

# Income and Work Satisfaction among Speech and Hearing Professionals in India: Two Sides of the Same Coin

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## Abstract

**Introduction:** Speech-language pathologists and audiologists work toward the prevention, assessment, or rehabilitation of persons with communication disorders. They work in a wide variety of service settings, with each setting being entirely different from the other in terms of the financial benefits, hours of work, nature of work, and work-life balance. With the extensive opportunities available, the field is growing and establishing itself in India. Measuring job satisfaction and understanding the factors that influence it makes known all facets of the profession in the Indian scenario. **Method:** The current study examined the various factors that affect work and income satisfaction among speech-language-hearing professionals who completed their professional education between 1967 and 2012 at an institute in India. A questionnaire-based survey method was used, and responses from 112 randomly selected participants from different work settings were analyzed. **Results:** A significant correlation between income and work satisfaction scores given by the participants was found. **Conclusions:** The study points out that income alone does not affect the professionals' work satisfaction. The latter is a resultant of other internal and external factors that lead to the professional feeling unappreciated for his/her job.

**Keywords:** Audiologists, income satisfaction, speech language pathologists, work satisfaction

## INTRODUCTION

Speech-language-hearing professionals work toward the prevention, assessment, diagnosis, rehabilitation or management, enhancement, and scientific investigation of speech, language, hearing, and swallowing disorders.<sup>[1]</sup> Speech-language pathologists (SLPs) and audiologists work in a wide variety of service settings. A few of these include public and private schools, hospital settings, private practice settings, universities and university clinics, individuals' homes and community residences, corporate and industrial settings, state and central government institutions, and research facilities.<sup>[2]</sup> Communication sciences and disorders are a lucrative field, with extensive opportunities for professionals to work in various service settings, either in terms of the workplace or the service recipients.

Despite the strengths, the field in India has not broadened to reach every stakeholder, and this is evident from the census studies and surveys at a global scale. Numerous studies based on census reports have estimated the availability of professionals in a changing scenario of increase in the incidence of persons with

communication disorders. For instance, a previous estimate for children with communication disorders in the US was 5%.<sup>[3]</sup> With the rising population of persons above 65 years of age and an estimated doubling of this population by 2030, the incidence of persons with speech, language, and swallowing disorders requiring services of an SLP will be more, and a projection of this increasing demand for speech and hearing professionals was made by the United States Bureau of Labor Statistics in a study.<sup>[4,5]</sup> It was estimated that SLPs should grow from 119,300 in 2008 to 141,400 in 2018. All the more, the study noted that even this increase would be inadequate to meet the rising demand of well-qualified practitioners in the field of SLP. The same holds good for audiologists worldwide. Reports have been established that, even with the increased number of patients requiring services, the professionals capable of providing

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these services are far from sufficient.<sup>[6]</sup> One reason for this as explained by them is the attrition rate of professionals in this field, approximately 40%, which is higher than other health professions reporting <10% attrition rates.

Continual research and corroborative knowledge about how a profession grows and establishes itself is necessary in understanding and resolving the issues related to the profession and professionals at large. Measuring job satisfaction and the factors influencing it is an important concern among professionals such as medical professionals and police personnel. Several authors report that, among the many studies on professional satisfaction among physicians, three general factors, that is, demographic-related, workplace-related, and healthcare system-related factors, were examined.<sup>[7-9]</sup> They report that, in addition to these individual factors, studies have also investigated the relationship between professional and patient satisfaction, and the results have always shown a direct correlation.

A number of studies conducted in the field of communication sciences and disorders help professionals understand how well established the profession is in various countries.<sup>[4,10,11]</sup> Studies conducted internationally have looked into job satisfaction in SLPs and audiologists and report work setting, financial benefits, and coworker relations as important positive factors that affect their job satisfaction. The factors that affect how the profession grows are diverse in terms of the professional's demographics, work setting, professional qualification and geographical location, and these are being studied in much detail by looking into the census reports. The financial benefits and rewards were some of the questions explored in relation with the settings in which a professional prefers to work, such as a hospital or school, rural or urban. In the Indian scenario, there is observable growth in the field of communication sciences and disorders. Yet, there is not much evidence to substantiate how the profession has grown over the years and the status of the professionals in comparison with professionals in other fields. Moreover, the Institute of Applied Manpower Research report raises questions about the need for such a profession and trivializes the speech, language, and hearing disabilities.<sup>[12]</sup> Being a scientifically based and official report, it is alarming as it indicates the lack of understanding of the scope of practice of professionals and in turn failure to assert the role of speech-language-hearing professionals.

### The concept of work satisfaction and its importance

The term job or work satisfaction, as defined by Sydney-Agbor, Ebeh, Nwankwo, and Agu, refers to a collection of attitudes, which employees have about their job.<sup>[13]</sup> They state that the feeling of content at the workplace, in turn, serving as an incentive to keep working is what describes it best. This is true for any profession, and studies confirm that a greater stakeholder satisfaction stems from a high professional satisfaction. Sy, Tram, and O'Hara state that people who are content with their job are also more satisfied with it.<sup>[14]</sup>

### Factors influencing work satisfaction

Various factors have been reported to affect work satisfaction across different professions. Appreciation, communication, coworkers' support and friendship, benefits, work conditions, timings, nature of work, organization, organization policies and procedures, documentation, pay, personal growth, promotional opportunities, recognition, security supervision, relationship with higher authority, and work-family conflict are more commonly discussed factors that affect professional satisfaction.<sup>[15,16]</sup>

### Literature on professional satisfaction in speech-language pathology and audiology

Among many studies on the professional satisfaction of SLPs practicing in the USA, one important study was a survey which aimed to explore the variables affecting job satisfaction.<sup>[4]</sup> Having developed a questionnaire that included thirty questions with various question formats such as multiple choice questions, a 100-point magnitude estimation scale, ranking scales, and "check all that apply" questions, information from currently practicing professionals was collected. As in all surveys, the first of the five sections in Reeter's survey probed into the demographic details of the participants. Following this, question on work satisfaction, personality traits of the participant and workplace factors were inquired. A significant relation of personality type to the work setting was seen. Participants in medical and school settings were reported to be more sympathetic and adaptive to new ideas, whereas participants at university settings did not claim such traits. With respect to years of experience, it was evident that participants with more years of experience seemed to be more satisfied with their work than others with less experience, but such a difference was not evident with respect to the educational level of the participants.

In contrast to the field of speech-language pathology, more studies have looked into the satisfaction of the audiologists with their work and the career chosen, and how intrinsic and extrinsic variables affect work satisfaction. It has been explained that variables such as educational levels, task autonomy and significance, involvement and interest created at workplace, and coworker bonds were more related to the internal gratification the professional received, whereas salary, benefits, supervisory assistance, and opportunity for promotion were rewards that could be observed more objectively.<sup>[17,18]</sup>

In a similar study, a survey of audiologists who were members of the ASHA was conducted to understand how happy they were with their work.<sup>[10]</sup> The authors stated that it was important to understand how satisfied audiologists were with their profession, as this would directly affect the services provided by them, and ultimately, the customer satisfaction is lowered. Questionnaire method was followed widely to carry out these surveys. Categories of information requested included demographic information and educational and professional information such as highest degree earned, number of years of experience, and employment setting. A similar questionnaire

was designed, employing a 5-point Likert scale wherein respondents could select the most likely choice for the statement given.<sup>[11]</sup> It was observed by the authors that there was only a marginal difference in the work satisfaction levels when the results of their study were compared with the earlier study.<sup>[11]</sup> It was surprising that, although a lot of variables had changed in the period between the two studies, such as an increase in the educational requirements for a practicing audiologist and better work settings among others, the work satisfaction remained the same. It was also interesting to note that these studies consistently reported that private practitioners were more satisfied with their work than other audiologists.<sup>[10]</sup>

### Rationale for the study

The voids in the quantity and quality of research that attempt to understand the status of the professionals within the field of communication sciences and disorders in India is evident, and the currently available literature does not project the profession in a favorable light. This brings about a greater need to look into the field from the point of view of the professional. Studies have shown a high rate of professional attrition in this field internationally and a lack of availability of professionals across various settings in India.<sup>[6,19]</sup> These findings create a need to uncover the factors that influence Indian professionals to work in various settings in India or move out of the country or even change their profession.

Over the decades, the status of speech-language-hearing professionals has been neglected in India and hence this study aimed to examine the various factors that affected work and income satisfaction among professionals who graduated from a premiere speech and hearing institute in India between 1967 and 2012. The present study examined the correlation between demographic and professional variables (age, age group, gender, educational qualification, work setting, annual income, and working hours per week) with the income and work satisfaction given by the participants.

## METHODS

### Procedure

To achieve the objectives of the study, a standard operating procedure was followed. First, an official permission from the institute to access student admission records from 1967 to 2012 was obtained. Among the academic programs run by the institute from 1967 to 2012, there were three undergraduate diploma courses, four graduate diploma courses, two undergraduate courses, four graduate courses, and three doctoral and one postdoctoral course. Second, the student data accessed were converted to a digital form and were categorized based on the program and year of admission of the students.

Data of those students who had discontinued the program were excluded. To ensure that a good representation of the heterogeneous population of 2234 (in terms of geographical and demographic distribution), a stratified random sampling technique was preferred. The strata were formed based on the educational qualification and the year of admission to the program.

A 5% sampling criterion was used for the study. To decide upon the sample size, a sample size calculator that is freely available online was used (retrieved from <http://www.raosoft.com/samplesize.html>).<sup>[20]</sup> Five percent of the population, that is, a sample size of 112 would have a margin of error of 9.03%, and considering that this amount of error is statistically tolerable, the required sample size was set as 112.

### Participants

With the sampling criterion set at 5% of the total population, random numbers were drawn from the ordinal data using the software R version 3.2.2 for Windows (retrieved from <https://www.r-project.org/>), with the option for replacement.<sup>[21]</sup> In addition to randomness, stratification was resorted to introduce a secondary element of control as a means of increasing precision and representativeness.

### Data collection

The questionnaire requested personal and professional information of the professional including questions on work and income satisfaction, age, gender, educational qualification, current work setting, annual income, and working hours per week of the professional. The income and work satisfaction score was obtained from a rating scale of 0–10, with zero being least/not satisfied, 5 being partially satisfied, and 10 being extremely satisfied. Descriptive questions on why they think this field is a good or bad career choice, and their views on the strong and weak points of this field were included in the questionnaire. A paper or electronic format of the questionnaire was distributed either in person, mailed or sent through electronic mail or social media.

### Analysis

The responses received through paper or electronic format were cumulated and entered in SPSS version 16.0 (IBM SPSS south Asia private limited, vashnathnagar, Bangalore, India). Descriptive statistics were extracted, and tests of normality of distribution of data were run before carrying out further analysis. Discrete values were obtained from ungrouped variables of age of the participant, working hours per week, and the income and work satisfaction scores. Grouped data were obtained from age group, gender, educational qualification, work setting, and annual income variables.

## RESULTS

The normality of distribution of the data in the present study was tested using the Shapiro–Wilk test. The data in the present study did not follow a normal distribution ( $P < 0.05$ ). Hence, nonparametric tests were used for further analysis of the data. Spearman's rank correlation examined if there was any correlation between the ungrouped variables of age, working hours, income satisfaction score, and work satisfaction score. Table 1 shows correlation coefficients for the correlation across age, working hours per week, income, and work satisfaction score.

From Table 1, the test showed either a positive or a negative correlation between variables, although it was not statistically

**Table 1: Correlation across age, working hours per week, and income and work satisfaction score**

	Age	Working hours/week	Income satisfaction score	Work satisfaction score
Age	1.0	0.032	-0.014	0.128
Working hours/week	99*	1.0	0.087	-0.092
Income satisfaction score	104*	94*	1.0	0.306**
Work satisfaction score	106*	96*	99*	1.0

\*Sample size considering missing data; \*\*Correlation significant at  $P$  (two-tailed)  $<0.01$

significant. Only between the variables of work satisfaction and income satisfaction, there was a positive correlation that was statistically significant ( $r = 0.306$ ,  $P < 0.05$ ), indicating that those who were satisfied with their income were also satisfied with their work.

On further analysis using Kruskal–Wallis test and Mann–Whitney test, it was examined if there is any significant correlation of the age groups, gender categories, educational qualifications, work setup categories, and income groups with the income and professional satisfaction scores. The results of this analysis are represented in Table 2.

Across the age-gender categories, educational qualifications, work setup categories, and income groups, the income and professional satisfaction scores showed no significant difference. The only exception was of age groups with work satisfaction score. On analysis using Kruskal–Wallis test, it was seen that the work satisfaction score across the four age groups showed a significant difference [ $H(3) = 8.32$ ,  $P < 0.05$ ]. Further pair-wise analysis using the Mann–Whitney test showed a significant difference in age groups of 25–29 years and 30–44 years across work satisfaction scores ( $U = 341.00$ ,  $|z| = 2.75$ ,  $P < 0.05$ ), indicating the latter group being more satisfied with their work than the younger age group. Although differences in work satisfaction scores were seen in the other pairs of age groups, these differences were not statistically significant.

To understand the association between the variables of age group, gender, educational qualification, work setting, and annual income with the two satisfaction scores, Chi-square test was done. Here, the income and work satisfaction scores were grouped as 0–2 = least satisfied, 3–5 = minimally satisfied, 6–8 = moderately satisfied, and 9–10 = highly satisfied.

#### Age group with income and work satisfaction score

There was no significant association between the age groups and whether or not they were satisfied with their income,  $\chi^2(9) = 6.755$ ,  $P > 0.05$ . It was noted that, of all the participants who responded, only 46.2% were highly satisfied with their income and comprised largely of the younger age groups.

Further analysis of data using Chi-square tests for work satisfaction level showed that there was no significant association between the age groups and whether or not they were satisfied with their profession,  $\chi^2(9) = 9.94$ ,  $P > 0.05$ . On observation of results, however, only 24.5% of the participants were highly satisfied with their work,

**Table 2: Correlation of Income and work satisfaction scores with the variables across groups**

Grouped variables	Income satisfaction scores	Work satisfaction scores
Age <sup>a</sup>	$H(3)=1.475$	$H(3)=8.32^*$
Gender <sup>b</sup>	$U=1085.50$ , $ Z =1.06$	$U=1132.50$ , $ Z =0.87$
Educational qualification <sup>c</sup>	$H(2)=0.245$	$H(2)=0.322$
Work settings <sup>d</sup>	$U=659.00$ , $ Z =1.45$	$U=709.50$ , $ Z =0.85$
Annual income <sup>e</sup>	$H(2)=0.984$	$H(2)=2.214$

Number of categories for <sup>a</sup>Age were four, namely, 20-24 years, 25-29 years, 30-44 years and 45-64 years; <sup>b</sup>Gender was two, male and female; <sup>c</sup>Educational qualification were three, namely, diploma and undergraduates, graduates, doctorate and above; <sup>d</sup>Work setting were two, namely, government and private setup; <sup>e</sup>Annual income were three, namely,  $<2$  lakhs, 2-5 lakhs and  $>5$  lakhs/annum; \*Significant at  $P < 0.05$ .  $H$ : Test statistic for Kruskal-Wallis test;  $U$ : Test statistic for Mann-Whitney test

and a majority of participants in all age groups were only moderately satisfied with their work. 3.8% of all participants were least satisfied with their job and were in the age groups of 20–24 and 25–29 years. The median scores of income and work satisfaction based on age groups are presented in Figure 1.

#### Gender with income and work satisfaction score

Chi-square tests showed no significant association between the gender and income satisfaction,  $\chi^2(3) = 4.785$ ,  $P > 0.05$ . Cross-tabulation of data shows that 51.4% of the male participants and 43.3% of the female participants were highly satisfied with their income. On the other hand, a total of 2.9% females were least satisfied with their income. A higher percentage of female participants were least or minimally satisfied with their income.

Similarly, with regard to the work satisfaction, there was no significant association between the gender and whether or not participants were satisfied with their job,  $\chi^2(3) = 6.69$ ,  $P > 0.05$ . A slight shift was seen in the gender distribution as compared to the income satisfaction. Nearly 8.3% of the males in the study were least satisfied with their job. About 18.6% of the females were minimally satisfied with their job. Figure 2 represents the median scores of income and work satisfaction of all participants based on gender.

#### Educational qualification with income and work satisfaction score

There was no significant association between the qualification and whether or not they were satisfied with their income, as on Chi-square test,  $\chi^2(6) = 3.261$ ,  $P > 0.05$ . It was observed that a

larger percentage of participants holding a doctorate or above had a high-income satisfaction (58.8%). Fewer participants with a graduate degree reported high-income satisfaction (43%).

Analysis of work satisfaction scores revealed no significant association with the educational qualification,  $\chi^2(6) = 5.044$ ,  $P > 0.05$ . On observation, all participants with a diploma or undergraduate degree were minimally or moderately satisfied with their job (25% and 75% participants, respectively). Participants with a doctorate or above were generally more satisfied with their income, but this was not the case with their work satisfaction. Only 31.2% of participants with a doctorate or above were highly satisfied with their work. The median scores of income and work satisfaction based on education are represented in Figure 3.

**Work setting with income and work satisfaction score**

There was a significant association between the work setting and whether or not participants were satisfied with their income,  $\chi^2(3) = 10.705$ ,  $P < 0.05$ . This meant that, depending on the work setting, participants expected a certain income, and their satisfaction levels varied significantly based on it. Cross-tabulated data of the type of setup to the income satisfaction are presented in Table 3.

Of the participants who worked in a government setup, 5.4% were least satisfied and formed the bulk of the participants who said so. No participants in private setups were dissatisfied, but a larger percentage was moderately satisfied with their income.

On further analysis using Chi-square test, there was no significant association between the work setup and whether or not participants were satisfied with their job,  $\chi^2(3) = 0.783$ ,

$P > 0.05$ . A larger percentage of the participants again, either in the government or private setup, was moderately satisfied with their job. About 5.5% in the government setup and 3.4% participants in private setups were least satisfied with their work. Overall, only 23.8% of participants across both setups were highly satisfied with their job. Figure 4 shows the median scores of income and work satisfaction of all participants based on work setting.

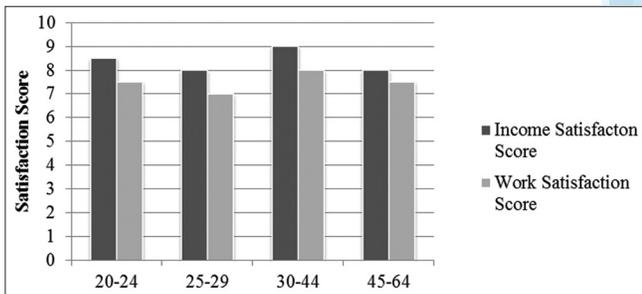
**Annual income with income and work satisfaction score**

There was no significant association between the annual income and whether or not they were satisfied with their income,  $\chi^2(6) = 2.84$ ,  $P > 0.05$ . It was surprising to note that when participants with an income of 2–5 lakhs (in Indian Rupees) or more were dissatisfied with their income, none of the participants with <2 lakhs income reported least satisfaction. Overall, the level of satisfaction of those earning 2–5 lakhs was lower, with most participants reporting least to moderate-income satisfaction.

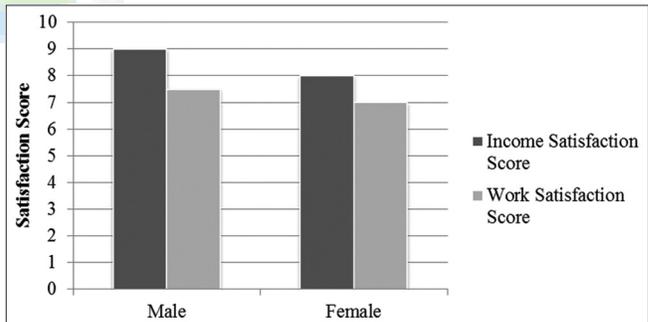
There was no significant association between the annual income and whether or not they were satisfied with their

**Table 3: Cross-tabulation of percentage of participants based on work setup to their level of income satisfaction**

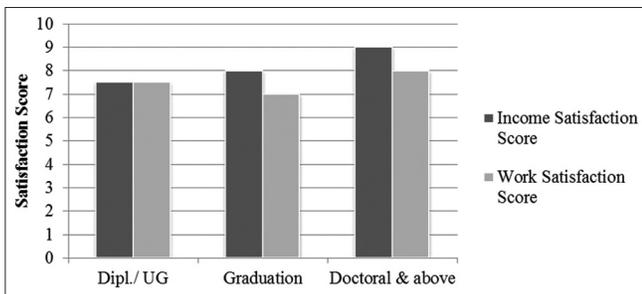
Work setup	Income satisfaction			
	Least	Minimal	Moderate	High
Government (%)	5.4	26.8	19.6	48.2
Private (%)	0	6.9	48.3	44.8
Total (%)	3.5	20	29.4	47.1



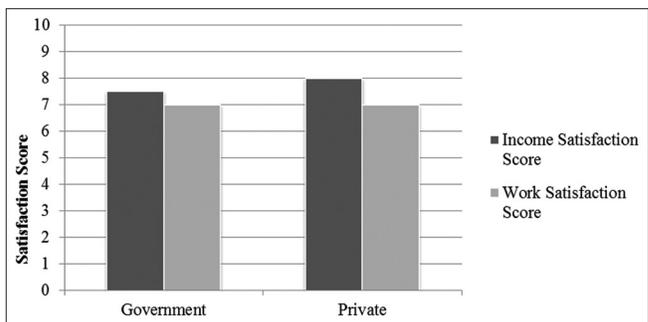
**Figure 1: Median scores of income and work satisfaction based on age groups**



**Figure 2: Median scores of income and work satisfaction based on gender**



**Figure 3: Median scores of income and work satisfaction based on educational qualification**



**Figure 4: Median scores of income and work satisfaction based on work setting**

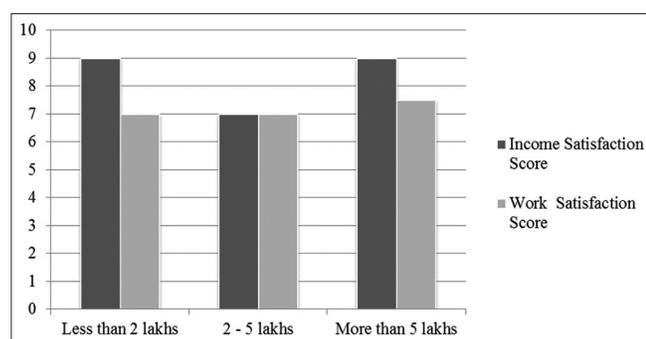
work,  $\chi^2(6) = 4.48, P > 0.05$ . Although not significant, the middle-income group was less satisfied with their work, with most participants reporting least to moderate satisfaction with their work. Figure 5 shows the median scores of income and work satisfaction of all participants based on annual income.

## DISCUSSION

The study explored how various factors affected a professional's income and job satisfaction and also how the income satisfaction affected their professional satisfaction. Data collected through the survey revealed that professionals in the field of speech, language, and hearing in India distributed across various government and private settings reported an average of forty working hours per week.

Qualitative data from the survey revealed that professionals were more committed on continuing their work due to the satisfaction they derived from serving people. Fewer participants stated any of the following reasons – “income,” “support of coworkers,” “independence at workplace,” or “work-life balance” as being the source of content with the career choice. Based on the statements by the participants, it could also be inferred that working hours, coworker relation, and workload were factors that directly affected a professional's quality of work. Furthermore, external factors such as “income and other benefits,” “paperwork,” were reported to affect their overall work satisfaction negatively. A lot of the dissatisfaction with the field also stemmed from the lack of academic and clinical facilities they received as students.

Among the many comments about the academic and clinical facilities, professionals pointed out the weaknesses of these facilities that they experienced as students. Some of these statements included “lack of hands-on experience,” “most of the training being restricted to classroom situation,” “not enough training to improve skills in decision-making,” “poor awareness among clinicians about pediatric language training programs,” and “improvement required in terms of clinical practicum, soft skills, and knowledge of business-related issues,” all of these indicating that the training for clinical, academic, and research skills is insufficient.



**Figure 5:** Median scores of income and work satisfaction based on annual income. (In Indian Rupees)

Largely, the strengths of the field in this country and the educational institute as acknowledged by the participants included ample research opportunities, good infrastructure, and excellent library facilities confined to a certain institute. Participants stated that the opportunities for work had increased over the past few years and there were more jobs at medical hospitals. Furthermore, the opportunity for international collaborations and the scope for higher education and advanced research have improved.

Fewer participants in their remarks mention that the weaknesses within the field in our country are threatening to reduce the quality of the professionals. Some of these as mentioned were a lack of confidence in terms of professional and clinical decision-making among most professionals, difficulty identifying our role in the team, professional jealousy, fraud and malpractice, and an obvious lack of public awareness due to poor advocacy.

Based on the quantitative results of this study, the age, gender, education, hours of work, work setting, and annual income, all had an influence on the work and income satisfaction of the participants. It is clear from the results that satisfaction with the income directly correlated with the work satisfaction and keeping in line with previous studies on job satisfaction, it may be inferred that a lower income or work satisfaction would also bring down the quality of work of the professional.<sup>[4,10]</sup> There was also a significant correlation between the work setting and the income satisfaction. Multiple internal factors within a workplace could affect the opinion of the professional, such as workload, work environment, and hours of work, which may lead them to feel that they are underpaid. The other information that needs to be highlighted is that the professionals were not directly unhappy with their income per year but were mostly upset by the imbalance between workload and income. Furthermore, even in qualitative data, professionals did not consider longer hours or remote work settings as a downside; instead, they reported that the financial proceeds they received were not adequate for the amount of effort put in.

Another observation in the study was that the middle-income groups, that is, participants who had an income of 2–5 lakhs INR, had lesser satisfaction with their work and income than the other income groups. Even with the variable of age, it was noticed that the professionals, whether young or old were never completely satisfied with their income or work, presenting the idea that even with the change in the status of the professional, the opportunities might not be enough, causing an imbalance in either work satisfaction or the income satisfaction. This calls for reflection by all professionals about how the field of communication sciences and disorders has fared over the years and what can be done for professionals in the future.

## CONCLUSION

As seen in the current study, the factor of monetary benefits was directly correlated with the overall work satisfaction of the professional. Thus, income can be stated as one of the

more important factors which promotes satisfaction level of professionals. It is imperative to take appropriate measures to improve the monetary compensation of the services delivered by speech-language pathologists and audiologists such that it is equivalent to the services rendered by these professionals. Enhancing monetary compensation and perquisites will in turn help in the deliverance of quality services to the stakeholders at large. The qualitative findings of the study also emphasize the need for upgrading training standards for developing better skills which will, in turn, improve the confidence and increase the work satisfaction among the speech-language and hearing professionals.

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### Conflicts of interest

There are no conflicts of interest.

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