



**ASSESSMENT OF RESIDENTS' LEVEL OF SATISFACTION AND ASSOCIATED
FACTORS WITH THE CURRENT MEDICAL EDUCATION AT SAINT PAUL'S
HOSPITAL MILLENNIUM MEDICAL COLLEGE**

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August, 2019G.C

Addis Ababa, Ethiopia

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department of Internal Medicine for the partial fulfillment of the requirement for
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List of Acronym

AOR - Adjusted Odds Ratio

COR - Crudes Odd Ratio

EB - Ethiopian Birr

FMOH - Federal Ministry Of Health

G.C- Gregorian calendar

IRB - Institutional Review Board

SPHMMC- Saint Paul's Hospital Millennium Medical College

SPSS - Statistical Package for Social Sciences

SSA - Sub-Saharan Africa

WHO - World Health Organization

WFME – World Federation Of Medical Education

Abstract

Introduction: Medical resident satisfaction is the predictors for institutional outcome with regard to how best is the educational activities in line with fulfilling the trainees need. Satisfied resident are crucial to deliver compassionate medical care for patients, having good knowledge, skill and attitudes, making the trainees competent in market, and communities activities, which is one of the expectation they have in future, career. Developed country have trend to evaluate their medical education and trainees satisfaction by doing resident survey. In contrary, in Ethiopia medical residency programs are in expansion to fulfil the health demand on the existing constraint of the health system. Assessment of resident level of satisfaction is crucial for SPHMMC to see level of their achievement and solve the identified gaps having role in residents' satisfaction.

Method: A cross-sectional analytic study was conducted from May 2019 G.C – June 2019 G.C to assess residents' level of satisfaction with current medical education at Saint Paul's Hospital Millennium Medical College. Structured questionnaire having, sociodemographic variables, free-text answer, multiple choice, and 5-point Likert scale were used to collect data from eligible residents. Data analyzed with Statistical Package for Social Sciences (SPSS) version 25. Mean, median, standard deviation, frequency and proportion used for descriptive statistics. Odds ratio, chi square, confidence interval of 95% and $P < 0.05$ was used to see significance of association.

Result: From 265-surveyed resident, 238 residents responded from 13 field of specialty with 89.8% response rate. The overall resident satisfaction with the current training at SPHMMC was 22.7%. The variable significantly associated with overall satisfaction were satisfaction with monthly income (AOR=3; 95%CI=1.54-5.9), educational presentation (AOR=8.3; 95%CI=3.3, 21). Working environment (AOR=17; 95%CI=3.5-84), peer relation (AOR=6; 95%CI=1.5-32), personal study hour availability (AOR=5.8; 95%CI=1.6-21), research opportunities (AOR=8; 95%CI=3-23) and resident evaluation methods (AOR=4; 95%CI=1.5-11.5).

Conclusion and recommendation: The overall level of resident satisfaction is low at SPHMMC. Academic activities, working environment, and balance of work and clinical activities are important for residents' satisfaction. Revision of the teaching methods, improving resident role in teaching activities and corrective measure in educational environment is critical issue to be taken by the responsible body.

Keywords: Ethiopia, Saint Paul's Hospital Millennium Medical College, resident satisfaction.

1. INTRODUCTION

1.1 Background of the study

Medical residency program in Ethiopia is in rapid expansion both in site of training and number of residents in each field of studies within the last ten years. Residency training is currently take place in twelve governmental medical schools and 22 different residency programs are currently running (1). Medical residency is stress full training, seeking to fulfill the knowledge, skills, attitudes and experiences among their trainees who have other duty of teaching junior students and having social responsibilities at the same time maintaining the patient satisfaction.(2)

Satisfaction can be defined as pleasurable fulfillment, in which consumers are familiar that consumption complete some goals, desire and consequently create pleasurable filling,(3). In case of medical education, satisfied medical resident is able to deliver compassionate health service to client and increase patient's satisfaction, can actively engage in educational activities and increase the qualities of education for undergraduate student and actively involve in research activities.

Medical resident satisfaction is one of the core measures of training program success. The health delivery system, balance between education and service, fulfilment of core competency the graduate perceived to have, infrastructure and other logistic can affect level of satisfaction. Financial issue and administrative role to facilitate the learning and aid in difficulties are determinant. Even though, some of the factors, which affect satisfaction of residents, depend on the level of economic growth, the basic standard for medical education, which is global standard (4), can be maintained to ensure trainees satisfaction.

Medical education is in fast revolution within the world, which uses highly sophisticated learning programs using clinical and practical placements, expert supervision, theoretical teaching, and research experience. Systematic assessments and evaluation of the education programs, identification of gaps suggested from residents can be used to increase their satisfaction (5), creating physician who can contribute for the national economy (6).

Satisfaction in residents is concern to worry about because dissatisfaction in education is associated with resident burnout which result in worse health status, substance abuse, tendency

towards depression, higher anxiety and suicidal thoughts(7),poor patient care ,satisfaction and adherence for advice, and increased in medical malpractice(8,9,10,11).

1.2 Statement of the problem

Ethiopia currently scaling up number of medical resident number and school to handle increased number of general practitioners that aims to solve the human power scarcity. Medical residents are the main human power to deliver health service currently in Ethiopia, handling the high patient flow in teaching hospitals. The balance between clinical work and educational aspect will be important for resident satisfaction.

According to world economic forum report of 2018, Ethiopia has the fastest growing economy in Africa. At the same time, the number of doctors is increasing at promising pace to make patient to physician ratio to be less than 1:15, 000, according to 2017, Ethiopia state minister of health report. With the above factors, patient demand for highly skilled physician, searching for all scientifically available medical care.

Medical resident education program is running with many constraint of existing problem of the country. Postgraduate medical program started with existing hospital setup, there is no monitoring of the quality of education at the national level; and there is no selection and evaluation method for academic staff based on how much they are ready to be postgraduate educator. Resident feedback of the college for any gaps during their stay, which have vital role according to developed country experience, is not in practice in Ethiopia.

However, data on medical resident satisfaction from low-income country is lacking. On the assessment of medical resident satisfaction and burnout in Greece medical schools, they found that considerable proportion of Greek residents were dissatisfied. Factors associated with dissatisfaction were ; quality of their residency training, continuous medical education, work responsibilities and supervisors' interest towards their training, too much routine and trivial medical paperwork(7).The magnitude of dissatisfied residents hypothesized to be high in Ethiopia as encountered from the day to day resident experience from different departments.

From one research done on burnout rate among physician in Southern region of Ethiopia were more than 65% (12); but no data among residents.

Like other low-income country, medical resident level of satisfaction and area associated with low satisfaction is deficient in Ethiopia context. There is no previous measure for ensuring residents satisfaction, which can be the problem for program developers, and other administrative personnel to evaluate on the line of where they are considering qualities of education, develop framework, and revise institutional curriculum.

1.3 Significance of this study

Since there is no data on level of resident satisfaction, the study is aiming to fill these gap on level of medical resident satisfaction and contributing factors for their satisfaction, in the current medical education, in SPHMMC.

Knowing the resident satisfaction with their education help to adjust the current way of teaching, favorability of the academic environment, the balance of clinical service and academic activities that will improve quality of education by giving insight for the department heads, postgraduate program directors and ministry of health.

Since federal ministry of health is expanding the number of postgraduate medical schools and their capacity to increase the trainee, this study will give way on the feasibility of current strategies and give recommendation on identified gaps that need to be improve concomitantly with the current effort.

2. LITERATURE REVIEW

Ethiopia is one of low-income country in sub-Saharan Africa. With high burden of communicable and non-communicable disease, costing the life of most citizens due to mostly preventable and treatable(WHO) which affect majority of the population due to lack of skilled manpower, lack of adequate health facilities; Which is also true for other sub-Saharan countries. This can be, addressed by increasing specialists and subspecialist (13). To address this problem, the ministry of health took the initiatives to increase both undergraduate and postgraduate schools and increase the numbers of students. However still with the significant patient loads to hospital in the capital city Addis Ababa, especially in teaching hospitals, which have better service, and creating big burden for residents and can be challenge to run smoothly academic and clinical activities. In addition, of solving the health needs of our communities, best-aligned medical schools have investment contribution with high number for job opportunities in the country and outside and can support counties economy (6).

Apart from increasing in numbers of graduate ,since medical education is advancing ,medical education need to focus out of the routine caring behavior to improve trainees scientific knowledge, give chance to participate in problem solving research activities without compromising it.

Developed country, have trend in evaluating their postgraduate education which is focused with their medical residents satisfaction, subsequently developed their own standards, which contribute for improvement of their medical training (4).

In research done among six undergraduate governmental medical schools among fifth year and internship students in Ethiopia, highest number, 46% need to specialize in internal medicine (14) which calls attention to increase the specialties number with qualities of education. However, despite of the increased needs and effort for work force, in Ethiopia and other SSA countries, Data on medical resident satisfaction assessment, which is necessary to line up with the qualities, is necessary.

Despite of half a century medical educational history in Ethiopia, and in other SSA, the uptake and expansion was stayed much limited for around 40 years, due to political and economic instabilities (15). Our current reference in medical resident satisfaction level that need to be maintained is from continent outside of Africa.

Majority of the study assessing medical resident satisfaction is done with specific field of study, all out of Africa. In review of a 15-years Stanford Internal medicine residency Program, which was conducted among 405 graduate within 15 years, from 185 to 201 of them completed the different part of the questioner through email, 58% of them were extremely satisfied about their previous internal medicine residency program. Majority were having good time with peer relation but needs much time for families, 30 % of respondents needs much bed side teaching and international training , 53% were in needs for more research exposure. Needs for quality improvement training, information technology and business management and administrative leadership were their interest to be included (16). Despite of the good side of this survey in showing the application of in-service training significance in real world work experience, recall biases will affect result to assess real satisfaction of resident.

According to Canadian study using cross sectional studies design to identify factors associated with residents satisfaction from different department in teaching hospital of San Carlos, over four year periods, about 1424 residents were taken; overall satisfaction were 75.2%. Staff involvement in training, year of residency, adequate time and numbers of department meeting were associated with satisfaction (17). In other studies from the same country, harassment and intimidation are common during their training, which could affect residents' wellbeing, increased stress and affect their satisfaction (18).

In study of challenges facing medical resident's satisfaction in Middle East, United Arab Emirates, in Dubai medical resident program, 110 residents from different field of study interviewed using cross sectional study design.

Overall satisfaction with the medical residency training was 80%. Factors associated with their satisfaction were, quality of the residency training, work responsibilities, supervisors and senior doctors' interest toward training and their up-to-date scientific knowledge, peer interaction and support; whereas salary and harassment issue were responsible for their dissatisfaction. This

survey include few residents from each department, which will have low power to show gap in each department (29).

In assessment of radiology residents' satisfaction with their training and education in the United States, 77.8% of residents were satisfied with their residency programs; factors associated with satisfaction, were program director or administrative office, the daily workstation experience, the faculty, educational conferences, work hours, teaching opportunities, research opportunities (20).

Medical resident satisfaction level is associated with reduced level of burnout. In study from Greek, cross sectional studies conducted with sample size of 400 to assess burnout and training satisfaction among medical residents. Considerable proportion of Greek residents were found to be dissatisfied with the quality of their residency training, continuous medical educational activities, patient care responsibilities (22.3%) and supervisors' interest towards their training(7)

In study done in southern part of Ethiopia among 537 physicians, 65.2% were in high emotional Exhaustion, 85.1% in high depersonalization and 91% in low personal accomplishment. This problem can be associated with training time dissatisfaction during undergraduate and postgraduate studies. (12)

Medical resident are responsive for their feature academicactivities, in teaching other residents, interns and other medical students, whichcreateopportunities to prepare more, and acquire skill. From National Autonomous University of Mexico Faculty of Medicine resident-as-teacher,92% of residents want to involve in teaching activities which can increase knowledge and patient caring ,with the obstacle being, seniors attitude to involve in teaching ,clinical workload and lack of time(21).

In Ethiopia, medical education in residency is dependent on real patient. In assessing the performance and satisfaction of medical residents utilizing standardized patient versus mannequin-simulated training in Mayo clinic, USA; residents acquire skill in managing critical patient better if use simulation techniques. Which is better with standardized patient simulation of cases (22).

Apart from the mentioned area of studies, harassment and intimidation was very common in medical school, which may contribute for low satisfaction and lack of interest; mainly from misbehavior of physicians. According to literature review in Canada, 45- 93% of residents experience harassment and intimidation during their training. (23, 24).

Since Job satisfaction have role for improvement in qualities of medical specialist in future career, ensure wellbeing of resident, give high standard patient care, this research will show the area of improvement to be provided for policy makers and administrative.

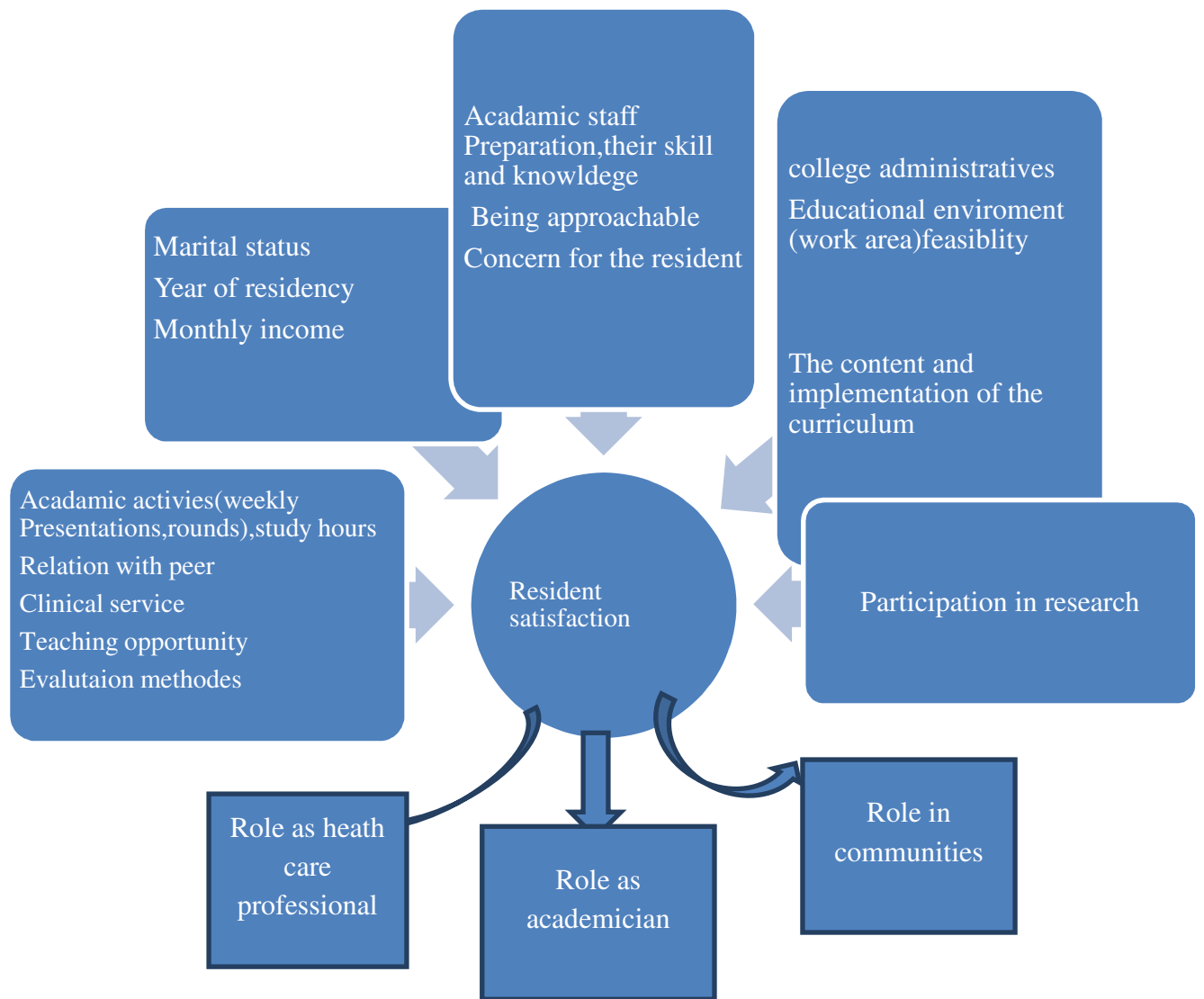


Figure 1: Conceptual framework about factors related with resident satisfaction, and impact of resident satisfaction.

3. OBJECTIVE

3.1 General objective

- Assessment of residents' level of satisfaction with the current medical education at SPHMMC

3.2 Specific objective

- To assess level of residents' level of satisfaction with current medical education at study area
- To identify factors associated with their satisfaction

4. METHODS

4.1 Study area and period

SPHMMC established as hospital in 1961, and as medical college running undergraduate medical education in 2007. Started postgraduate program in 2014 and in four years periods the number of programs increased to sixteen, as the same time-sharing large numbers of residents than other medical schools outside of Addis Ababa and site for clinical attachment in specific department from other university. Being one of the largest medical college next to Addis Ababa university medical school, which is the pioneer in the country, SPHMMC is the only college to run under FMOH.

Previously residents were enrolled by exam and interview prepared by the department; but for the last two years, the national residency matching exam is prepared and trainees who passed the exam are assigned in the nine medical schools, based on the score and their choice.

The study was conducted from May (2019 G.C) to June (2019 G.C)

4.2 Study design

A cross-sectional analytical study was conducted to assess residents' level of satisfaction with current medical education in SPHMMC.

4.3 Source population

All residents attending their postgraduate training in SPHMMC

4.4 Study Population

All sampled residents

Inclusion Criteria

Those residents who were on training for at least ≥ 6 months

Exclusion Criteria

Residents who come for periodic clinical attachment from other university

Resident from newly opened department who have no graduating class in 2019 G.C

4.5 Sample size determination

The sample size for the study was determined using single population proportion formula

$$n = \frac{Z^2 P(1-p)}{w^2}$$

Where: n = required sample size

Z = standard normal deviation at a given 95% confidence level is 1.96

$p=50\%$ considered (conveniently taken, similar study is lacking from Africa)

w = marginal error =0.05

N = (population size) ≈ 640

n_c = corrected sample size to number of population

n_f = Final sample size after considering none response rate of 10%

Therefore: $n = \frac{(1.96)^2 (0.5*0.5)}{(0.05)^2} = 384$

Since the source population is of this study is <10000 , using the correction formula

$$n_c = 384 / (1 + (384/640)) \approx 241$$

Where n_c - corrected sample size to population number

If non response rate is 10%, then

$$n_f = (1/(1-0.1)) \times 241 \approx 265 \text{ is the final sample size}$$

4.6. Sampling Method and Sampling Procedure

SPHMMC was selected because, this is the only residency program to run under ministry of health, with rapid expansion in residency program and numbers of residents in each department, with high patients flow, which need a checkup for balance of academic and clinical service. All resident of postgraduate department's in SPHMMC were our source population. Stratified sampling method, residency program stratified in to first to fourth year, which is currently available. Using the number of source population being (N) 640, and sample size 265, numbers of sampled resident from each year calculated to get first year resident number being 83, 76 second year, 69 third year, and 37 fourth year residents . By calculating the proportion of resident for each department, the numbers of sampled residents were calculated from respective

academic year. Using systematic sampling, participant resident selected and questionnaire distributed. Residents were involved in distributing and collecting questionnaire during morning and seminar gathering.

4.7. Data collection tools and procedures

4.7.1 Data collection tool

The data collection tool was prepared by extracting and adapting from previous similar research (7, 20, 25). Variables that are the focus of standards set by world federation of medical education federation, 2015, were included. The developed Likert scale type of tool has 64 variables and 15 of different questions.

Internal consistency checked by entering all Likert scale type of question. Cronbach alpha value of 0.944 obtained which shows high internal consistency.

The tool have socio demographic information, open-ended question on academic activities and resident feedback for the college. Multiple-choice question about maltreatment and work insecurity. Forty-seven items with 5-point Likert scale ranging from one (strongly disagree) to five (strongly agree).

Following consent from residents, those who agree to fill the questioners and fulfill the inclusion criteria participated.

4.7.2. Pre-test

Pretest was done among selected 25(10%) of residents, two weeks before actual data collection date. Resident who participated in the pretest excluded from final survey. Correction was done on unclear, redundancy, inappropriate items.

4.8. Study variables

4.8.1. Dependent variables

- Resident satisfaction level

4.8.2. Independent variables

- Age,
- Sex
- Marital status

- Residency years
- Salary, work area maltreatment/insecurity
- Address, university of undergraduate, average hours of weekly work, academic hours, study hours, participation in research, item related to college satisfaction,
- educational presentation ,curriculum, evaluation methods ,personal study ,work area ,peer relation , academic staffs, with income

4.9. Dataprocessing and analysis

Row data from each completed questionnaire entered using SPSS version 25. By sorting data, checking for error done. Variables categorized, coded. Frequency and cross tabulation used for descriptive analysis of categorical variables. Tables and graphs used for data presentation. Proportions of categorical variables compared using chi-square, binary regression. Multivariate analysis used to exclude confounder effect. $P < 0.05$, CI of 95%, and OR used to show the presence and strength association.

4.10. Ethical consideration

Ethical clearance and permission letter was obtained from the Institutional Review Board (IRB) of Saint Paul's Millennium Medical Collage. All residents informed about the study and those who are interested are involved in the study.

4.11. Operational Definition

Cronbach alpha - measure of internal consistency and reliability, for assessment tools, computed using SPSS application, value of 0.7, and above is acceptable; where higher value is associated with higher internal consistency

Harassment - If resident, respond to any of, insult or frightening, mistreatment during teaching activities or exam, inappropriate comment, discrimination from other resident, sexual harassment (23)

Satisfaction --using Likert scale; resident who answers four (agree to the satisfaction assessment +tools) and five (strongly agree), are considered as satisfied; those who answers one, two and three are non-satisfied. Over all resident satisfaction has one item at and resident say four or five on their level of satisfaction are considered satisfied.

Satisfaction to specific categories and subcategories on Likert scale- using – using convention of Spector job satisfaction survey, satisfaction is defined if the sum of items is ≥ 14 for four item five scale Likert (19, 20,25).

4.12. Plan for dissemination of results

The findings of the study will be presented on the annual medical conference of the collage. Gaps identified for lower satisfaction resident will be selected, and recommendation will be given to, each department, postgraduate office and medical education coordinating office, ministry of health, which can be used to improve the quality of education. It will be published in locally accessible journals enabling other university to focus for the resident satisfaction, which could be quality measure.

5. RESULTS

5.1. Sociodemographic Characteristics and resident profile

A total of 265 residents were surveyed; 243 returned the questionnaires and 5 were excluded during data cleaning due to incomplete data, and data from 238 questionnaires were analyzed yielding a response rate of 89.8%. Males residents constituted 180 (75.6%), age ranging from 25-37 years, and mean age of 28.76 (SD=1.787). one hundred sixty-six of the respondent (69.7%) were single and seventy-two (30.3%) were married. Minimum monthly income after taxation is 6767EB, the maximum income 16,000EB, with mean of 9956.76EB and SD (1456.96). Residents were from 17 different undergraduate schools. Sixteen percent of the respondent were from internal medicine and 2.9% were from oral and maxillofacial surgery department. Second year residents account 30.3%, first and third year 28.6% each and fourth year 12.5 % (table 1).

Table 1: Sociodemographic characteristics and profiles of study participants at SPHMMC, 2019 G.C

Item		Response	Frequency	Percent
Age		25-29	160	67.2
		30-34	76	32
		35+	2	0.8
Sex		Male	180	75.6
		Female	58	24.4
Marital status		Single	166	69.7
		Married	72	30.3
Monthly income		≤ 8700	48	20.1
		8700.1-10000	68	28.6
		10000.1-10470	84	35.3
		10,470.1+	38	16
Field of specialization	Internal medicine		39	16.3
	Surgery		33	13.8
	Pediatrics		30	12.6
	Gynecology/obstetrics		31	13.0

	Radiology	25	10.5
	Psychiatry	6	2.5
	ENT	7	2.9
	Pathology	10	4.2
	Oral& maxillofacial surgery	7	2.9
	Ophthalmology	11	4.6
	Anesthesiology	9	3.8
	Emergency and critical care	16	6.7
	Orthopedics	15	6.3
Year of residency	1 st year	68	28.6
	2 nd year	72	30.3
	3 rd year	68	28.6
	4 th year	30	12.5

5.2. Clinical and work related response

Educational presentation, working hours, duty hours and work security related response are included in these categories. Average working hours is constant and 8 hours per day, excluding the duty time. The mean duty hours per week is 28hours, minimum of zero hours (some of the first year resident and pathology resident did not have duty) and maximum hours is 56 hours. Educational presentation which includes, seminar, case presentation, grand round , death audit, death round, journal presentation and update lecture; minimum presentation per month residents can attend was 5 hours and maximum of 32 hours with SD =5.5hours(table 2).

One hundred sixty four(68.9%) of the respondents have experienced work related harassment and intimidation during their activities. 41 % have insult or frightening to affect their final result , 82%in the form of inappropriate comment,0.6% reported insult from patient(table 2). With regard to frequency, 60.5% encounter occasionally, 7.19% very rarely (Figure.2)

Table 2: Academic, clinical activities and work related harassment and intimidation of respondents in SPHMMC, 2019G.C

Items	Minimum	Maximum	Mean
Educational Presentation hours/month	5	32	15.9
Duty hours per week	0	56	28.5
Study hours available per week	2	18	10.3
Items	Frequency	Percentage	
Insult or frightening to affect result	68	41	
Mistreatment on exam	66	40	
Inappropriate comment	135	82	
Discrimination from other resident	29	17.7	
Discrimination from seniors	1	0.6	
Sexual harassment	6	3.6	
Insult from patient	1	0.6	

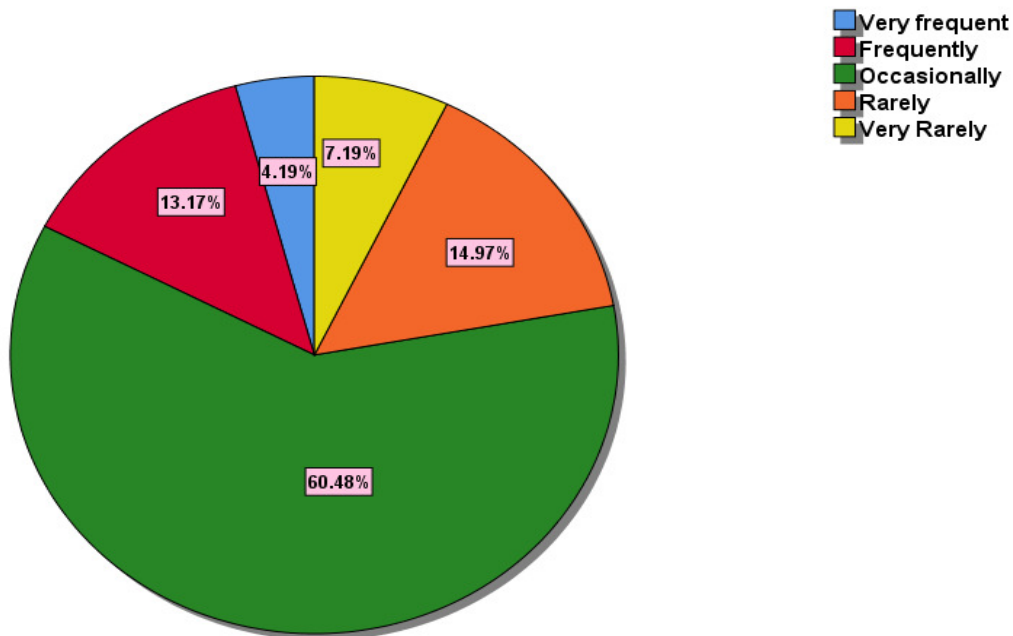


Figure 2: Frequency of work related harassment and maltreatment of study participant in SPHMMC, 2019 G.C (N=164)

Using the Likert scale methods, categorical and sub categorical response, the overall satisfaction of residents with current medical education in SPHMMC is 22.7%. Significant numbers of residents are not satisfied with ten of the categories; only 31.1% are satisfied with daily work area experience, 16.5% with medical college and administrative, 26.1% with teaching opportunity, 9.2% with educational and working area. Peer relation in the college is exceptional with 76.9% of resident are satisfied (table3).

Table 3: Proportion of resident satisfaction with each categories and specific sub categorical items of study participants in SPHMMC, 2019 G.C

Categories/subcategories	Not satisfied	Satisfied
Daily work experience		
My college has excellent case volume	58(24.4%)	180(75.6%)
There is enough time to adequately learn from every case	183(76.9%)	55(23.1%)
The case discussion enable me to acquire knowledge/skill	94(39.5%)	144(60.5%)
Overall satisfaction with the daily experience	164(68.9%)	74(31.1%)
About the SPHMMC and administrative		
Commitment for resident education	199(83.6%)	39(16.4%)
Incorporation of teaching and clinical service	194(81.5%)	44(18.5%)
Well informed of relevant resident issues	214(89.9%)	24(10.1%)
Approachable during problems and concerns	192((82.4%)	42(17.6%)
Are ready to hear residents issue and to find solution	11(88.7%)	27(11.3%)
Handle issues confidentially	189(79.4%)	49(20.6)
Overall satisfaction with the faculty and administrative	198(83.2%)	40(16.5%)
Educational presentations		
Morning case discussion for knowledge and skill development	127(53.4%)	11(46.6%)
Chance to discuss freely with colleagues during case presentation	98(41.2%)	140(58..8)
Presentations are case based and interactive presentation	108(45.4%)	130(54.6%)
I get adequate presentation	174(73.1%)	64(26.9%)
I would like more presentation	172(72%)	66(27.7%)
Overall satisfaction with the educational presentation	176(73.9%)	62(26.1%)
Curriculum		
I got the curriculum and know the content included	132(55.5%)	106(44.5%)
Enable to integrate biomedical knowledge and clinical aspects	160(67.2%)	78(32.8%)
Content included is well implemented	186(78.2%)	50(21.8%)
The time allocated for clinical attachment are adequate	170(71.4%)	68(28.6%)
Clinical attachment included are important for future career	76(31.9%)	162(68.1%)

Table 3: continued

Categories/subcategories	Not satisfied	Satisfied
I suggest revision in the curriculum	121(50.8%)	117(49.2%)
Overall I am satisfied with the curriculum	169(71.9%)	69(29.1%)
Teaching opportunities		
Involved in teaching activities for undergraduate students	126(52.9%)	92(38.7%)
Trend and time to teach my juniors during round /routine working hours	166(69.7%)	56(23%)
I learn cases better when I teach others	74(31.1%)	164(68.9%)
Teachers understood my teaching role for juniors	178(74.8%)	60(25.2%)
Teaching opportunities improve my educational experience	56(23.5)	182(76.5)
Overall satisfaction about teaching opportunity	176(73.9)	62(26.1)
Educational environment		
My college is convenient to see my patient at any time(in terms of distance from residential house)	227(95.4%)	11(4.6%)
have adequate reading room near to my working area	212(89.1%)	26(10.9%)
I feel free (have autonomy) while doing my clinical activities	174(73.1%)	64(26.9%)
Overall satisfaction about the learning environment	216(90.8%)	22(9.2%)
Academic staffs		
Have adequate teaching skills	86(36.1%)	152(63.9%)
Have strong devotion to share knowledge, skills and empathy	144(60.5%)	94(39.5%)
Have adequate preparation to share up-to-date knowledge/ skill	145(60.9%)	93(39.1%)
I have no fear of intimidation during round/clinical activity	125(52.5%)	113(47.5%)
I have role model in the department for my future career	72(30.3%)	166(69.7%)
My teachers are easy to approach and share experience	113(47.5%)	125(52.5%)
Overall satisfaction about academic staffs	114(59.2%)	97(40.8%)
Relation with peer		
I have enough time with my peer	96(40.3%)	142(59.7%)
Enable me to improve Knowledge and skills	65(27.3%)	173(72.7%)

My peer relationship helps me during difficulties	42(17.6%)	196(82.4%)
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Table 3 : continued

Categories/subcategories	Not satisfied	Satisfied
Overall satisfaction with peer relationship	55(23.1%)	183(76.9%)
Personal study		
I got adequate time for study during the working day	215(90.3%)	23(9.7%)
I am satisfied with the amount I study	216(90.8%)	22((9.2%)
I am typically too tired after work to effectively study	157(66%)	81(34%)
Learning during work hours is largely sufficient for my education	226(95%)	12(5%)
Overall satisfaction about personal study opportunity	210(88.2%)	28(11.8%)
Research opportunities		
I have adequate opportunities throughout the residency program	184(77.3%)	54(22.7%)
The residency program incorporate adequate time for research	191(80.3%)	47(19.7%)
The college create adequate opportunity to be involved in research	182(76.5)	56(23.5%)
Overall satisfaction about research opportunity	197(82.8%)	41(17.2%)
Resident evaluation		
I know progressive assessment result timely	187(78.6%)	51(21.4%)
Assessment results are fair	185(77.7%)	53(22.3%)
Seniors are good evaluator to see my progress and identify weakness	177(74.4%)	61(25.6%)
Assessment methods are best to evaluate my knowledge	182(76.5%)	56(23.5%)
Assessment methods are best to evaluate my attitudes	181(76.4%)	57(23.9%)
Overall satisfaction with evaluation	188(79%)	50(21%)
I am satisfied with monthly income	183(76.9%)	55(23.1%)
I am satisfied with my residency training at SPHMMC	184(77.3%)	54(22.7%)

Using binary logistic regression, from sociodemographic variables, sex ($p=0.95$), Age group, marital status ($P=0.575$), and monthly income level are not significantly associated with the overall satisfaction; but those residents who are satisfied about their monthly income are more likely to have overall satisfaction in their training than those who are not satisfied with their income ($p=0.001$). From field of specialization, surgical residents ($p=0.003$), psychiatry (0.003), oral and maxillofacial ($p=0.001$), ophthalmology residents (0.007) were more likely to be satisfied than internal medicine residents. With relation to academic year is not statistically associated with overall satisfaction (table 4).

From those having any form of harassment, 55% have lower satisfaction rate, but not statistically significant ($p=0.099$).

Table 4: Binary logistic regression analysis between socio-demographic factors of study participants and overall satisfaction, SPHMMC, 2019G.C

Variables	Category	overall job satisfaction		COR(CI)	P-value
		No	Yes		
Sex	Male	139(58.4%)	41(17.2%)	1	0.95
	Female	45(18.9%)	13(5.5%)	1.02 (0.50,2.07)	
Age	≤29	129(54%)	31(13%)	1	0.102
	30-34	54(23%)	22(9.2%)	1.7(0.9,3.19)	
	35+	1(0.4%)	1(0.4%)	4.1(0.25,68.39)	
Marital Status	Single	130(54.6%)	36(15.1%)	1	0.575
	Married	54(22.7%)	18(7.6%)	1.2(0.63,2.30)	
Monthly Income(Birr)	≤8700	37(15.5%)	11(4.6%)		1.00
	8700.1 – 10000	58(24.4%)	10(4.2%)		1.00
	10000.1 – 10470	63(26.5%)	21(8.8%)		1.00
	>10470	26(10.9%)	12(5.0%)	1	
Monthly income satisfaction	NO	154(64.7%)	34(14.3%)	1	0.001*
	YES	30(12.6%)	20(8.4%)	3(1.54,5.9)	

*..... $p<0.05$

Table 5: Binary logistic regression analysis between study participant profiles and overall satisfaction, SPHMMC, 2019 G.C

Variables		overall job satisfaction		COR(CI)	P-value
		No	Yes		
Field of specialty	Internal Medicine	36(15.1%)	3(1.3%)	1	
	General Surgery	20(8.4%)	13(5.5%)	7.8(1.99,30.68)	0.003*
	Pediatrics	28(11.8%)	29(0.8%)	0.86(0.13,5.48)	0.871
	Gynecology and Obstetrics	25(10.5%)	6(2.5%)	2.9(0.66,12)	0.160
	Radiology	21(8.8%)	4(1.7%)	2.3(0.47,11)	0.308
	Psychiatry	2(0.8%)	4(1.7%)	24(3,189)	0.003*
	ENT	7(2.9%)	0		0.999
	Pathology	7(2.9%)	2(0.8%)	3.4(0.48,24)	0.219
	Oral & Maxillofacial Surgery	2(0.8%)	5(2.1%)	30(3.99,225)	0.001*
	Ophthalmology	6(2.5%)	5(2.1%)	10(1.88,53)	0.007*
	Anesthesiology	8(3.4%)	1(0.4%)	1.5(0.14,16.36)	0.739
	Emergency & Critical Care	11(4.6%)	5(2.1%)	5.5(1.12,26.55)	0.036*
	Orthopedics	11(4.6%)	4(1.7%)	4.4(0.85,22.55)	0.079
year of residency	1st Year	54(22.7%)	14(5.9%)	0.69(0.33,1.42)	0.308
	2nd Year	59(24.8%)	13(5.5%)	0.58(0.28,1.22)	0.152
	3rd Year and above	71(29.9%)	27(11.3%)	1	0.309

Table 6: Binary logistic regression analysis between works related harassment and overall satisfaction of residents, SPHMMC, 2019 G.C

Variables		overall job satisfaction		COR(CI)	P-value
		no	Yes		
Any form of harassment	No	53(22.3%)	22(9.2%)	1	
	Yes	131(55.0%)	32(13.4%)	0.59(0.31,1.12)	0.099
Frequency of harassment	Very frequent	7(2.9%)	0		0.999
	Frequently	18(7.6%)	3(1.3%)	0.39(.10,1.48)	0.167
	Occasionally	77(32.4%)	22(9.2%)	0.68(0.34,1.34)	0.263
	Rarely	20(8.4%)	5(2.1%)	0.59(0.2,1.78)	0.348
	very rarely	10(4.2%)	2(0.8%)	0.47(0.1,2.34)	0.358
	Never	52(21.8%)	22(9.2%)	1	0.684

Using binary logistic regressions of all categories shows strong association with overall resident satisfaction (table 7).

Table 7: Binary logistic regression of categorical satisfaction and overall job satisfaction of study participants, SPHMMC, 2019 G.C

Sub categorical satisfaction		overall job satisfaction		COR(CI)	P-value
		No	Yes		
Clinical and daily Experience satisfaction	no	146(61.3%)	18(7.6%)	1	
	yes	38(16.0%)	36(15.1%)	7.68(3.94,15)	<0.001*
Faculty satisfaction	no	177(74.4%)	21(8.8%)	1	
	yes	7(2.9%)	33(13.9%)	39(15,100)	<0.001*
Educational presentation satisfaction	no	158(66.4%)	18(7.6%)	1	
	yes	26(10.9%)	36(15.1%)	12(6,25)	<0.001*
Curriculum satisfaction	no	153(64.3%)	16(6.7%)	1	
	yes	31(13.0%)	38(16.0%)	12(6,23)	<0.001*
Teaching opportunity satisfaction	no	145(60.9%)	31(13.0%)	1	
	yes	39(16.4%)	23(9.7%)	2.8(1.5,5)	0.002*
Education(working environment) satisfaction	no	178(74.8%)	38(16.0%)	1	
	yes	6(2.5%)	16(6.7%)	12.5(4.6,34)	<0.001*

Table 7: continued					
Academic staff satisfaction	no	135(56.7%)	6(2.5%)	1	
	yes	49(20.6%)	48(20.2%)	22(9.54)	<0.001*
Peer relation satisfaction	no	50(21.0%)	5(2.1%)	1	
	yes	134(56.3%)	49(20.6%)	3.7(1.4,9.7)	0.009*
Personal Study hour availability satisfaction	no	175(73.5%)	35(14.7%)	1	
	yes	9(3.8%)	19(8.0%)	10.6(4.4,25)	<0.001*
Research opportunities satisfaction	no	167(70.2%)	30(12.6%)	1	
	yes	17(7.1%)	24(10.1%)	8(4,16)	<0.001*
Resident evaluation methods satisfaction	no	162(68.1%)	26(10.9%)	1	
	yes	22(9.2%)	28(11.8%)	7.9(4,15.9)	<0.001*

After doing multiple logistic regression and adjusting for confounder in the multivariate analysis, monthly income, educational presentations, working environment, peer relation, availability of personal study hour, research opportunities, academic staffs, teaching opportunity and resident evaluation methods were found to be determinants of overall job satisfaction. Resident satisfied with their monthly income were three times more satisfied with the overall training compared to those physicians not satisfied with their monthly income (AOR=3; 95%CI=1.54-5.9). Being satisfied with educational presentation resulted in 8.3 times more satisfaction with the overall job when compared to those resident not satisfied with the educational presentation (AOR=8.3; 95%CI=3.3,21). Working environment (AOR=17; 95%CI=3.5-84), peer relation (AOR=6; 95%CI=1.5-32), personal study hour availability (AOR=5.8; 95%CI=1.6-21), research opportunities (AOR=8; 95%CI=3-23), academic staffs (AOR=19; 95%CI=5.5,66.2), teaching opportunity (AOR=5.4; 95%CI=1.8-16.5) and resident evaluation methods (AOR=4; 95%CI=1.5-11.5). Resident who was satisfied with working environment, peer relation, personal study hour availability, research opportunities academic staff, teaching opportunity and resident evaluation methods was seventeen times, six times, about six times, eight times, nineteen times, 5.4 times and four times respectively, as likely to have overall job satisfaction as a resident doctor not satisfied with the respective domains (table 8).

Table 8: Association between satisfaction with categorical work domain and overall job satisfaction of respondents, SPHMMC, 2019 G.C

Sub categorical satisfaction		overall job satisfaction		COR(CI)	AOR(CI)	P-value
		No	Yes			
Monthly income satisfaction	NO	154(64.7%)	34(14.3%)	1	1	
	YES	30(12.6%)	20(8.4%)	3(1.54,5.9)	3.3(1.2,9.3)	0.034*
Educational presentation satisfaction	no	158(66.4%)	18(7.6%)	1	1	
	yes	26(10.9%)	36(15.1%)	12(6,25)	8.3(3.3,21)	<0.001*
Education(working) environment satisfaction	no	178(74.8%)	38(16.0%)	1	1	
	yes	6(2.5%)	16(6.7%)	12.5(4.6,34)	17(3.5,84)	0.001*
Peer relation satisfaction	no	50(21.0%)	5(2.1%)	1	1	
	yes	134(56.3%)	49(20.6%)	3.7(1.4,9.7)	6(1.5,32)	0.03*
Personal Study hour availability satisfaction	No	175(73.5%)	35(14.7%)	1	1	
	Yes	9(3.8%)	19(8.0%)	10.6(4.4,25)	5.8(1.6,21)	0.008*
Research opportunities satisfaction	No	167(70.2%)	30(12.6%)	1	1	
	Yes	17(7.1%)	24(10.1%)	8(4,16)	8(3,23)	<0.001*
Resident Evaluation methods satisfaction	No	162(68.1%)	26(10.9%)	1	1	
	Yes	22(9.2%)	28(11.8%)	7.9(4,15.9)	4(1.5,11.5)	0.005*
Academicstaff satisfaction	No	135(56.7%)	6(2.5%)	1		
	Yes	49(20.6%)	48(20.2%)	22(9.54)	19(5.5,66.2)	0.001*
Teaching opportunity satisfaction	no	145(60.9%)	31(13.0%)	1		
	yes	39(16.4%)	23(9.7%)	2.8(1.5,5)	5.4(1.8,16.5)	0.003*

On the last part of the questionnaires, residents were asked to write their feedback or recommendation about the college. Seventy residents gave their feedback on the training. Forty three percent of the resident said the college mainly focuses on the clinical service with less priority for education. 12.5% need regular update lecture and coordinated teaching round, 23% are in need for reading room near the working area, 17% transportation/ housing near the working area (table 9).

Table 9: Resident feedback and recommendation about educational activities and working environment, SPHMMC, 2019 G.C (N=70)

Feedback /recommendation	Frequency	Percent
Regular Update lecture, teaching round should be coordinated	10	14.3%
Reading room should be available near to working area	16	23%
Enough time to read during the week day should be given	12	17%
The college focuses on the service, less priority for education	30	43%
Teachers are not willingness to teach	15	21.4%
Senior should collect feedback from residents	5	7%
Transportation/ housing near the working area should be available	12	17%
Separate and adequate duty room arrange for male and females	10	14.3%
Ward attachment should be with subspecialty	5	7%

6. DISCUSSION

In this study, the overall resident satisfaction at SPHMMC is 22.7%. In assessment of health, professional job satisfaction in police hospital was 43.2%, and other study at different hospital in Ethiopia was between 30-50percent (26, 27). In assessment of work satisfaction in Nigeria among physicians, the overall satisfaction were (56.7%), (28).This might implies generally physician in Africa has lower satisfaction rate, which can be also affected by social, economic and political factors (29).

The current study was on resident in training and mainly on satisfaction with the training in SPHMMC. The lowest figure cannot be compared with those at work place because of different predictors and trainees expectation.

Since we have no similar research done on resident satisfaction in Ethiopian and other African country, it is very low with comparison to satisfaction level outside Africa. From study done in united Arab Emirate involving resident from different department, 80% of the resident were satisfied with the overall training(19), 75.2% overall satisfaction from Canadian study involving resident from different department(17). In study done by American college of radiology department, overall satisfaction in radiology resident were 77.8 %(20), among study done in Stanford internal medicine resident, 58% were extremely satisfied (16). This high figure with different social, economic and political level between the developed nations and sub-Saharan country cannot be the standard for comparisonof the trainee's satisfaction.

Though the proportion of resident not satisfied in the different subcategories were much, being satisfied in monthly income, adequate opportunity for personal study, adequate research opportunity, being satisfied with educational presentations, satisfaction with the working environment are associated with overall satisfaction. Satisfaction with academic staffs, teaching opportunity and resident evaluation methods werealso significantly associated with the overall residents satisfaction which were found in other study as predictors for resident satisfaction (16,20,28)

About 76.9% of the residents were not satisfied with monthly income. Ethiopia and other sub-Saharan Africa were mentioned as main area affected by higher number of physician brain drain to European country and SouthAfrica, one of the underlying cause is payment, which is

correlated with overall job satisfaction in different literatures (28, 29). This is of the one reason, which resulted for countrywide strike of physician in this year. Along with increasing the resident numbers, it could be economically wise to address underlying problem for both income dissatisfaction and increase brain drain. In this study payment level by itself was not associated with satisfaction level, though many research found association. However, being satisfied with the income is associated with overall satisfaction level, which may be due to individual perception about the income and standard of living having role for them to be satisfied. Other explanation could be both with relatively good income and other with low income are still not satisfied with their income.

In this study surgical, ophthalmology, psychiatry, emergency medicine residents were more likely to be satisfied than other but lost association after multivariable regression.

Educational presentation and teaching opportunity satisfaction is strongly correlated with overall resident satisfaction, in this study. Educational presentations include presentation by the residents and update by seniors on specific topic. In this study, educational presentation satisfaction is associated with having high quality presentation, interactive presentation, having adequate presentation, morning case discussion.

Teaching opportunity includes bedside or case based presentation or other methods to other junior resident, intern and clinical medical students or nurses. In this study only one fourth of resident were satisfied with teaching opportunity and main factors responsible for lower level of satisfaction were absence of chance to be involved in teaching juniors, lack of time, absence of trend and senior physicians didn't consider the teaching role of the resident. Two-third of the resident consider educational and teaching involvement is important for their academic advancement, which has strong association of teaching involvement of resident to overall satisfaction. This finding is similar to the other studies (30,32,35).

Interactive presentation for resident in the form of small group based discussion, practice based learning, team based learning, will enable resident to acquire knowledge, have high retention rate and increase resident educational satisfaction than the old lecture method of teaching. This is also supported by study done in Mayo clinic, USA (36).

Satisfaction with college/ faculty, academic staff and adequate opportunity for personal study can relate with each other. In addition, satisfaction with each of them is associated with overall satisfaction in this study. Most residents say the college is disproportionality centered on the clinical activity than educational activities. Different studies support the determinant role of balancing medical education and clinical service to increase satisfaction and the perception of residents toward their training (20, 32, 33)

According to this study, 59.2% of residents were not satisfied with academic staff overall. Satisfaction with academic staff significantly associated with having no fear of intimidation or maltreatment during clinical and teaching activities, having role model physician in the field of study and senior physician being approachable to the resident. Data from Nigeria and European literature review on improving living and working condition (20, 28, 37) workers who are encouraged to bring new ideas, having open communication and welcoming department are more likely to be satisfied.

Since majority of residents are not satisfied with approachability of seniors and have fear of intimidation during clinical activities, improving this gap by improving the role of residents, and timely feedback for every academic staff to be collected biannually or annually will improve satisfaction. Periodic feedback for academic staff was included as one criteria for postgraduate medical school by WFME (4).

Some residents recommend get-together program for both residents and seniors prepared periodically. In addition, for those who are considered as role model or selected as best senior's promotion and recognition should be given.

In this study, work area satisfaction was associated with area on availability of reading room near the working area and having work area autonomy in making daily activity freely. Eighty-nine percent were not satisfied about the reading room availability which can be associated with feeling being tied to study and personal study dissatisfaction as found in this study. Seventy-three percent feels there is no working autonomy. Job autonomy, which has association in different research, will be difficult to apply in medical school due to need for involvement of different team members, which is important for patient outcome. Ensuring open communication and making the resident to feel as part of the college staff members will improve the clinical and

academic atmosphere in our setup (7, 37). In research done on other field of study, physical environment and the individual perception for specific work, area is associated with job satisfaction (38)

Creating conducive physical environment and freedom for the clinical practice and involving in decision-making process in the college can solve problem of educational environment.

In this study, 76.9% were satisfied with relation with their peer and significantly associated with overall satisfaction. Peer relation role for the overall resident satisfaction was supported by study done in Greek (7). Positive learning experience with good and respectful interaction with peer were basic for creating conducive learning environment, according to study done in Canada (39). These researches use the term peer, which will underscore relation of resident with nurses, midwives and other involved in patient care, and the figure will varies if we include specific question addressing satisfaction with relation to specific part of the team.

Research is considered one of the graduating criteria for postgraduate program in Ethiopia. Only 17.2% were satisfied with current research opportunity. Those residents satisfied with the opportunity for research were associated with high level of resident satisfaction. However, 80% of the resident feels time allocated for research was not adequate. In study done in USA, among radiology resident, those having one-month research attachment were more likely to be satisfied (34). Adequate facilities to complete research was also predictors of overall satisfaction.

With current training in SPHMMC, there is no uniform time for when to start, how many research to have; therefore ensuring the resource available to support the research and give adequate time should be considered apart to considering research as criteria.

Other finding from this study was 68.9% of the resident have at least on form of maltreatment/harassment. This finding was lower than that reported in Canada (18). Due to difference in economic, social, psychologic and norm values, our finding will have more impact on medical training than the developed country. The medical school should insure the security of the resident and need to manage to decrease maltreatment in work area.

Resident evaluation methods satisfaction was associated with overall satisfaction. Subjectivity in evaluation was mention as one of the factors for lower satisfaction. Fair evaluation methods with involvement of all competency area need to be practiced, as recommended by WFME (4).

7. LIMITATION OF THE STUDY

- No similar previous study from Ethiopia and other African country, and difficult to compare the finding with other developed country.

8. CONCLUSION

From this study, the overall resident satisfaction in SPHMMC is low. Resident have low satisfaction rate in all area of assessment except peer relation, which is high. Income satisfaction, satisfaction with teaching opportunity, working area , presentation , research , with academic staff and college satisfaction are significantly associated with the residents overall satisfaction. Apart to the items included in the questionnaire, transportation, housing and other issue were given as feedback to be solved showing the role of multiple other factors that can affect their satisfaction.

Resident are the main power in caring patients and at the same time, they have the duty of doing their academic activities for the future role as academician and clinicians. Postgraduate schools need to have the ability to fulfill the resident with academic requirement and factors affecting their satisfaction. This shows timely intervention on the area suggested from this paper and resident centered residency program whereby the responsible body is ready to hear the residents need and find solution is mandatory.

9. RECOMMENDATION

For the college administration and academic staffs

- Academic activities and patient care service should be balanced, so that resident have time to read and consolidate patient cases, can attend adequate update lecture, seminar and other presentation
- Develop mechanism to increase senior's commitment for teaching (like, incentives) and arrange promotion mechanism for those having good performance, which need to be done under the resident recommendation. Feedback from resident collected by senior academic staffs about overall teaching, communication and other parameters of efficiency will also increase staffs commitment and communication with resident.
- Resident need to have their mentors assigned starting from first years, which is important to increase resident seniors interaction and help during difficulty
- Resident should be incorporated in teaching of juniors including medical students with fixed schedule and adequate allocated time, which will increase theoretical knowledge, and teaching skill
- Should respond for resident need on transportation, housing, adequate reading room, duty room and other predictors
- Each department need to have annual survey from their graduating resident and adjust their way of training based on their feedback.
- Content included in the curriculum should be introduced for resident in each year and implementation should be uniform with allocation of adequate time

For FMOH and ministry of education

- Should respond the residents question on incentives, improvement of working area which are frequent questions of health professionals

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Annex

Annex I-Information Sheet for Study Subjects

You are kindly invited to participate in this study, which involves residents of St. Paul's Hospital Millennium Medical College (SPHMMC).

A. Purpose: the purpose of this study is to determine the level of residents' satisfaction with the current education and training at SPHMMC.

B. Duration: The study period will be from May (2019 G.C) to June (2019 G.C)

C. Procedures: Data collection tool have different section, which is pretested, and having good internal validity

D. Risk and discomfort: There is no risk associated during data collection.

E. Expected benefits: You will not get special and direct benefit from this study. However, the finding of the study will be useful for the subsequent medical residents by showing area, which need improvement for better medical education, having role for quality education.

F. Confidentiality: No personal information will be included on the questioner, and the response kept confidential.

G. Compensation: No compensation provided by participating in this study.

H. Termination of the study: Participation is voluntary, and refusal to participate is your choice with no penalty or loss of benefit.

I would also like to inform you that this study is accepted by department of Internal medicine and approved by SPHMMC research and ethical Review Committee. If you have question about the study, the address of the principal investigator is:

Getachew Bizuneh

Tel: 0922595718/, e-mail address. getachew2128@gmail.com

Annex II-Individual Consent Form

**St. Paul's Hospital Millennium Medical College Department of Internal medicine
individual consent form for the study on: To assess residents' level of satisfaction with
current medical education atSPHMMC**

My name is _____. I am working with the research team of St. Paul's Hospital Millennium Medical College. We would like to assure you your name will not be mentioned in the questionnaire and the information that you will give us will be kept confidential and only used for research purpose. The information that you will give us is quite useful to achieve the objective of the study .But you have full right not to participate in the study if you are not interested.

Are you willing to participate in the study? 1) Yes 2) No

If the answer is yes, thanks! Fill the questionnaire. If the answer is no, Thank you!

Thank you for your participation!

Annex III-Questionnaire

The following are parts of the questioners, divided in three section, if you are willing to participate, you are kindly asked to fill accordingly.

Part.1 Socio-demographic information (1-4)

1. Gender

- A. Male B. Female

2. Age (in years) _____

3. Marital status,

- A. Single B) Divorced
B. Married D) Widowed

4. How much is your monthly income, including duty and others (after tax), in Ethiopian birr?

Part.2. Academic/work related issues questions

4. Field of specialization_____

5. Year of residency

- A. 1st year C) 3rd year
B. 2nd year D) 4th year

6. University you attend your undergraduate program

7. Average time for morning case discussion per week__.....

8. What is the average time for presentations per month that you can attend? Fill only if it is applicable to your department....

- A. Seminar_____hrs per month
- B. Grand round/case presentation _____hrs. per month
- C. Update lecture_____hrs.per month
- D. Death round_____hrs. per month
- E. Clinical audit_____hrs.per month
- F. Others (specify if any) _____hrs. Per month

9. Average hours of study outside of work during regular working days (Monday-Friday)

10. Average hours of study outside of work during **weekend** _____

11. Average duty hours per week_____

Part 2.1 Choose appropriate response

12. Do you experienced any of the following during your stay in the college? (You can choose more than one response)?

- A. Insult or frightening to affect your result
- B. Mistreatment during teaching activities or exam
- C. Inappropriate comment
- D. Discrimination from other residents
- E. Sexual harassment
- F. If others specify..... ..
- G. Never

13.1. If you experience any of the above, how frequent was it?

- A. very frequent C. occasionally E. very rarely
- B. frequent D. Rarely

Part3; In the following part of the questioners, their area different area, under that are few points included. After reading each part, you are requested to tick (√) on the space under the scale which describe your level of agreement or disagreement; 1(strongly disagree), 2(disagree), 3(neutral), 4(agree), 5(strongly agree)

Part 3.1.About clinical and Daily experience	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
My program has excellent case volume					
There is enough time to adequately learn from every case					
The case discussion enable me to acquire knowledge/skill					
Part3.2. about the Faculty					
In general, the faculty is very committed to resident education					
My faculty is best to incorporate teaching and clinical service					
Well informed of relevant resident issues					
Approachable during problems and concerns					
Are ready to hear residents issue and to find solution					
Handle issues confidentially					
Part 3.3. Educational presentations					
I got full chance to develop my knowledge and decision making skill from morning case discussion					
Chance to discuss freely with colleagues during case presentation					
Presentations are case based and interactive presentation					
Presentation in my college is adequate					
I would like more presentation					
I would like more presentation					

Part 3. 4 about curriculum					
I got the curriculum and know the content included					
Enable to integrate biomedical and clinical aspects					
Contents included is well implemented					
The time allocated for clinical attachment is adequate					
Clinical attachment included are important for feature career					
I need revision in the curriculum Overall I am satisfied the curriculum					
Part 3.5 Teaching opportunities					
I get bedside teaching activities for undergraduate students, interns					
There is established trend and time to teach my juniors during round					
I learn material better when I teach others					
My seniors understood my teaching role for juniors					
Teaching opportunities improve my educational experience					
Part3.6 Educational environment					
My college is convenient to see my patient at any time(in terms of distance from residential house)					
My college have adequate reading room nearer to my working area					
I feel free(have autonomy) while doing my clinical activities					
Part3.7Academic staffs					
My teachers have adequate teaching skills					
My teachers have strong devotion to share knowledge, skills and empathy during round					

activities					
My teachers have up-to-date knowledge					
Give priorities to practice our knowledge					
I have no fear of intimidation during training from seniors					
I feel free to speak during round and presentation					
I have role model for my future career in the college					
My teachers are easy to approach and share experience					
Part 3.8 relation with peer					
I have good time with my peer					
My relationships may make me to improve Knowledge and skills					
My peer relationship enables me during difficulties					
Part 3.9 Personal study					
I got adequate time for study during the working week (Monday---Friday)					
I am satisfied with the amount I study					
I am typically too tired after work to effectively study					
Learning during work hours is largely sufficient for my education					
Part 3.10 Research opportunities					
I have adequate opportunities to develop my research skill throughout the residency program					
The residency program incorporate adequate time for research					
The college create adequate opportunity to be involved in research					
Part 3.11 Resident evaluation					

I know progressive assessment timely, which give me to see my gap					
My teachers are good evaluator to see my progress and identify weakness					
Assessment methods are best to evaluate my knowledge					
Assessment methods are best to evaluate my skill					
Assessment methods are best to evaluate my attitudes					
Single item Likert					
I am satisfied with my monthly income					
Over all ,I am satisfied with my training at SPHMMC					

Part4. Free text questions

Do you have any recommendation or feedback about the residency program at SPHMMC?

1.....

2.....

3.....

4.....

5.....

6.....