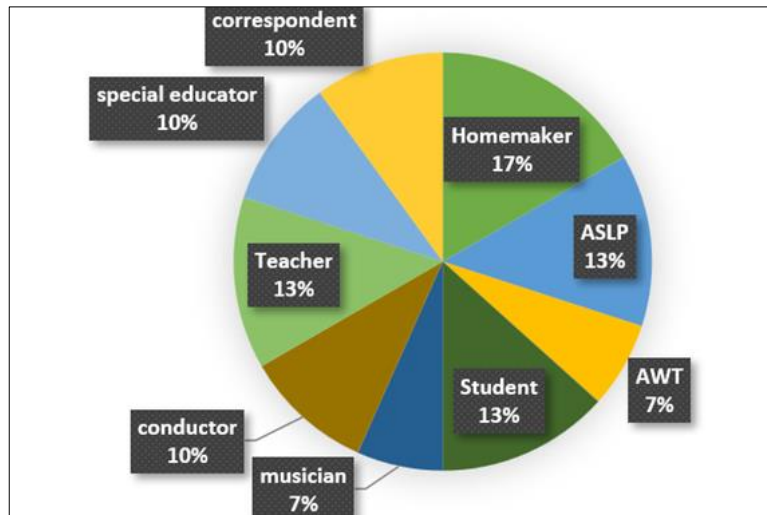


Figure 1 The percentage of participants in various occupation

3.2. Percentage of condition in which Misophonia present

Figure 2 depicts the percentage of participants with misophonia in various conditions. The most common condition that triggers misophonia is stress (30%), followed by shouting or loud speech (27%), group conversations (23%), dialysis (10%), tiredness (7%), and TV noises/sound (3%).

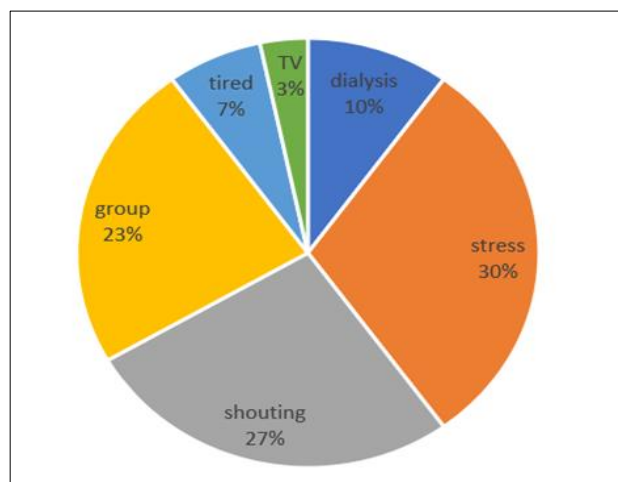


Figure 2 The percentage of participants with misophonia in various conditions

3.3. Percentage of severity of Misophonia on whole data

Figure 3 depicts the percentage of severity of misophonia on the whole data, which shows that 47% are subclinical, 23% are moderate, 20% are mild, and 10% are severe. It is important to note that no participant reported extreme severity of misophonia.

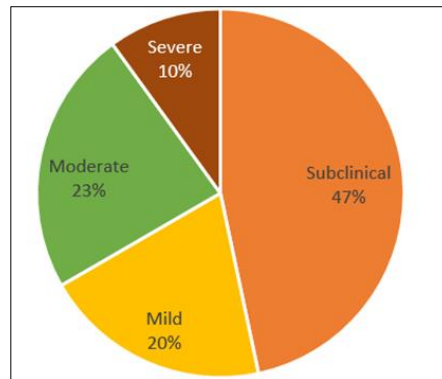


Figure 3 The percentage of severity of Misophonia on whole data

3.4. Various occupation in different severity with condition.

Table 2 Percentage of various occupation with severity and degree of Misophonia

Occupation	Subclinical	Mild	Moderate	Severe
Homemaker	2 (0.40%)	2 (0.40%)	0	1 (0.20%)
ASLP	2 (0.50%)	2 (0.50%)	0	0
AWT	1 (0.50%)	0	1 (0.50%)	0
Student	2 (0.50%)	0	2 (0.50%)	0
Musician	0	0	1 (0.50%)	1 (0.50%)
Conductor	1 (0.33%)	1 (0.33%)	1 (0.33%)	0
Teacher	2 (0.50%)	1 (0.25%)	1 (0.25%)	0
Special Educator	2 (0.66%)	0	1 (0.33%)	0
Correspondent	2 (0.66%)	0	1 (0.33%)	0

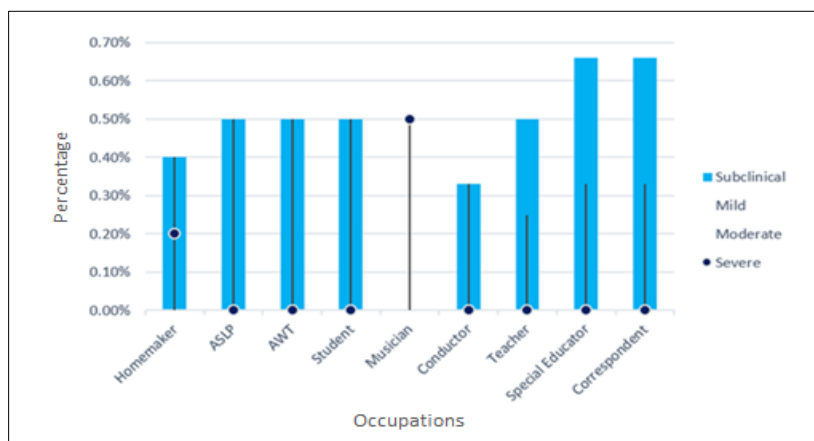


Figure 4 The percentage of occupation and severity of Misophonia

The majority of the participants, 14%, fall into the subclinical category from various occupations, indicating normal, according to the study authors. In the mild condition, it was demonstrated that the homemaker and ASLP in the stress condition, but the conductor and teacher in the loud speech condition. The conductor, students, and correspondents were shown stressed in the moderate condition, whereas the AWT and Special Educator were shown in the loud speech condition, the musician was shown on TV noises, and the teacher was shown in group conversations. Both the homemaker and the musician reported misophonia after dialysis in severe cases. Surprisingly, no one in the study reported extreme severe misophonia. The detailed data was given in the table 2 and figure 4. Note that percentage was taken based on the no. of participants in each group.

3.5. To compare between various occupations

ANOVA followed by Post hoc test Bonferroni was used to do multiple comparisons, in Age factor there is no significant difference in all occupations except for ASLP and Correspondent ($P=0.02$; $P<0.05$) as well as correspondent and student ($P=0.003$; $P<0.05$) showed there is a significant difference however in other factors such as Gender and Condition there is no significant difference ($p=1.00$; $P>0.05$).

The outcomes of the study reveal that highest percentage was seen in home maker i.e 17%. Stress (30%) was seen in which it triggers misophonia, 47% subclinical, 23% moderate, 20% mild and 10% severe. 13% of students reported misophonia which also agreed with [5] reported that 14% of the students are reported misophonia. [8] Study also found higher rate of students with misophonia symptoms which also agreed with the current study. Additionally, the authors found that 53% of the participants reported that the presence of misophonia, these results are agreed with [10] states that misophonia is a common condition which requires treatment as a separate condition. No significant difference found between occupation except for student and correspondent and ASLP and correspondent in age condition where as other factors such as gender and condition showed no significant difference.

Finally, the current study's authors discovered that misophonia occurs in a variety of occupations and is triggered by stress, as most of the participants demonstrated. As this study was done to check misophonia in various occupations and whether the individuals are aware of their problem, most of the individuals are not aware of the problem (misophonia) but can identify which condition misophonia is seen in. Homemaker, ASLP, conductor, and teacher showed mild misophonia, at least one participant from each occupation showed moderate misophonia except homemaker and ASLP, and one individual from each homemaker and musician showed severe misophonia followed by dialysis.

4. Conclusion

Most daily living activities or occupations may cause people to experience misophonia symptoms, which are often dismissed as unessential. Misophonia screening should be performed to identify misophonia where the quality of life may be affected as the severity of misophonia increases. According to the current study findings, nearly 53% of participants reported mild to severe misophonia based on the misophonia assessment questionnaire, and it was also discovered that stress levels are higher when compared to others. Finally, the authors stated that misophonia may be a part of daily life where most of the people will be addressed and ignored, it must be assessed and treated appropriately before it has an impact on quality of life.

Compliance with ethical standards

Acknowledgments

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Disclosure of conflict of interest

The authors declared that there are no conflicts of interest.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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