

ASSESSMENT OF THE LEVEL OF JOB SATISFACTION OF RADIOLOGISTS PRACTICING IN ETHIOPIA

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ABSTRACT

Background: Professional satisfaction is a key factor in delivering quality medical care. However, the level of professional satisfaction of radiologists, among others, in Ethiopia has not been assessed so far. In light of this, this study hopes to determine the Level of Professional Satisfaction in Ethiopian Radiologists.

Methods: The study is a cross-sectional survey of the level of professional satisfaction among Ethiopian practicing radiologists who have at least 2 years of experience. We compiled the list of participants that came for the 2017 annual conference to the Radiological Society of Ethiopia (RSE) meeting and used a self-administered structured questionnaire.

Results: Eighty radiologists participated in the study of which 2/3rd was males, and 53.9% were younger than 45yrs of age, with an overall satisfaction rate of 62.8%. Male radiologists ($p = 0.01$) aged 35-44 (P -value =0.02) and working in large cities outside Addis ($P = 0.01$), as well as radiologist in clinical practice were found to be somewhat or extremely satisfied ($p= 0.03$). Meanwhile, radiologists of younger age, females, and those working in small towns ($p= 0.001$), were more dissatisfied. In addition, only 32% of the radiologist are either very satisfied or extremely satisfied with their monthly income which was significantly associated with the overall level of job satisfaction ($p=0.001$)

Conclusions: The survey demonstrated a comparable level of professional satisfaction of Ethiopian radiologists with those of other countries. Professional satisfaction is associated with work arrangement, gender, and age group in addition to years of experience, and place of work. It was also able to determine that income has a major influence on professional satisfaction.

Keyword: Ethiopia, Job Satisfaction, Radiologists

INTRODUCTION

Satisfaction of medical professionals is a key factor in delivering quality medical care. It is important to note that, not only is it vital to keep the professional motivated to stay in their respective specialty; it is also an indirect measure of patient outcome (1). In addition, it affects patient care by also increasing the tendency of professionals to unionize and participate in a strikes (2, 3).

Professional satisfaction is also strongly associated with patient satisfaction (4-6). According to a study in Japan, having a high income as well as, working in large hospitals were associated with high satisfaction, whereas, older age and night shifts were associated with dissatisfaction (8).

Factors affecting work satisfaction may also vary depending on time, with changes in practice, patient load, and income over time. Published works also show that close to half of all radiology professionals reported a decreased level of satisfaction in their job, as compared to five years prior (7, 8).

Although there are published research works in Ethiopia that analyze the radiological services, no published works so far investigate the level of satisfaction among radiology professionals. Therefore, the main aim of this survey is to do a baseline assessment of the level of professional/ job satisfaction of radiologists in local practice.

METHODS

Study design

This was a cross-sectional survey conducted on a source population of 140 radiologists who attended the 22nd annual radiology conference in 2017

Study setting

The study was conducted in Addis Ababa, Ethiopia during the 22nd annual conference of the Radiology Society of Ethiopia.

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Study population and procedure

The study participants were all radiologists who have a minimum work experience of two years. 40 out of 140 radiologists who have work experience of less than two years were excluded from the study. The remaining 100 met the inclusion criteria. Among those eligible, 80 of them consented to participate in the survey.

Data collection and analysis

Data was collected using a structured questionnaire which contains sociodemographic characteristics, area and type of practice, staffing character, work schedule, number of institutions that the radiologist is working or practicing in, stability within the current institution, and career plans. Satisfaction was measured using a five-level Likert scale. Data was entered into SPSS version 20 and analyzed. Descriptive and analytical statistics were used as applicable. The dependent variable was satisfaction and independent variables included age, sex, years of experience, income, and type of practice, and multivariate logistic regression was used to test the association between the two variables. Statistically, a significant association was taken for p values <0.05.

Ethical considerations

Participation in the survey was voluntary. Informed consent was obtained from all respondents, and individual identifiers were not used during data collection. Ethical clearance was obtained from the Research and Ethics Committee of the Department of Radiology. Permission was obtained from the radiology society.

RESULTS

Out of the 100 eligible radiologists, 80 of the participants in the study complied making the response rate 80 %. Around 2/3rd of the respondents were males and 55.1% of them were <45yrs of age (Table I).

All levels of professional experience above 2 years were represented and only 1.3% of the respondents were above the age of 65 (figure I & II). Among the participants, 68% of the respondents had 2-10 years of experience, while 31.3% had above 10 years (figure II). 74 (92.5%) of the respondents were general radiologists and only 6 (7.5%) were subspecialists.

Concerning the area of practice, 88.8% of the respondents were practicing either in Addis Ababa or other larger cities. 88.4% were in clinical practice during the time of data collection and 70% percent of the respondents were full-time employees. Those who were working in private practice accounted for 41.3% of the respondents and the rest were working in government institutions and uninformed services (Table II). The data showed that half of the respondents were working in only one institution while the remaining half was working in two or more institutions.

The overall satisfaction level of radiologists in this study was 62.8%, 31.3% of respondents reported to be satisfied with their current monthly income and 53.8% of respondents were indifferent. Concerning stability of respondents, 83.8% of respondents were stable during the past two years with 52.3% having no plan to change their current working place within the next one year. Among the participants, 78.8% also had a plan to keep the current practice rather than change practice or career path (Table I).

Radiologists who were male and in the age group of 35 -44 were more likely to be satisfied than the females or younger, and older age groups (P-value = 0.02 & 0.01 respectively). (Table II)

Radiologists working in larger cities other than Addis Ababa also reported to be satisfied than those working in Addis and smaller cities. Those who were working in small cities reported more dissatisfaction than those radiologists working in Addis Ababa and other large cities, respectively (P-value = 0.00). Those radiologists in clinical practice also reported better satisfaction than those who were in academic practice (P-value = 0.03). (Table II)

The study also found that those radiologists who had longer years of experience (>11yrs) were more likely to encourage college-age students to join medicine than those who had <10years of experience (P-value= 0.01) (table II).

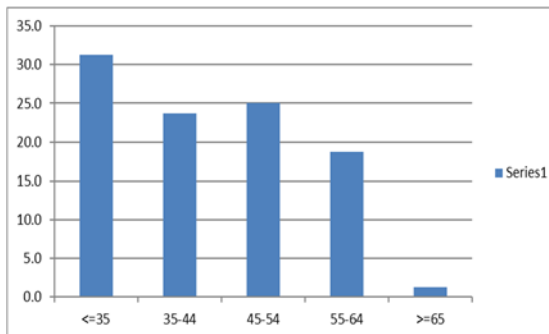


Figure I: Age distribution of Ethiopian radiologists participated in the survey, Addis Ababa, 2017 GC.

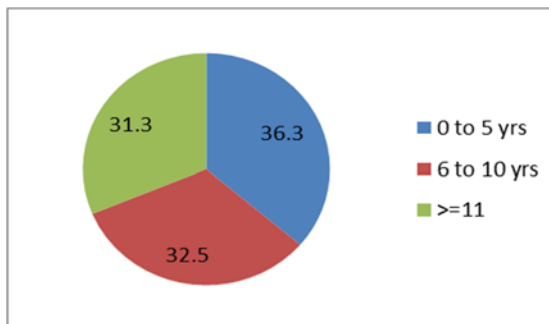


Figure II: Category of years of professional experiences of Ethiopian radiologists, Addis Ababa, 2017GC

Table: I:- Professional and Practice Characteristics of Ethiopian radiologists, Addis Ababa 2017GC

		Frequency	Percent
Area of Practice	Addis Ababa	42	52.5
	Other large cities	29	36.3
	Small cities	9	11.3
	Total	80	100
Full-Time Practice	Private	41	51.3
	Government	37	46.3
	Uninformed services	2	2.5
	Total	80	100
Staffing Character	Academic	22	27.5
	Clinical	58	72.5
	Total	80	100
Work Schedule	Full time	56	70
	Part-time	2	2.5
	Both	22	27.5
	Total	80	100
Number of institutions	One	40	50
	Two	29	36.3
	More than two	11	13.8
	Total	80	100
Satisfaction with Income	Extremely satisfied	4	5
	very satisfied	21	26.3
	indifferent	43	53.8
	very dissatisfied	10	12.5
	Extremely dissatisfied	2	2.5
	Total	80	100
Institutions the Past 2yrs	No	13	16.3
	Yes	67	83.8
	Total	80	100
Plan to Change Work Place	Yes next 6months	16	20
	Yes next one year	22	27.5
	No	42	52.5
	Total	80	100
Career Plan	keep practicing	63	78.8
	change practice	16	20
	Make career change	1	1.3
	Total	80	100

Table II. Satisfaction According to their Socio-demographic and Practice Characteristics of Ethiopian radiologists

Category	Encourage College Ages to Join Medicine n(%)	p-Value	Recommend Radiology n(%)	p-Value	Satisfaction Compared to what was before 2yrs			p-Value	
					Highly/Somewhat Satisfied n(%)	No change n(%)	Extremely/Somewhat Dissatisfied n(%)		
Age Category									
<=35	10(76.9%)	0.18	19(95.0%)	0.17	16(64%)	3(12%)	4(16%)	0.02	
35-44	16(88.9%)	6	14(82.4%)	5	15(79%)	0(0%)	4(21.1%)		
45-54	14(73.7%)		11(73.3%)		8(40%)	8(40%)	4(20%)		
55-64	13(100%)		13(100%)		9(60%)	4(26.7%)	2(13.3%)		
>=65			1(100.0%)		1(100%)	0(0%)	0(0.0%)		
Sex									
Female	17(85%)	0.89	23(95.8%)	0.13	14(48.3%)	9(31%)	4(13.6%)	0.01*	
Male	36(83.7%)	7	35(83.3%)	4	35(68.6%)	6(11.8%)	10(19.6%)		
Years of Experience									
0 to 5 Years	14(87.5%)	0.01*	24(96%)	0.19	20(69%)	3(10.3%)	4(13.8%)	0.06	
6 to 10 Years	17(68%)		14(77.8%)		3	17(65.3%)	5(19.2%)		4(15.4%)
>=11 Years	22(100%)		20(87%)			12(48%)	7(28%)		6(24%)
Level of Training									
General radiologist	50(84.7%)	0.60	55(88.7%)	0.41	47(63.5%)	14(18.9%)	11(14.9%)	0.23	
Subspecialist	3(75%)		3(75%)		5	2(33.4%)	1(16.7%)		3(50%)
Place of Practice									
Addis Ababa	28(82.4%)	0.59	30(88.2%)	0.98	23(54.7%)	13(31%)	4(9.5%)	<0.00*	
Other Large Cities	20(83.3%)		22(88%)		3	21(72.4%)	1(3.4%)		7(24.1%)
Small Cities	5(100%)	0.46	6(85.7%)	0.87	5(55.6%)	1(11.1%)	3(33.3%)		
Academic	15(78.9%)		13(86.7%)			13(59.1%)	3(13.6%)		6(27.3%)
Clinical	38(86.4%)		45(88.2%)			36(62.1%)	12(20.7%)		8(13.8%)
Satisfaction with income									
Extremely satisfied	3(100%)	0.10	2(50%)	0.06	4(100%)	0(0%)	0(0%)	<0.00*	
very satisfied	16(100%)		21(100%)			19(90.45)	2(9.5%)		0(0%)
Indifferent	30(81.1%)		30(85.7%)			24(55.8%)	12(27.9)		7(16.3%)
very dissatisfied	3(60%)		4(80%)			1(10%)	0(0%)		7(70%)
Extremely dissatisfied	1(50%)		1(100%)		1(50%)	0(0%)	0(0%)		
working in the same institution during the Past 2yrs									
Yes	45(83.3%)	0.67	48(88.9%)	0.59	39(58.3%)	13(19.4%)	13(19.4%)	0.03*	
		3		4					
Plan to Change Work Place									
Yes next 6months	6(66.7%)	0.30	12(92.3%)	0.81	74(3.8%)	4(25%)	3(18.8%)	0.04*	
Yes next one year	14(87.5%)		16(88.9%)			15(68.2%)	3(13.6%)		4(18.2%)
No	33(86.8%)		30(85.7%)		27(64.3%)	8(19%)	7(16.7%)		
Career Plan									
Keep practicing	53(84.1%)	-	45(84.8%)	0.13	40(63.5%)	12(19%)	11(17.5%)	<0.00	
				5					
Change practice			13(100%)		9(56.3%)	2(12.5%)	3(18.8%)		
Make career change			0(0%)		0(0%)	1(100%)	0(0%)		

* Statistical test was calculated at P<0.05

DISCUSSION

The survey revealed that the overall satisfaction of radiologists is 62.8%. Given the relatively low level of satisfaction, most radiologists have been stable at their current positions for two years and have no plans of moving to other places in the coming year or changing career paths. Middle-aged male radiologists and those working in the larger cities outside the capital city, Addis Ababa, have a higher level of satisfaction than younger and female radiologists and those working in the capital or smaller regional cities.

So far many studies have been published locally and internationally addressing issues of satisfaction among Ethiopian healthcare workers including general practitioners and specialists (9-12). However, since the discipline differs substantially from other medical specialties in terms of the level of interaction with patients, and the speed of technological evolution, the results of these studies cannot be directly extrapolated to radiologists (13).

Radiologist satisfaction can be affected by many factors, such as income, physical working environment, freedom to choose work method, recognition for good work, job security, and career prospects (14, 15). There are also differences in the level of satisfaction among the different age groups and gender. Most works of literature also demonstrated changes in the level of job satisfaction over time (7, 15, 16).

The level of job satisfaction also was shown to be different among radiologists working in different countries and even in different institutions within a specific country.

This is due to the difference in the determinants of job satisfaction, and the overall satisfaction of radiologists in the published works of literature, which ranged from 49.5% to 93% (7, 8, 14, 15). Our result also fell within this range.

Despite few reports which showing no difference in satisfaction among males and females (14, 15), most literature report the contrary (7, 14, 16, 17). Similarly, our study showed most males reported a higher level of satisfaction than females. In the authors' opinion, Gender differences in satisfaction among radiologists, found both in our study and other works of literature, arise from the different factors and tools used to measure satisfaction.

In contrast to most studies that reported that academic, non-government practitioners reported more satisfaction than private practitioner (7, 15, 17), our results indicate that academic radiologists have a low level of satisfaction than radiologists in private practice (P-value 0.03). The authors attribute this to the work overload and working environment. Most private radiology services are well equipped compared to the academic radiology departments, which are all government-owned.

In addition, radiology equipment downtime in the academic departments is long due to a shortage of budget for equipment maintenance and a lack of preventive and corrective maintenance agreements. On the other hand, private radiologic facilities usually get maintained quickly because of lack of bureaucratic channels and the income they present. As a result, these factors may contribute to the low levels of satisfaction reported by academic radiologists in comparison to private practitioners.

A high level of job satisfaction was also reported from those working in the same institution for two years and above with intentions of staying for at least one more, during the data collection. The possible explanation may be related to fulfillment within their given employment. Job satisfaction is one factor for radiologist turnover intention (18).

Similar to reports in other pieces of literature, our survey showed that there is no statistically significant difference in the level of satisfaction between full-time and part-time employees (14, 16). Likewise, working in single or multiple institutions was not associated with differences in the level of satisfaction.

Conclusion and Recommendations

This survey showed that Ethiopian radiologists have a level of satisfaction comparable with radiologists in the rest of the world. Being female, younger than 35 and older 44, academic radiologists as well as, working in the capital city, Addis Ababa, were associated with a low level of satisfaction.

The authors recommend investigating factors affecting the level of job satisfaction among radiologists and running comparative studies between the different disciplines or specialties.

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Conflict of Interest

The authors declared no sources of financial support or conflict of interest

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