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Turnover intention and associated factors among employees of regional and city health regulatory bodies in Ethiopia: A cross-sectional study

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Abstract

Introduction: High employee turnover has become a significant global challenge, especially within the healthcare sector. The most significant indicator of employee turnover is turnover intention, which reflects an employee's inclination to leave their current job. This issue is particularly concerning within health regulatory bodies, which are entrusted with upholding healthcare standards and ensuring the delivery of quality care. Nevertheless, research assessing turnover intention within this group remains absent in Ethiopia.

Objective: This study aimed to assess turnover intention and its associated factors among employees of regional and city health regulatory bodies in Ethiopia.

Methods: A cross-sectional quantitative study was conducted to examine turnover intention among regional and city health regulatory bodies. Data were collected between October 1 and November 30, 2023, and then rigorously cleaned and processed in Epi Data version 4.2 before being transferred to SPSS version 26 for advanced analysis. Descriptive statistics and binary logistic regression were conducted, yielding key metrics, such as percentages and odds ratios, which formed a solid foundation for interpreting the study's findings.

Results: Turnover intentions were reported by 55.5% of the 418 participants. In the adjusted model, significant factors associated with turnover intention were having fewer than two family members (AOR = 6.077), working in a city other than one's family residence (AOR = 3.241), living apart from one's spouse and/or children (AOR = 2.040), dissatisfaction with salary (AOR = 7.021) or organization (AOR = 2.705), and, as a protective factor, the lack of adequate educational infrastructure for one's children (AOR = 0.411).

Conclusion: A significant proportion of health personnel working in regional and city health regulatory agencies in Ethiopia exhibited turnover intention. Addressing this issue requires

targeted interventions that focus on improving employee salaries, enhancing organizational environments, and supporting employees to achieve work-life balance.

Keywords: Health Workforce, Turnover Intention, Health Regulation, Ethiopia

Introduction

Employee turnover intention is a critical concern for organizations worldwide, particularly in the healthcare sector [1]. Defined as an employee's stated intention to leave their current job in the near future, turnover intention represents the final phase of the turnover process before an employee formally exits the organization [2,3]. High employee turnover poses significant challenges because it can drive up recruitment and training costs, result in the loss of valuable organizational knowledge, and disrupt operations [2,4,5].

High employee turnover in healthcare has particularly detrimental effects because it disrupts service delivery, limits access to care, and reduces healthcare service quality, ultimately resulting in poor health outcomes [6–8]. The effects are especially pronounced within health regulatory bodies, which are integral to the oversight, coordination, and quality assurance processes that support the healthcare system [9,10]. High employee turnover within health regulatory bodies risks inadequate oversight, potentially allowing healthcare facilities to operate without undergoing the necessary certification and quality checks, thereby compromising patient safety and the standard of care [3,10,11].

Globally, turnover intention and actual turnover rates among healthcare professionals significantly vary across professions. A recent study for instance revealed turnover rate and intention prevalence of 15% and 38%, respectively, among nurses worldwide [12]. Another similar study involving nurses also found a global turnover rate ranging between 8% and 36.6%, with the highest rates observed in low and middle-income countries, which already suffer from shortages of critical healthcare professionals [13]. In high-income nations, turnover rate of healthcare professionals also remains high, illustrating a global challenge in workforce retention within the healthcare system. A study conducted in the United States for instance discovered an average healthcare professional turnover rate of 29%, with notable

variations across professions [14]. Similarly, a study in the United Kingdom found that 2.35% to 2.45% of healthcare professionals have turnover from their NHS hospital trust within a period of one-month [8].

The high turnover rate among healthcare personnel in low- and middle-income countries places significant strain on the already overburdened healthcare system. Despite this, however, LMICs have struggled to decrease employee turnover within the healthcare sector. This is evident in a systematic review of studies conducted in Asia, which found an average turnover rate of 19% among nurses [13]. Turnover rate among healthcare professionals working in Africa is also high, ranging from 17% to 41%, further emphasizing the widespread nature of the problem [15–18].

Ineffective human resource management is a significant barrier to the delivery and quality of health services in Ethiopia. The healthcare sector is further constrained by workforce shortages, inequitable distribution, and high attrition rates, all of which impede effective service provision [19]. Moreover, human resource development efforts are consistently undermined by persistently high turnover rates [20]. Turnover intention and turnover rates among healthcare workers in Ethiopia vary considerably across professions and regions, further complicating the development of retention strategies. A review assessing turnover intentions among healthcare providers in Ethiopia, for instance, found a turnover intention level of 39% in four developing regions, with figures rising to 83% in Sidama [17]. Furthermore, more than a quarter and approximately half of the nurses and midwives working in Addis Ababa and Jimma, respectively, were found to have turnover intention [21,22]. These intentions have also resulted in the departure of 22% to 37% of nurses, 15% to 25% of physicians, and 10% to 15% of pharmacists and lab technicians across the country [23–27].

Turnover intention among healthcare professionals arises from a multifaceted set of socio-demographic, personal, job-related, and organizational factors. Employees who are young, unmarried, and female, as well as those with large families and originating from rural areas, are more likely to have turnover intention, largely due to dual work-family roles, inflexible work schedules, and limited local support systems [24,26,28–30]. Personal factors such as short tenure, dissatisfaction with pay and benefits, low job satisfaction, high burnout, and poor organizational commitment also significantly drive turnover intentions among employees [28,31–36]. Job-related factors, such as high workloads, limited autonomy, role ambiguity, and insufficient career advancement opportunities, further contribute to turnover by elevating job stress and reducing retention [18,35,37–40]. Organizational influences such as inadequate supervisory support, poor working conditions, lack of professional development, and challenging physical environments also play critical roles. Additionally, broader economic and social factors, such as low public sector pay and external job opportunities, especially those offered by companies originating in high-income countries, intensify turnover through healthcare worker migration [34,37,40–47].

Despite the critical role of health regulatory bodies in overseeing quality, safety, and compliance within healthcare systems, research aimed at assessing turnover intentions among their employees remains absent, particularly in Ethiopia. The few studies conducted to assess turnover intentions among health professionals employed across Ethiopia have primarily focused on those working in clinical setups, with limited focus on those working in health regulatory agencies such as the Ethiopian Food and Drug authority. Therefore, this study is vital for identifying the scope and drivers of turnover intentions among healthcare professionals working in the Ethiopian Food and Drug Authority as well as other regulators. The study is also expected to bridge the critical gap in literature and provide a foundation for the development of evidence-based workforce retention strategies. The findings could also

help enhance public health outcomes in Ethiopia and beyond by supporting global priorities aimed at strengthening regulatory capacity and sustaining effective health system governance.

Methods and materials

Study design, period, and area

This study employed a cross-sectional quantitative design to assess turnover intentions among employees of regional and city health regulatory bodies in Ethiopia. Data were collected between October 1 and November 30, 2023.

Established under Proclamation No. 661/2009, the Ethiopian Food, Medicine, and Healthcare Administration and Control Authority (EFMHACA) was restructured into the Ethiopian Food and Drug Authority, with certain regulatory mandates transferred to the Ministry of Health under Proclamation No. 1112/2019.

The Ethiopian Food and Drug Authority safeguards public health by ensuring the safety, quality, and efficacy of foods, medicines, medical devices, and cosmetics. It also regulates alcohol and tobacco products to mitigate health risks. The authority operates through several branches, each of which is responsible for entry and exit product inspection, food control, medicine and medical device control, food and medicine quality control, and administration and finance. Each regional and city administration branch oversees regulatory compliance in the area.

Population

The source population comprises all health personnel working in regional and city regulatory bodies in Ethiopia. The study population consisted of randomly selected healthcare personnel currently employed at the participating branches. Eligible employees must currently work at one of the regional or city branches and have been working there for at least six months. The study excluded consultants or contractors, employees on extended leave (such as

maternity/paternity and study leave), employees working at the Tigray branch, and employees who were resigning or transferring.

Sample size

The sample size needed to estimate the proportion of regulators with turnover intentions was calculated using a single population proportion formula, assuming that 50% of participants would have turnover intentions, with a 95% CI and 5% error margins. Additionally, multiple sample sizes were computed using the Epi info sample size calculator to determine the sample size needed to assess the factors associated with turnover intentions, with parameters set to a minimum 80% power and a 5% significance level. After selecting the largest sample size among the calculated sample sizes and adding 10% to compensate for possible nonresponse, the final sample size was 424.

$$\mathbf{n = \frac{(Z_{a/2})^2 \times P\,(1-P)}{d^2}}$$

Where:

Z = 1.96 (Z-score for 95% confidence level)

P = 0.5 (anticipated prevalence of turnover intention)

D = 0.05 (5% margin of error)

This yielded:

$$\mathbf{n = \frac{(1.96)^2 \times 0.5 \times 0.5}{(0.05)^2} = 384.16 \approx 385}$$

A final 10% nonresponse buffer was added as follows:

$n_f = 385 + (0.1 \times 385) = 423.5 \approx 424$

Sampling procedure

A stratified sampling technique was used to select study participants, with all health regulators in Ethiopia first stratified according to their respective regions. Subsequently, the sample size was proportionally allocated to each region based on the total number of available regulatory staff in each region. Finally, the participants were selected from the staff rosters via simple random sampling (**Fig 1**).

Fig 1: Schematic representation of the sampling procedure followed to select the study participants

Data collection tools, procedures, and quality control measures

Data were collected using a structured, self-administered questionnaire developed by the research team referring to studies assessing turnover intention [sup 1]. The questionnaire was initially prepared in English, translated into local languages, and retranslated by language experts to ensure its validity. Content validity was also assessed by three healthcare management experts who reviewed item relevance. A pre-test was conducted to further check the reliability and validity of the tool. Data collectors with health and statistics background administered the questionnaire. The selected regulators were contacted at each location to elucidate the study aims and procedures, and signed informed consent was obtained. Participants who consented were then given paper-based surveys, and data collectors were on hand to address any queries they posed.

Turnover intentions were assessed using three self-report items: “I frequently think about leaving my current job,” “I will possibly look for a new job in the coming year,” and “I will leave the organization as soon as possible,” with possible answers ranging from "strongly disagree" to "strongly agree". Responses to the items were then summated and the resulting scores were later recoded as 1 (indicative of turnover intention) and 0 (indicating the lack of

turnover intention) using the mean score as a cutoff point. The tool's reliability was confirmed using Cronbach's alpha = 0.75.

The data collection tool also included continuous variables, such as age, years of experience, and work hours per week. The categorical variables included relationship status, education level, position type, employment status, and location. Perceptions of work climate, transparency, safety, and similar factors were measured using a 5-point Likert scale ranging from "strongly disagree" to "strongly agree."

To ensure quality, the questionnaire was pre-tested on 25 regulatory personnel located in Addis Ababa, and the results guided adjustments to the questioner before use. The data collectors also received two days of training on the study's aim, procedure, and the importance of maintaining confidentiality. The questionnaire included built-in skip patterns and logic checks to improve accuracy. The supervisors carefully observed the data collection process every day and examined the forms for completeness. Any errors were discussed with the data collectors and resolved whenever possible. All completed forms were securely stored.

Data analysis

Data were loaded into Epi-Data version 4.2 and transferred to SPSS version 26 for cleaning and analysis. Sociodemographic, job-related, and organizational factors were summarized via descriptive statistics, including percentages, means, and standard deviations. Binary logistic regression was used to identify the factors associated with the intention of turnover. Variables with $p<0.25$ during bivariate analysis were included in the multivariate model. Finally, odds ratios were estimated with 95% confidence intervals, and p-value <0.05 indicating statistically significant relationships.

Results

The study included 418 health personnel employed in regional and city health regulatory offices, yielding a response rate of 98.58%. The majority of participants (79.4%) were male, and most (53.6%) were between the ages of 35 and 44 years. Approximately three-quarters (77.3%) of them were married, and 65% held a bachelor's degree. Regarding the proximity of the participants' workplace to their family's residence, 284 (67.9%) lived in the same city as their family, and 277 (66.3%) reported a family size of 3 to 5 members. Nearly half of the respondents (45.5%) also had 5–10 years of professional experience (**Table 1**).

Job-related factors

The satisfaction level of the participants with their salary was assessed using a five-point Likert scale. Accordingly, 70.5% of them expressed dissatisfaction with their salary, whereas the remaining 29.5% were either neutral or satisfied. In addition, 61 participants (14.6%) held supervisory roles, and 96.4% were employed on a permanent basis (**Table 2**).

Factors related to the organization's environment

The satisfaction level of the participants with their organization was assessed using 5 questions measured on a 5-point Likert scale. The findings revealed that a substantial proportion of the participants were dissatisfied with opportunities for professional development, with 41.9% indicating dissatisfaction and 26.8% expressing strong dissatisfaction. Dissatisfaction was also evident in relation to the clarity and transparency of the promotion criteria, with 34.7% of respondents dissatisfied and 26.6% very dissatisfied. In terms of managerial support and feedback, 41.1% of the participants took a neutral stance, while 20.8% were very dissatisfied. Workplace safety was another significant concern, with more than one-third (35.4%) of the participants expressing strong dissatisfaction. Overall, a

considerable majority (64.8%) of the participants, totaling 276 individuals, were dissatisfied with their organization (**Table 3**).

Personal level factors

More than half of the participants (51.4%) reportedly lived apart from their spouses and/or children, and 168 individuals (40.2%) indicated that personal health issues affected their job performance. The majority (71.1%) cited inadequate infrastructure for children's education, and 62.9% noted family-related issues as factors prompting them to consider leaving their jobs. Additionally, workplace rules and regulations were challenging for 62.9% of the participants, further contributing to job dissatisfaction (**Table 4**).

Turnover intention

Turnover intention was assessed using three questions, each scored on a five-point Likert scale. Responses were then categorized into two groups using the mean value as a threshold. Accordingly, more than half of the workers (55.5%) had turnover intentions. Examining the individual items also revealed that an overwhelming 90.2% agreed or strongly agreed that they frequently considered leaving their current job, with a mere 3.6% expressing disagreement. Furthermore, 74.9% of the respondents indicated plans to actively seek new employment within the next year, while 61% expressed an intention to leave the organization as soon as possible. Only a small proportion of respondents disagreed with statements regarding their intentions to leave: 7.6% frequently considered leaving, 13.2% planned to look for new employment soon, and 13.2% desired to exit the organization promptly (**Table 5**) (**Fig 2**).

Fig 2: Turnover intention among employees of regional and city health regulatory bodies in Ethiopia, 2023.

Factors associated with turnover intention

A binary logistic regression model was employed to identify the significant factors linked with the intention to turnover. Variables with a p-value of < 0.25 in the bivariate analysis along with known confounders were included in the multivariate model to control for confounding factors. The model met the multicollinearity assumption (VIF < 10), and the Hosmer-Lemeshow test confirmed the model fit.

The multivariate binary logistic regression analysis revealed several key findings. The first statistically significant factor was family size, with those employees whose family size is fewer than two members having 6 times higher odds of turnover intention than those whose family size exceeds five members (Adjusted OR = 6.077, 95% CI: 2.019, 18.291). The odds of turnover intention also were 3 times higher among employees who were working in a city other than the city where their families resided (Adjusted OR = 3.241, 95% CI: 1.612, 6.514). Moreover, employees who lived away from their spouses and/or children had 2 times higher odds of turnover intention than those living with their spouses and/or children (Adjusted OR = 2.040, 95% CI: 1.191, 3.495). Dissatisfaction with the overall organization was also associated with higher turnover intention, with dissatisfied employees having 2.7 times the odds of turnover compared with satisfied employees (Adjusted OR = 2.705, 95% CI: 1.124, 6.514). Employees working in a place where the infrastructure was inadequate for their children's education had 60% lower odds of turnover intentions than those who worked in an environment with adequate infrastructure (Adjusted OR = 0.411, 95% CI: 0.226, 0.750). Finally, dissatisfaction with salary was strongly linked to turnover intention, with dissatisfied employees exhibiting 7 times higher odds of turnover intention than satisfied employees (Adjusted OR = 7.021, 95% CI: 3.940, 12.510) (**Table 6**).

Discussion

More than half (55.5%) of the employees working for Ethiopia's health regulatory agencies plan to quit their jobs, highlighting a considerable staff turnover problem. This figure is comparable to the prevalence of turnover intentions observed among healthcare professionals in various Ethiopian healthcare settings. For instance, it aligns with rates found in the Jimma (48.76%), Illubabora Zone (52%), Kefa Zone (56.3%), and North Showa Zone (56%) [21,30,48,49]. However, it was significantly lower than the rates in Addis Ababa (77%), Ghana (87.2%), and Saudi Arabia (40%), and significantly higher than the rate in Wolitasodo (39.8%) [22,50–52]. Several contextual and methodological differences may have contributed to this discrepancy. The employment specifics within regulatory agencies are likely distinct from those found in frontline healthcare settings, possibly providing more job security, varying levels of stress, or unique career paths that influence turnover intentions. These discrepancies may have also been due to methodological inconsistencies, such as differences in how "turnover intention" was defined and measured, or the timing of data collection relative to specific workplace events.

According to the current study, employees with smaller families were at higher odds of considering leaving their jobs than those with larger families. This result contradicts earlier research, which concluded that having a large family increases the desire to leave because of higher financial obligations and difficulties associated with juggling job and personal obligations [53]. Nevertheless, having a small family could be linked to other factors, such as younger age or a lack of social support, which might worsen the intention to leave the workforce. Additionally, employees with small families may find it simpler to relocate in search of new opportunities. It is also important to note that a family-friendly and supportive work environment can help mitigate the negative impact of work-family conflict, which in turn prevents employees from developing the intention to leave the organization [54].

The distance between the employee's workplace and family residence was also identified as a significant factor associated with turnover intention. Employees working in a different city than the city where their families resided were at higher odds of developing turnover intentions than those residing in the same city. This result is consistent with those of earlier studies emphasizing the value of work-life balance and closeness to family in retaining healthcare professionals [53,55]. The difficulties associated with living apart from one's family may intensify job discontent and increase the desire to seek work closer to home [56].

In line with prior research, dissatisfaction with one's organization and salary were both strongly linked to turnover intention. Employees dissatisfied with their organization's culture or compensation are more likely to develop turnover intentions than their satisfied peers [57,58]. Further supporting our conclusion, a study conducted in China revealed that dissatisfaction with compensation significantly increases the odds of turnover intention among employees [59]. Studies involving nurses have further highlighted the strong associations between turnover intention, job satisfaction, and organizational commitment [36]. Employees' decision to stay employed within an organization is also closely tied to their perceptions of organizational fairness and support [31]. Dissatisfaction with employee recognition [50], decision-making processes [25,49], and compensation has also been demonstrated to increase turnover intentions. Therefore, addressing factors such as the work environment, employee recognition, and equitable compensation is crucial to retain health regulatory personnel.

Employees who live with their spouses and/or children exhibit lower turnover intentions than those who do not, suggesting that proximity to family may reduce work-related stress and enhance job satisfaction. Previous studies have shown that family-friendly workplace policies that help employees balance work and family responsibilities can significantly reduce

turnover rates [60]. Living with family, particularly for those with a small family and substantial family obligations, alleviates stress and fosters greater workplace satisfaction [61].

This study also revealed that employees who disclosed that their children's schooling lacked the necessary infrastructure were less likely to plan to leave their jobs than those who did not. This unexpected finding highlights the need for further investigation into the underlying causes and confounding variables because previous studies have suggested that employees with significant family responsibilities, such as those with children, often experience increased work-family conflict, which may, in turn, elevate their turnover intentions [54].

Strengths and limitations of the study

The defining strength of the study is its exhaustive coverage of Ethiopia's entire healthcare regulatory apparatus, yielding unprecedented insights into workforce retention challenges. However, several limitations warrant consideration. First, the absence of qualitative data to complement and contextualize the quantitative findings may limit the depth of interpretation of the findings. Second, the cross-sectional design inherently precludes causal inference and fails to account for the dynamic effects of temporal factors such as macroeconomic instability (e.g., inflationary pressures) or abrupt policy changes on turnover intentions.

Conclusion

Turnover intention among health personnel employed in Ethiopia's regional and city health regulatory agencies was notably high. The key determining factors include family size, leaving with or apart from one's family, level of satisfaction with one's salary or organization, availability of adequate infrastructure for one's children's education, and distance between work place and family residence.

Ensuring that employees are paid and compensated well for the work they undertook is not only vital in reducing turnover intention but also in minimizing the pull of external

opportunities. Competitive salaries aligned with industry standards and local living costs are also crucial. Fostering a supportive organizational environment further promotes job satisfaction and loyalty, achieved through fostering a respectful, inclusive culture, ensuring workplace safety, and encouraging transparent communication. Promoting work-life balance through flexible schedules, paid leave, and family support services, such as on-site childcare, also aids in employee retention. Collectively, these measures support a stable, engaged workforce, which is vital for effective health regulatory services.

Declarations

Ethics approval and consent to participate

Ethical clearance was obtained from the ethical review board of Asrat Woldeyes Health Science campus, Debre Berhan University in 2023. In accordance with the Declaration of Helsinki, both verbal and written informed consent was obtained from each participant before data collection. All personal information of the study participants was kept confidential to maintain the anonymity of the study.

Consent for publication

Not applicable (NA).

Availability of data and materials

The datasets generated and analysed in the current study are available upon reasonable request from the corresponding author.

Competing interests

The authors have no conflicts of interest to declare in this work.

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Authors' contributions

FZ: Conceptualized the research idea, designed the study methodology, collected and analyzed data, wrote the original manuscript draft, and reviewed and revised the manuscript.

SD: Conceptualized the research idea, designed the study methodology, collected and analyzed data, wrote the original manuscript draft, and reviewed and revised the manuscript.

GG: Designed the study methodology, provided academic and research mentorship, contributed to the research design and methodology, reviewed and provided critical feedback on the manuscript, and approved the final version of the manuscript.

TM: Provided guidance and supervision throughout the research process, assisted in the study design and methodology development, and reviewed and edited the manuscript for critical intellectual content.

ET: Provided guidance and supervision throughout the research process, assisted in the study design and methodology development, and reviewed and edited the manuscript for critical intellectual content.

MG: Provided guidance and supervision throughout the research process, assisted in the study design and methodology development, and reviewed and edited the manuscript for critical intellectual content.

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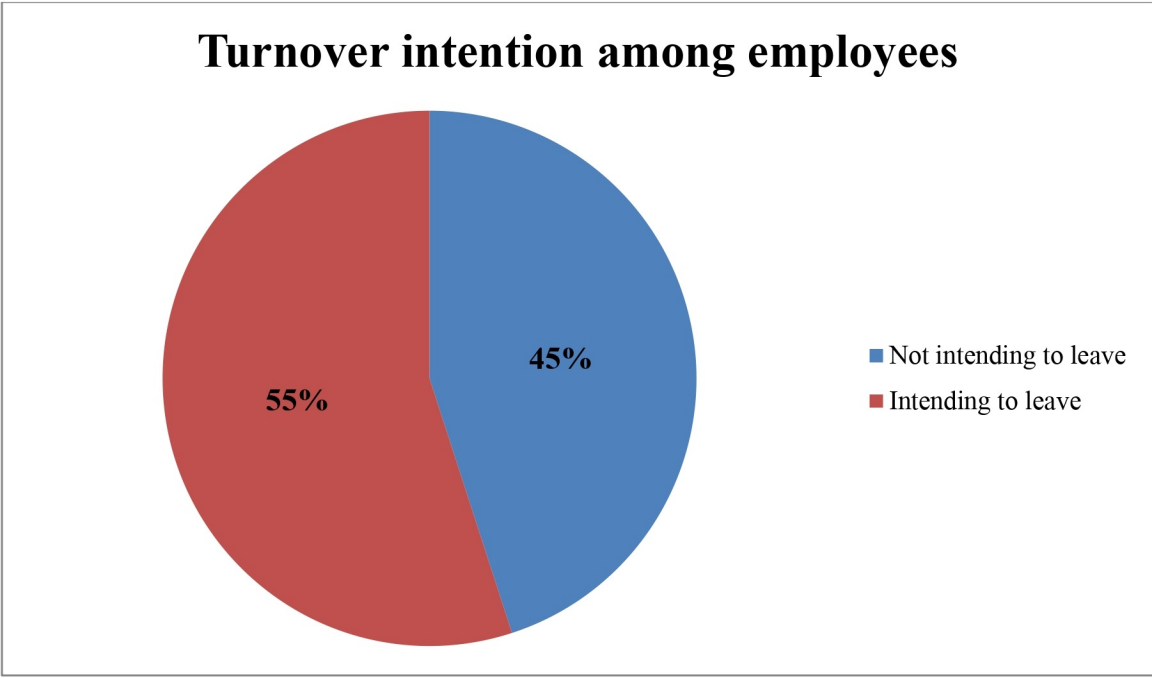
Turnover intention among employees
45%
55%
Not intending to leave
Intending to leave

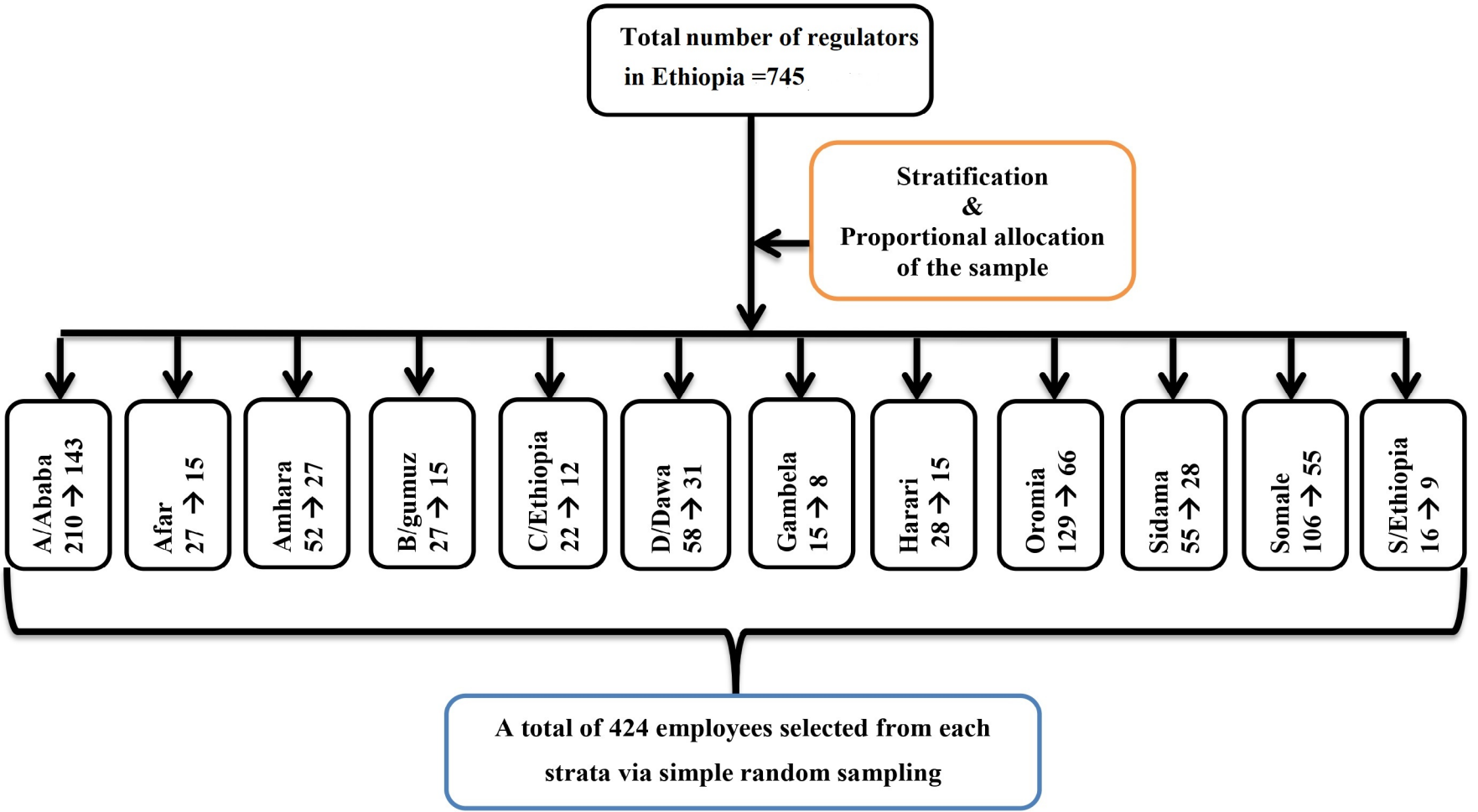
Total number of regulators in Ethiopia =745
Stratification & Proportional allocation of the sample
A/Ababa 210 → 143
Afar 27 → 15
Amhara 52 → 27
B/gumuz 27 → 15
C/Ethiopia 22 → 12
D/Dawa 58 → 31
Gambela 15 → 8
Harari 28 → 15
Oromia 129 → 66
Sidama 55 → 28
Somale 106 → 55
S/Ethiopia 16 → 9
A total of 424 employees selected from each strata via simple random sampling

Table 1: Socio-demographic characteristics of health personnel working in regional and city health regulatory bodies in Ethiopia 2023.

Variables	**Frequency**	**Percentage**
Sex		
Male	332	79.4
Female	86	20.6
Age		
<35	156	37.3
35-44	224	53.6
>44	38	9.1
Marital status		
Single	74	17.7
Married	323	77.3
Separated/divorced/widowed	21	5.0
Level of education		
Diploma	23	5.5
Degree	273	65.3
Masters and above	122	29.2
Distance between the workplace and family residence		
Same city	284	67.9
Within 50 km	42	10.0
Another city	92	22.0
Family size		
<2	114	27.3
3-5	277	66.3
>5	27	6.5

Work experiences		
< 5 years	216	51.7
5-10 years	190	45.5
>10 years	12	2.9

Table 2: Job-related characteristics of health personnel working in regional and city health regulatory bodies in Ethiopia 2023.

Variables	**Frequency**	**Percentage**
Satisfaction with one's salary		
Very Satisfied	57	13.6
Satisfied	46	11.0
Neutral	20	4.8
Dissatisfied	146	34.9
Very dissatisfied	149	35.6
Role within the organization		
Supervisor	61	14.6
Non-supervisor	357	85.4
Job type		
Permanent	403	96.4
Temporary	15	3.6

Table 3: Level of satisfaction with the organization's environment among health personnel working in regional and city health regulatory bodies in Ethiopia 2023

Organizational factors	**Frequency**	**Percentage**
Opportunities for professional development		
Very Dissatisfied	112	26.8
Dissatisfied	175	41.9
Neutral	90	21.5
Satisfied	40	9.6
Very Satisfied	1	.2
Clarity and transparency of the criteria used for promotion		
Very Dissatisfied	111	26.6
Dissatisfied	145	34.7
Neutral	132	31.6
Satisfied	24	5.7
Very Satisfied	6	1.4
Level of support and feedback received from a close supervisor		
Very Dissatisfied	87	20.8
Dissatisfied	78	18.7
Neutral	172	41.1
Satisfied	71	17.0
Very Satisfied	10	2.4
Safety of the workplace		
Very Dissatisfied	148	35.4
Dissatisfied	99	23.7
Neutral	123	29.4
Satisfied	34	8.1

Very Satisfied	14	3.3
Workplace climate and culture		
Very Dissatisfied	66	15.8
Dissatisfied	134	32.1
Neutral	134	32.1
Satisfied	77	18.4
Very Satisfied	7	1.7
Overall satisfaction with the organization's environment		
Dissatisfied	271	64.8
Satisfied	146	35.2

Table 4: Personal factors among health personnel working in regional and city health regulatory bodies in Ethiopia 2023

Personal factors	**Frequency**	**Percentage**
Live apart from one's spouse and/or children		
No	203	48.6
Yes	215	51.4
Personal health problems made it difficult to do my job		
No	250	59.8
Yes	168	40.2
Adequate infrastructure for one's children education		
No	121	28.9
Yes	297	71.1
Family related problems made me consider leaving my job		
No	155	37.1
Yes	263	62.9

Experienced difficulties following workplace rules and regulations		
No	158	37.8
Yes	260	62.2
The job is difficult/demanding		
No	223	53.3
Yes	195	46.7
The job does not fulfill my expectations		
No	63	15.1
Yes	355	84.9

Table 5: Turnover intention among health personnel working in regional and city health regulatory bodies in Ethiopia 2023

Turnover intention	**Frequency**	**Percentage**
I often consider leaving my current job.		
Strongly disagree	2	.5
Disagree	13	3.1
Neutral	26	6.2
Agree	283	67.7
Strongly Agree	94	22.5
I will probably look for a new job in the coming year		
Strongly disagree	11	2.6
Disagree	21	5.0
Neutral	73	17.5
Agree	237	56.7
Strongly Agree	76	18.2
I will leave the organization as soon as possible		

Strongly disagree	17	4.1
Disagree	38	9.1
Neutral	108	25.8
Agree	162	38.8
Strongly Agree	93	22.2
Overall prevalence of turnover intention		
Yes	232	55.5
No	186	45.5

Table 6: Binary logistic regression analysis to identify the factors associated with turnover intention among health personnel working in regional and city health regulatory bodies in Ethiopia 2023

Factors	**Turnover intention**		**Crude odds ratio(95%CI)**	**Adjusted odds ratio (95%)**	**P-value**
	Yes	**No**			
Sex					
Male	164 (39.2%)	168 (40.2%)	1.322 (0.822, 2.126)	1.442 (0.774, 2.686)	0.249
Female	36 (8.6%)	50 (12.0%)	1	1	1
Age					
<35	79 (18.9%)	77 (18.4%)	0.866 (0.420, 1.786)	0.493 (0.194, 1.249)	0.136
35-44	98 (23.4%)	126 (30.1%)	0.753 (0.373, 1.518)	0.470 (0.196, 1.125)	0.090
>44	23 (5.5%)	15 (3.6%)	1	1	1
Marital Status					
Single	44 (10.5%)	30 (7.2%)	1.206 (.442, 3.291)	0.579 (0.167, 2.010)	0.390
Married	146 (34.9%)	177 (42.3%)	0.684 (0.276, 1.694)	0.407 (0.133, 1.246)	0.115

Separated/divorced/widowed	10 (2.4%)	11 (2.6%)	1	1	1
Level of education					
Diploma	5 (1.2%)	18 (4.3%)	0.370 (0.146, 0.939) *	0.359 (0.118, 1.087)	0.070
Degree	135 (32.3%)	138 (33.0%)	0.872 (0.566, 1.345)	0.791 (0.442, 1.416)	0.430
Masters and above	60 (14.4%)	62 (14.8%)	1	1	1
Family size					
<2	78 (18.7%)	36 (8.6%)	6.961 (2.75, 17.59) **	6.077 (2.019, 18.291) **	0.001
3-5	114 (27.3%)	163 (39.0%)	2.392 (1.013, 5.64) *	2.350 (0.800, 6.900)	0.120
>5	8 (1.9%)	19 (4.5%)	1	1	1
Distance between the workplace and family residence					
Same city	117 (28.0%)	167 (40.0%)	1	1	1
within 50 km	18 (4.3%)	24 (5.7%)	0.296 (0.172, 0.507) *	0.488 (0.224, 1.063)	0.071
Another city	65 (15.6%)	27 (6.5%)	0.244 (0.112, .532) **	3.241 (1.612, 6.514) **	0.001
Role within the organization					
Supervisor	34 (8.1%)	27 (6.5%)	1.011 (.585, 1.747) *	1.386 (0.686, 2.798)	0.363
Non-supervisor	166 (39.7%)	191 (45.7%)	1	1	1
Satisfaction with the organization's environment					
Dissatisfied	137 (32.8%)	134 (32.1%)	2.307 (1.157, 4.598) *	2.705 (1.124, 6.514) *	0.026
Satisfied	63	84	1	1	1

	(15.1%)	(20.1%)			
Live apart from one's spouse and/or children					
No	84 (20.1%)	119 (28.5%)	1	1	1
Yes	116 (27.8%)	99 (23.7%)	1.704 (1.155, 2.515)	2.040 (1.191, 3.495) **	0.009
Personal health problems					
No	114 (27.3%)	136 (32.5%)	.673 (.452, 1.001)	0.776 (0.437, 1.343)	0.353
Yes	86 (20.6%)	82 (19.6%)	1	1	1
Adequate infrastructure for one's children education					
No	52 (12.4%)	69 (16.5%)	0.682 (0.446, 1.043) *	0.411 (0.226, 0.750) **	0.004
Yes	148 (35.4%)	149 (35.6%)	1	1	1
The job is difficult/demanding					
No	102 (24.4%)	121 (28.9%)	0.560 (0.378, 0.828) **	0.791 (0.437, 1.324)	0.353
Yes	98 (23.4%)	97 (23.2%)	1	1	1
Satisfaction with one's salary					
Dissatisfied	193 (46.2%)	102 (24.4%)	4.625 (2.841, 7.530) **	7.021 (3.940, 12.510) **	0.001
Neutral	10 (2.4%)	10 (2.4%)		1.666 (0.513, 5.406)	0.396
Satisfied	29 (6.9%)	74 (17.7%)	1	1	1

Supplementary Files

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