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Background: Communication in healthcare organizations is an important factor in quality care, patient safety, and financial function. However, there was a dearth of evidence on the organizational communication skills of healthcare providers in Ethiopia, including the current study area, Wolaita Sodo. This study is aimed at assessing the level of organizational communication skills and their associated factors among healthcare providers working at Wolaita Sodo health facilities, SNNPRS, Ethiopia.

Methods: An institutional-based cross-sectional study design was conducted. A pretested and structured questionnaire was utilized using the self-administration method. The data were entered into Epi Data version 3.1 and analyzed using STATA version 17.0. Pearson correlation, a binary logistic regression analysis was carried out to identify factors associated with outcome variables. Accordingly, variables that fulfilled p-values <0.25 on the bivariate logistic regression were considered candidates for multivariate logistic regression to control for possible confounders. The odds ratios along with the 95% confidence interval were used to present the finding, and statistical significance was reported at a p-value of 0.05.

Results: In the current study, about 45.8% (95% CI: 40.9–50.7) of the health professionals experienced good organizational communication skills. Males [AOR = 2.29; 95% CI = 1.38, 3.82], who had training in communication skills [AOR = 2.30; 95% CI = 1.46, 3.63], and those working at laboratories [AOR = 3.22; 95% CI = 1.07, 9.65] were significantly associated with organizational communication skills.

Conclusion: Less than half of the participants practiced good organizational communication skills. Sex, training on communication skills, and working units were important factors affecting the communication skills of healthcare providers. Interventions to improve the communication skills of healthcare providers should be instituted targeting females, those who have never taken training on communication skills, and those who are working at the ward.

Keywords: organizational communication, healthcare providers, Wolaita Sodo, SNNPR

Introduction
Currently, information is becoming a vital asset for an organization. It helps employees make important decisions about organizing and performing different activities in the organization. To achieve their overall goals and objectives, organizations should encourage the flow of information across the entire organization. Employees should communicate the right information at the right time using the right medium to execute their tasks.

Organizational communication can be defined as a social process that provides contact and information exchange between both departments and units of an organization and the organization’s environment for the organization’s operation and the accomplishment of its objectives. The different forms of organizational communication include...
downward communication, upward communication, and horizontal (lateral) communication. Downward communication is the flow of messages from supervisors or managers to lower-level employees. The managers communicate organizational vision, goals, procedures, practices, and feedback to the subordinates. Upward communication is the flow of information from lower-level employees up to the managers or supervisors in the organization. It can have aspects of problems in the organization, advancement in the way of action and employees’ activity, and how the employees are feeling. Horizontal (lateral) communication is the interaction between individuals and groups on the same hierarchical level in an organization. The importance of horizontal (lateral) communication in the organization is for linking related tasks, work units, and divisions in the organization. Additionally, diagonal communication takes place between employees that are at different organizational levels and are not in direct relationships in the organizational structure.

Different theories and models of communication are proposed to describe the importance and structure of organizational communications. The current study bases its findings on a linear model of communication, an interactional model of communication, and a transactional model of communication.

The linear model views communication as a one-way or linear process in which the speaker speaks and the listener listens.

Laswell’s (1948) model was based on five questions (who said what, in what channel, to whom, and with what effect), which effectively describe how communication works. Shannon and Weaver’s (1949) model includes noise or interference that distorts understanding between the speaker and the listener.

The interactional model depicts that the speaker or sender of the message also listens to the feedback given by the receiver or listener. Schramm (1955) in Wood (2009) came out with an interactive model that saw the receiver or listener providing feedback to the sender or speaker.

The transactional model shows that each person in the communication act is both a speaker and a listener and can be simultaneously sending and receiving messages. According to the model, “Transactional” means that communication is an ongoing and continuously changing process.

Health providers’ communications help patients to be aware of their health status, health-related problems, and treatment plan, and they also enable a person to manage unpredictable professional situations. Effective communication between the patient and the health care professional is important in order to have effective healthcare. In healthcare organizations, effective communication is important to provide effective patient management services, such as pain control, recalling the history of disease, and improving the satisfaction of the clients.

Organizational communication skills among healthcare providers remain a frequent cause of healthcare errors. It can result in healthcare mistakes and poor health outcomes. It also has an economic impact, including lower care quality, unsafe care, and less access to care. It is usually a potential barrier to providing services in caring settings. According to the study done on the determinants and outcomes of good provider communication in seven African countries, the average provider communication score was low in each of the countries studied. It varied from 26% in Senegal (2012–2014) to a high of 49% in Uganda (2007). According to the study done in different areas of Ethiopia, the prevalence of communication skills among nurses was 34.5%.

The organizational communication skills of healthcare providers play an important role in the clinical process. However, there was a dearth of evidence on the organizational communication skills of healthcare providers in Ethiopia, including the current study area, Wolaita Sodo. This study is aimed at assessing the level of organizational communication skills and their associated factors among healthcare providers working at Wolaita Sodo health facilities, SNNPRRS, Ethiopia.

### Materials and Methods
#### Study Setting, Design, and Period
An institutional-based cross-sectional study was conducted at Wolaita Sodo health facilities, the administrative capital for the Wolaita zonal administration in southern Ethiopia. It is located 380 kilometers south of Addis Ababa. The town has three sub-cities and 11 lower administrative units. According to the census population projection, the zone has a total population of 5,385,782. From the total population of the zone, females count 2,698,261 and males count 2,687,021.
In Wolaita Sodo, there are 3 hospitals (1 specialized university hospital and 2 general hospitals), 3 health centers, and 19 private clinics. The study was conducted at Wolaita Sodo health facilities in southern Ethiopia. Otona Teaching and Comprehensive Referral Hospital was one of the study areas, which has 437 beds and is staffed with a total of 650 staff, including 321 BSc and MSc nurses, 76 midwives, 31 health officers, 51 residents, 55 specialists in emergency medicine, internal medicine, surgery, and anesthesiology, and 116 academic clinical doctors. Enyat and Sodo Christian Hospitals were general hospitals staffed with 239 and 107 healthcare providers, respectively. Wadu (WHC), Geneme (GHC), and Sodo (SHC) health centers were another study area staffed with 75, 70, and 81 healthcare providers, respectively. The study was conducted from September 1–30, 2022.

Source of Population and Study Population
All healthcare providers who were working at Wolaita Sodo health facilities were the source population, and healthcare providers who were working at randomly selected health facilities in Wolaita Sodo during the study period were the study population.

Inclusion Criteria and Exclusion Criteria
Healthcare providers working at Wolaita Sodo health facilities in southern Ethiopia during the study period were included in the study, and healthcare providers who were unable to attend health facilities due to diseases, conditions, or other personal reasons during the study period and healthcare providers on leave during the data collection period were excluded from the study.

Sample Size Determination
The sample size was computed based on a single population proportion formula assuming the prevalence (p) of communication skills among health care providers is 0.6615, the 95% confidence level is 1.96, and the margin of error is 5%.

\[ n = \frac{p(1 - p)}{d^2} \]

\[ n = \frac{(1.96 * 1.96)(0.6615)(1 - 0.6615)/0.05 * 0.05 = 344} \]

Taking 10% non-response, the final sample size was 0.1*344 + 344 = 379.

The sample size of the second objective was smaller than the first objective. Therefore, the final sample size by taking 10% non-response was 379.

Sampling Procedure/Technique
A multi-stage sampling procedure with two stages was used to select study participants. In the first stage, six healthcare facilities were selected from Wolaita Sodo using a simple random sampling technique. In the second stage, by using proportionate allocation from each facility a proportionate to their population size, a total of three hundred seventeen nine healthcare providers were selected by systematic random sampling. According to the data from six randomly selected health facilities, the total number of healthcare providers was 1222. Therefore, 379 study participants were selected from each health facility proportional to population size.

Data Collection Method
Data Collectors and Supervisors
Four BSc public health officers for data collection were recruited, and onsite supervision was performed by one supervisor and a PI. Two days of training were given by the principal investigator on the objectives, confidentiality of information, and techniques of data collection for the study.

Data Collection Instruments
A pre-tested and structured self-administered questionnaire was developed by the Mind Tools Editorial Team to evaluate communication skills at five levels (the source, encoding, channel, decoding, and feedback) of communication. In this
questionnaire, questions 2 and 11 are related to source; questions 1, 5, 8, 10, and 15 are related to encoding; questions 7, 11, and 13 are related to channel; questions 3, 6, 12, and 14 are related to decoding; and questions 4 and 9 are related to feedback skill. To assess the socio-demographic, organizational, and professional factors, a structured self-administered questionnaire was developed by reviewing different literature. All sections of the questionnaire were translated into local languages (Amharic and Wolitigna) and re-translated back to English to ensure accuracy. The translation was done by individuals who were language experts.

Study Variables

Dependent Variable
Organizational communication skills.

Independent Variables
- Independent variables include socio-demographic factors such as age, sex, marital status, educational qualification, and professional factors. This variable includes a type of profession, year of job experience, and organizational factors. This variable includes the working unit, training on communication skills, and the monthly salary.

Operational Definitions

Organizational communication skill: The level of communication skill (the source, encoding, channel, decoding, and feedback) of healthcare providers is assessed using a five-point scale questionnaire (Not at all = 1 point; Rarely = 2 points; Sometimes = 3 points; Often = 4 points; and Very Often = 5 points), including 15 communication skill questions, each with a maximum score of 75 points and a minimum score of 15 points.
  - Good OCS: Participants who scored ≥ the median (≥ 38).
  - Poor OCS: Participants who scored below the median (<38).

Data Quality Control

Data quality was assured before, during, and after the data collection process. Before data collection, a standardized questionnaire was prepared. The questionnaire was pre-tested outside the study area on about 5% of the sample size. The questionnaire was translated into the local language versions (Amharic and Wolitigna) and re-translated back to English to ensure accuracy. The training was given to data collectors regarding the objective of the study, sampling procedures, and data collection tools and processes. During the data collection process, there was close day-to-day supervision, and the questionnaire was checked to ensure completeness. After data collection, double data entry and validation were done to avoid errors in data entry.

Data Processing and Analysis

Data was entered into Epi Data version 3.1, and it was exported to STATA version 17.0 for data cleaning and analysis. Descriptive statistics like frequency distribution, appropriate summary measures, cross-tabulations, Pearson correlation, bi-variable and multivariable logistic regression analyses were done to describe the variables. Primarily, binary logistic regression analysis was carried out with the assumption that the response variable is binary, the observations are independent, there is no multicollinearity among the explanatory variables, there are no extreme outliers, and the sample size is sufficiently large (at least 150). Then, variables with p-values less than 0.25 were further examined using a multivariable logistic regression model to control for possible confounders. Then, variables with p-values <0.05 with 95% CI were used to determine associated factors. Texts, tables, and graphs were used for data presentation.

Results

Socio-Demographic and Organizational Factors

Three hundred sixty-nine healthcare providers participated in this study from 379 sampled participants, with a 97.36% response rate. The study consisted of 212 (57.5%) males and 157 (42.5%) females. The mean (± standard deviation) age of the participants was 32.16 (± 7.31) years. Around two-thirds (64.8%) of the participants were married, and 86.7% were
BSc degree holders. Close to three-fifths (57.7%) of the participants were nurses, and the mean (SD) job experience of the participants was 5.6 (±0.04) years. Around three-fifths (59.1%) of the participants had never taken training on communication skills, and around half (50.4%) of the participants were working at the ward (Table 1).

The Level of Organizational Communication Skills
Below half, 45.8% (95% CI= 40.7, 50.7) of healthcare providers had good organizational communication skills. Majority of the respondents, 54.2% (95% CI= 49.3, 59.3) have poor organizational communication skills. The communication skills is better among male than female and the difference is statistically significant (Pearson Chi-Square statistic, $\chi^2$= 14.31; P-value= 0.01) (Figure 1).

Factors Associated with Organizational Communication Skills
From a total of 9 covariates, six covariates, sex, type of profession, educational qualification, working unit, training on communication skills, and work experience, fulfilled a P-value ≤ 0.25 and were considered candidates for multivariate analysis. In multivariate binary logistic regression, after controlling for possible confounding effects of other covariates, sex, training on communication skills, and working unit were identified as significant factors associated with communication skills (Table 2).

Table 1 Socio-Demographic and Organizational Factors Related with Organizational Communication Skills of Healthcare Providers Working at Wolaita Sodo Health Facilities, Southern Ethiopia, from September 1–30, 2022

<table>
<thead>
<tr>
<th>Variables</th>
<th>Categories</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>Male</td>
<td>212</td>
<td>57.5%</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>157</td>
<td>42.5%</td>
</tr>
<tr>
<td>Age (in year)</td>
<td>Below mean level</td>
<td>190</td>
<td>51.5%</td>
</tr>
<tr>
<td></td>
<td>Above mean level</td>
<td>179</td>
<td>48.5%</td>
</tr>
<tr>
<td>Marital status</td>
<td>Currently unmarried</td>
<td>130</td>
<td>35.2%</td>
</tr>
<tr>
<td></td>
<td>Currently married</td>
<td>239</td>
<td>64.8%</td>
</tr>
<tr>
<td>Educational qualification</td>
<td>Diploma</td>
<td>28</td>
<td>7.6%</td>
</tr>
<tr>
<td></td>
<td>BSc</td>
<td>320</td>
<td>86.7%</td>
</tr>
<tr>
<td></td>
<td>MSc and above</td>
<td>21</td>
<td>5.7%</td>
</tr>
<tr>
<td>Training on communication skills</td>
<td>Yes</td>
<td>151</td>
<td>40.9%</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>218</td>
<td>59.1%</td>
</tr>
<tr>
<td>Working unit</td>
<td>OPD</td>
<td>107</td>
<td>29.0%</td>
</tr>
<tr>
<td></td>
<td>Ward</td>
<td>186</td>
<td>50.4%</td>
</tr>
<tr>
<td></td>
<td>Laboratory</td>
<td>39</td>
<td>10.6%</td>
</tr>
<tr>
<td></td>
<td>Pharmacy</td>
<td>17</td>
<td>4.6%</td>
</tr>
<tr>
<td></td>
<td>Emergency</td>
<td>20</td>
<td>5.4%</td>
</tr>
<tr>
<td>Type of profession</td>
<td>Doctor</td>
<td>50</td>
<td>13.6%</td>
</tr>
<tr>
<td></td>
<td>Nurse</td>
<td>213</td>
<td>57.7%</td>
</tr>
<tr>
<td></td>
<td>Public health officer</td>
<td>35</td>
<td>9.5%</td>
</tr>
<tr>
<td></td>
<td>Lab technician</td>
<td>30</td>
<td>8.1%</td>
</tr>
<tr>
<td></td>
<td>Pharmacist</td>
<td>41</td>
<td>11.1%</td>
</tr>
<tr>
<td>Job experience (in year)</td>
<td>Below mean level</td>
<td>170</td>
<td>46.1%</td>
</tr>
<tr>
<td></td>
<td>Above mean level</td>
<td>199</td>
<td>53.9%</td>
</tr>
<tr>
<td>Monthly salary (in ETB)</td>
<td>Below mean level</td>
<td>152</td>
<td>41.2%</td>
</tr>
<tr>
<td></td>
<td>Above mean level</td>
<td>217</td>
<td>58.8%</td>
</tr>
</tbody>
</table>
Accordingly, the odds of having good organizational communication skills were 2.29 [AOR = 2.29; 95% CI = 1.38; 3.82] times better among male healthcare providers compared to their female counterparts. The odds of good organizational communication skills were 2.30 [AOR = 2.30; 95% CI = 1.46; 3.63] times better among healthcare providers who

Table 2 Logistic Regression of Factors Associated with Organizational Communication Skills of Healthcare Providers Working at Wolaita Sodo Health Facility, SNNPRS of Ethiopia from September 1–30, 2022

<table>
<thead>
<tr>
<th>Variables</th>
<th>Categories</th>
<th>Organizational Communication Skills</th>
<th>COR (95% CI)</th>
<th>AOR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Good OCS (n=169)</td>
<td>Poor OCS (n=200)</td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>Male</td>
<td>114</td>
<td>98</td>
<td>2.16 (1.41, 3.30)</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>55</td>
<td>102</td>
<td></td>
</tr>
<tr>
<td>Educational Qualification</td>
<td>BSc</td>
<td>148</td>
<td>173</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Diploma</td>
<td>10</td>
<td>18</td>
<td>0.65 (0.29, 1.45)</td>
</tr>
<tr>
<td></td>
<td>MSc and above</td>
<td>11</td>
<td>19</td>
<td>1.43 (0.57, 3.54)</td>
</tr>
<tr>
<td>Training on Communication Skills</td>
<td>Yes</td>
<td>98</td>
<td>83</td>
<td>1.95 (1.28, 2.94)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>71</td>
<td>117</td>
<td></td>
</tr>
<tr>
<td>Working Unit</td>
<td>Pharmacy</td>
<td>8</td>
<td>9</td>
<td>1.16 (0.43, 3.15)</td>
</tr>
<tr>
<td></td>
<td>Emergency</td>
<td>11</td>
<td>9</td>
<td>1.60 (0.63, 4.05)</td>
</tr>
<tr>
<td></td>
<td>Laboratory</td>
<td>24</td>
<td>16</td>
<td>1.97 (0.98, 3.95)</td>
</tr>
<tr>
<td></td>
<td>OPD</td>
<td>46</td>
<td>61</td>
<td>0.99 (0.61, 1.60)</td>
</tr>
<tr>
<td></td>
<td>Ward</td>
<td>80</td>
<td>105</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Nurse</td>
<td>88</td>
<td>127</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Health officer</td>
<td>16</td>
<td>18</td>
<td>1.28 (0.62, 2.65)</td>
</tr>
<tr>
<td></td>
<td>Pharmacist</td>
<td>25</td>
<td>17</td>
<td>1.99 (1.06, 2.65)</td>
</tr>
<tr>
<td></td>
<td>Doctor</td>
<td>29</td>
<td>21</td>
<td>2.12 (1.08, 4.16)</td>
</tr>
<tr>
<td></td>
<td>Lab technician</td>
<td>11</td>
<td>17</td>
<td>0.93 (0.41, 2.09)</td>
</tr>
<tr>
<td>Job Experience</td>
<td>Below mean level</td>
<td>86</td>
<td>84</td>
<td>1.43 (0.94, 2.16)</td>
</tr>
<tr>
<td></td>
<td>Above mean level</td>
<td>83</td>
<td>116</td>
<td></td>
</tr>
</tbody>
</table>

Notes: *Significant at p-value <0.05. Those with p value 0.25 and less than were entered into the multivariate regression.
Abbreviations: COR, crude odds ratio; AOR, adjusted odds ratio; CI, confidence interval.
had training on communication skills compared to healthcare providers who had never taken training on communication skills. The odds of having good organizational communication skills were 3.22 [AOR = 3.06; 95% CI = 1.07, 9.65] times better among healthcare providers working in laboratories compared to healthcare providers working at wards.

**Discussion**

Good communication plays an important role in contributing to the positive and desired quality of patient outcomes in healthcare organizations. Therefore, the results presented here are crucial, and the main objective to be attained is to determine the level of organizational communication skills and associated factors among healthcare providers working at the Wolaita Sodo health facility. Results from this research indicated that sex, communication skill training, and working units were the main associated factors in organizational communication.

This study reveals that 54.2% (95% CI = 49.3, 59.3) of the participants practiced poor organizational communication skills. It reflects that the majority of the health professionals had poor organizational communication skills. The findings of this study were lower than those of studies done in the Amhara region of North West Ethiopia (61.4%), Iran (59.2%), and Korea (75%). In contrast, the current finding was higher than studies done in Addis Ababa (34.5%), Jimma University’s specialized hospital (33.9%), in the government hospitals of Bahir Dar city (36.5%), and in Iran (14.3%). This implies that the communication skills they acquired in school through the health education course were not adequate. It might also be related to the lack of recurrent training in communication skills and techniques, like other skill training. Additionally, ineffective communication is reported as a significant factor in medical errors and inadvertent patient harm. The current healthcare system is aimed at creating competent and responsible healthcare professionals. With this poor communication, it is hard to deliver high-quality care. Henceforth, educational curriculum development about effective communication skills is needed in all healthcare specializations and practice settings.

In this study, one of the socio-demographic variables, such as the sex of the respondent, had a significant association with the outcome variable. Male health professionals had 2.29 [AOR=2.29; 95% CI=1.38, 3.82] times better organizational communication skills compared to their female counterparts. This is in line with previous studies done in Iran, which stated that sex affected communication skills. In contrast to the study in Jimma University specialized hospital, in governmental hospitals of Bahir Dar city (36.5%), in Amhara region, and other studies in Iran, sex did not show a significant association with organizational communication skills. A possible explanation may be the fact that male healthcare providers were more frequently involved in different organizational activities than female healthcare providers, which may predispose male healthcare providers to better organizational communication skills than women.

The study also showed that the odds of having good organizational communication skills were 2.30 [AOR = 2.30; 95% CI = 1.46; 3.63] times better among healthcare providers who had training on communication skills compared to healthcare providers who had never taken training on communication skills. This was in line with the previous study conducted in governmental hospitals in Bahir Dar city and Iran which said that a lack of communication skill training directly affected communication. It was in contrast with a study in Amhara region referral hospitals, which found that training on communication skills did not have a significant association with organizational communication skills. The possible explanation is that communication skills training can improve communication, enhance empathy, provide reassurance, and facilitate discussion of psychosocial needs.

In this study, the odds of having good organizational communication skills were 3.22 [AOR = 3.06; 95% CI = 1.07, 9.65] times better among healthcare providers working in laboratories compared to healthcare providers working at wards. This was in line with the previous study conducted in Iran. It was in contrast with studies in Jimma University’s specialized hospital, in Amhara Region referral hospitals, and in governmental hospitals in Bahir Dar City, where working units did not show a significant association with organizational communication skills. The possible explanation is that favorable working conditions may predispose healthcare professionals working in laboratories to practice good organizational communication skills.

In this study, majority of the respondents have poor organizational communication skills. In order to achieve organizational goal, it needs good communication skills of healthcare providers. All responsible bodies (government, non-governmental and health institutions) should pay attention to improve healthcare providers’ communication skills in the organization.
Due to cross-sectional nature of the study, causation may not be inferred. The use of self-administered questionnaire may end up with overestimated result. As per researcher’s literature review, this study was done on certain variables. Since the organizational communication skill of healthcare providers working in study area was low, strengthening communication skills by working on those factors significantly associated with organizational communication skill in future is essential. Further studies need to be conducted on large sample size and at different agro ecological zones to see the effect of poor organizational communication skills of healthcare providers on health outcomes and also to see the effect of more formal and rigid communication practice that over emphasis rules and regulation on the level of organizational communication skills.

**Conclusion**

Majority of the respondents have poor organizational communication. Sex, training on communication skills and working units were important factors affecting the communication skills of healthcare providers. To increase organizational communication skills Woreda and zonal health department should understand the need for communication skills among healthcare providers working at different units and should institute intervention to improve communication skills.

**Abbreviations**

AOR, Adjusted Odds Ratio; BSc, Bachelor of Sciences; CI, Confidence Interval; COR, Crude Odd Ratios; EH, Enyat Hospital; GHC, Geneme Health Center; HRT, Human Relation Theory; IHRERC, Institutional Health Research Ethics Review Committee; OCS, Organizational Communication Skills; OTCRH, Otona Teaching and Comprehensive Referral Hospital; PI, Principal Investigator; SCH, Sodo Christian Hospital; SHC, Sodo Health Center; SNT, Social Network Theory; SNNPRS, South Nation Nationality People’s Regional State; SPSS, Statistical Package for Social Science; WHC, Wadu Health Center.

**Data Sharing Statement**

The data used to support the findings of this study are available from the corresponding author upon request.

**Ethics Approval and Consent to Participate**

Ethical clearance was obtained from the Institutional Health Research Ethics Review Committee (IHRERC) of Haramaya University College of Health and Medical Science. The official letter from the Institutional Health Research Ethics Review Committee (IHRERC no.) and the department was submitted to the Wolaita Sodo health facility. Informed, voluntary, written, and signed consent was obtained from the head of each health facility and each of the professionals for their willingness to be part of the study before starting data collection. Participants were told that they could refrain whenever they felt like it. The participant’s response was kept anonymous and confidential throughout the study.

**Acknowledgments**

The authors are pleased to thank Haramaya University College of Health and Medical Sciences, School of Public Health, for giving us these opportunities and support to conduct this research. We would also like to extend our deepest gratitude to Girmaye Dinsa (Ph.D.), who provided valuable ideas throughout the preparation of this research thesis. Lastly, we would like to acknowledge our family, friends, study participants, data collectors, and Wolaita Zone Health Office for their great help and encouragement.

This paper is based on the thesis of (Samuel Demissie, Behailu Hawulte, Melake Demena, Dawit Firdisa, Samrawit Shawel, and Ashenafi Berhanu). It has been published on the institutional website.

**Author Contributions**

All authors made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis and interpretation, or in all these areas; took part in drafting, revising or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.
Funding
This study was supported by Haramaya University.

Disclosure
The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

References
17. Sodo City Health Office (SCHO); 2022. Annual report of health sector plan achievement of the year 2022, Wolita Sodo, southern Ethiopia.
18. Club M. 1996–2017 how good are your communication skills (speaking, listening, writing, and reading effectively)? 2022.
20. Gebechyu K, Hailu M. Nurses’ communication skills and determinant factors in Amhara Region Referral Hospitals, Northwest Ethiopia; 2019.