

Self Perceived Stress and Oral Health Related Quality of Life Among Tribal Gypsies in Chennai

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Abstract Introduction: Certain ethnic groups continue to practice traditional values and beliefs while remaining geographically or socially isolated. These groups also tend to rely on traditional indigenous methods of treatment rather than accessing oral health treatments when necessary. Past studies of the tribal Narikuravar population's oral health state and understanding of oral hygiene measures revealed that both were in very poor condition, necessitating greater dental care. Poor oral health also implies that their general health will be compromised, affecting their ability to work as well. **Aim:** To assess the self-perceived stress and oral health-related quality of life among tribal gypsies in Chennai. **Materials and Methods:** The study was conducted among the Narikuravar tribal gypsies living in Thirumullaivoyal, Chennai, in April 2022. The present study included 320 study participants in total. Using the perceived stress scale (1983) and the OIDP scale, the tribal population's self-perceived stress and oral health quality of life were evaluated. To determine the statistical significance with $p = 0.005$, descriptive statistics and Pearson's correlation test were used. **Results:** Our study shows a high-stress level of 30.6%, a Moderate stress level of 56.3%, and a low-stress level of 13.1% among tribal gypsies in Chennai. The correlation between stress levels and sleeping and relaxation among tribal gypsies in Chennai shows a high association between high-stress levels and their impact on everyday life. A chi-square test was done, and the association was found to be statistically significant, $P - value = 0.000$, $P = < 0.05$. **Conclusion:** Many nomads had oral health perceptions significantly correlated with their traditional habits, and their oral health had worsened. To enhance their oral health status, steps must be taken to increase their access to care and reduce barriers.

Key Words Oral health, Self-perceived stress, Quality of life, Tribal gypsy

1. Introduction

"Health begins in the mouth", according to ongoing scientific studies in the medical sector [1]. Nowadays, maintaining good oral health is important for more than just maintaining the condition of our teeth. As adequately supported by the literature, it also serves as a foundation for our body's whole health and well-being. An essential human right is the right to health. An individual can live a happy life, boost productivity, and enjoy the quality of life (QoL) if they are healthy [2]. In addition to causing pain, oral disorders can also create social embarrassment and set off physiological processes that make the entire body suffer [3]. However, certain ethnic groups continue to practice traditional values and beliefs while remaining geographically or socially isolated. These groups also tend to rely on traditional indigenous methods of treatment rather than accessing oral health treatments when necessary [4]. They are frequently referred to as the tribal

population and are regarded as the native inhabitants of the area. Native to the state of Tamil Nadu is the tribal group known as the Narikuravar. They deal with concerns including poverty, illiteracy, communication difficulties, inadequate healthcare, and social discrimination, which are prevalent but significant [5], [6].

Past studies of the tribal Narikuravar population's oral health state and understanding of oral hygiene measures revealed that both were in very poor condition, necessitating greater dental care [7]. Additionally, this community tends to use traditional indigenous healing methods rather than seeking out oral health care when they are needed [8]. A further investigation found that Narikuravar women used allopathic healthcare less frequently than other women because they encountered stigma and discrimination when seeking medical attention [9]. The impact of stress on the development of the illness has emerged as a key subject in current psychosomatic

research. Oral health-related QoL is a multifaceted concept, just as health-related QoL, that includes aspects like survival, illness and impairment, social, psychological, and physical function and disability, oral health perceptions, and opportunity [10].

The Oral Impacts on Daily Performance (OIDP) scale is one of the QoL tools for oral health that measures how oral diseases affect people’s daily lives. OIDP is a tool that is useful for population surveys [11]. In addition to being user-friendly, it evaluates behavior rather than emotional state. Researchers have analyzed each stress measurement method and its limitations as research tools in psychosomatic medicine. Several tools that have been created to evaluate individual stress levels can be used to get a more accurate measure of personal stress. One is the Perceived Stress Scale (PSS), a well-known tool for measuring stress [12], [13]. Although it was created in 1983, the tool continues to be a popular option for assisting us in comprehending how various circumstances affect our feelings and our perception of stress. Because of the various stigma and stress associated with seeking treatment for oral health, there is compromised oral health care in this community [14]. With this background, our study aimed to assess the self-perceived stress and oral health-related quality of life among tribal gypsies in Chennai.

2. Materials and Methods

The study was conducted among the Narikuravar tribal gypsies living in Thirumullaivoyal, Chennai, in April 2022. Every gypsy who is a Chennai district resident and is over 18 was required to meet the inclusion criteria. Participants in the study were those who gave their consent and were willing to participate. People under 18 who were bedridden and unable to engage were omitted. The current study’s participants were all given information about it and received assurances of confidentiality. All of the study’s subjects provided their informed consent. The present study included 320 study participants in total. Using the perceived stress scale (1983) and the OIDP scale15, the tribal population’s self-perceived stress and oral health quality of life were evaluated. Microsoft Excel 2017 was used to collect, tabulate, and perform statistical analysis on the data. SPSS Software version 23.0 was used for the analysis. To determine the statistical significance with p0.005, descriptive statistics and Pearson’s correlation test were used.

3. Results

Table 1 shows the demographic data of population;

Figure 1 depicts the stress level among tribal gypsies in Chennai, high-stress level of 30.6%, Moderate stress level of 56.3%, and Low-stress level of 13.1%.

Figure 2 depicts the impact of stress on the daily performance of Tribal gypsy in Chennai, which includes Eating and enjoying food, smiling and showing teeth without embarrassment, cleaning teeth, sleeping and relaxing, and enjoying contact with people: 75.9% of people have reported no impact of stress on daily performances for past 6 months,

Demographic variables	Frequency	Percentage
Age groups		
18-35	125	39
36-50	97	30.4
51-70	98	30.6
Total	320	100
Gender		
Males	141	44
Females	179	56
Total	320	100

Table 1: Demographic data of study population; Age and Gender distribution

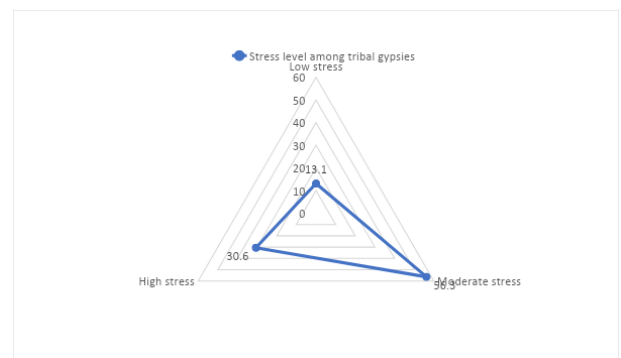


Figure 1: Distribution of stress level among tribal gypsies in Chennai.

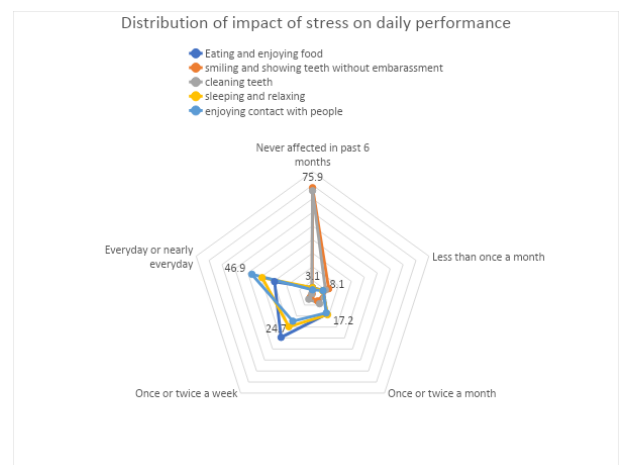


Figure 2: Impact of stress on daily performance of Tribal gypsy in Chennai.

46.9% Impact of stress affecting their daily life nearly every day; 24.7% once or twice a week; 17.2% once or twice a month; 8.1% less than once a month.

Table 2 shows the correlation between stress levels and sleeping and relaxation among tribal gypsies in Chennai, showing a high association between high-stress levels and their impact on everyday life. A chi-square test was done, and the association was found to be statistically significant, $P\text{-value} = 0.000$, $P = < 0.05$.

Table 3 shows a correlation between stress levels and their contact with people among tribal gypsies in Chennai; high stress levels are associated with a great impact on daily performance with contact with people. A chi-square test was done, and the association was found to be statistically significant, $P\text{-value} = 0.001$, $P = < 0.05$.

Table 4 shows a correlation between stress levels and their gender; females had higher stress levels than males. A chi-square test was done, and the association was found to be statistically significant, $P\text{-value} = 0.000$, $P = < 0.05$.

4. Discussion

Compared to non-indigenous majority populations, indigenous peoples typically experience more exclusion/marginalization and worse health status, which includes decreased oral health and less access to dental treatments [16]. When compared to non-Indigenous people, those who identify as Indigenous often suffer greater barriers to social resources in all facets of life. Their health state is generally worse; they typically have less access to and use of healthcare, and their health-related data are commonly missing, erroneous, or incomplete. The global burden of oral diseases, such as dental caries, periodontal disease, and oral cancer, is significant and rising, especially in low- and middle-income nations. Dental problems are a major cause of morbidity and poor health-related quality of life in indigenous communities, where data are available [17].

When combined with other chronic conditions, psychological stress is a factor in systemic poor oral health. Previous research has demonstrated that people who perceive stress as being higher also report having worse oral health, and dental insurance and socioeconomic status have an impact on this association [18]. Additionally, our study shows (Figure 1) a high-stress level of 30.6%, a Moderate stress level of 56.3%, and a low-stress level of 13.1% among tribal gypsies in Chennai. Figure 2 depicts the Impact of stress on the daily performance of Tribal gypsy in Chennai, which includes Eating and enjoying food, smiling and showing teeth without embarrassment, cleaning teeth, sleeping and relaxing, and enjoying contact with people: 75.9% of people have reported no impact of stress on daily performances for past 6 months; 46.9% Impact of stress affecting their daily life nearly every day; 24.7% once or twice a week; 17.2% once or twice a month; 8.1% less than once a month. Table 2 shows the correlation between stress levels and sleeping and relaxation among tribal gypsies in Chennai, showing a high association between high stress levels and their Impact on everyday life.

Table 4 shows a correlation between stress levels and their gender; females had higher stress levels than males.

Given these results, more attention has to be paid to the role of psychological stress in the emergence of oral disease, as well as how perceived stress affects disparities in oral health status as reported by individuals. In addition to what is required to reach a state of health in the oral environment of less stressed people, patients experiencing stressful lives may differentially demand closer monitoring and more careful management of their oral health. In particular, for the underprivileged and uninsured, addressing psychosocial dental care issues may have health-promoting consequences [19]. However, it is also noted that there are cultural impediments, such as the gypsy community's pride in independence and the acceptance of poor health [20]. Low expectations and mistrust of healthcare services and professionals may result from these various issues, in addition to poor quality care that does not meet healthcare needs [21].

Interventions to raise awareness about oral health care are frequently multifaceted but important for Indigenous people in lowering their stress and stigma levels [22]. Increased healthcare use is linked to improved health behaviors, higher standards of care, and trust in services and providers. Strategies for community participation have the power to increase confidence and guarantee that services are adapted to the needs of certain communities [23]. "Community engagement" is one of several overlapping terms (others include "community involvement," "community participation," and "community development") used to describe activities intended to enable communities to take part in decisions that affect their lives and enhance their health and wellbeing, including planning, designing, delivering, and evaluating health services [24]. To enhance their oral health status, steps must be taken to increase their access to care and reduce their barriers [25].

5. Conclusion

Inattention to oral health is a common trait in the Narikuravar community. Many nomads had oral health perceptions significantly correlated with their traditional habits, and their oral health had worsened. To enhance their oral health status, steps must be taken to increase their access to care and reduce barriers.

Conflict of Interest

The authors declare no conflict of interests. All authors read and approved final version of the paper.

Authors Contribution

All authors contributed equally in this paper.

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Stress	Daily performance "sleeping and relaxing"					Total	P value
	Never affected	Less than once a month	Once a month	Once a week	Everyday		
Low	2	6	9	18	7	42	0
Moderate	5	17	39	45	74	180	
High	3	3	7	16	69	98	
Total	15	25	60	95	125	320	
Chi-square value	21.43a						

Table 2: Correlation between stress levels and sleeping and relaxing among tribal gypsy in Chennai

Stress	Daily performance "contact with people"					Total	P value
	Never affected	Less than once a month	Once a month	Once a week	Everyday		
Low	3	7	7	20	5	42	0.001
Moderate	4	9	40	35	92	180	
High	3	10	8	24	53	98	
Total	10	26	55	79	150	320	
Chi-square value	81.26a						

Table 3: Correlation between stress levels and contact with people among tribal gypsy in Chennai

Gender	Stress level			Total	P value
	Low	Moderate	High		
Males	14	80	47	141	0
Females	28	100	51	179	
Total	42	180	98	320	
Chi-square value	2.836a				

Table 4: Correlation between stress levels and gender of tribal gypsy in Chennai

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