Health Workers’ Knowledge and Attitude Towards Intimate Partner Violence: A Descriptive Study in Sidama Region, Southern Ethiopia

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Background: It is important that health workers understand intimate partner violence (IPV) and its link with ill health. Increasing their awareness will help them play a stronger role in identifying survivors and providing appropriate health care. We assessed the knowledge and attitude of health workers towards IPV survivors taking into account their professional roles.

Methods: Data was collected in 2018 in 12 health centers and 55 health posts located in 3 districts of the former Sidama zone using a self-administered questionnaire. The main outcome variable was proportion of wrong responses of the knowledge questions. We also calculated scores from the 10 knowledge questions and 10 Likert items of attitude. Proportions of wrong responses were compared between health post and health center staff. Mean knowledge score was compared using an independent samples t-test and a one-way analysis of variance. A Tukey’s honestly significant difference test was performed to determine significant analysis of variance results.

Results: There were 139 participants. Most (78%) of them were females. Nurses and midwives accounted for 54% of the total. Few (13%) of the participants had received previous training regarding IPV. More than half of the participants were not confident about how to care for women exposed to IPV. “Wrong responses” (incorrect or “don’t know”) ranged from 5.8% to 30.9%. The mean knowledge score was higher for women older than 30 years (p = 0.03). Negative attitudes ranged from 4 to 47%. One-third of the participants believed that they could not suspect IPV unless they saw physical injuries. More knowledge about IPV was associated with better attitude scores.

Conclusion: Around half of the health workers felt unprepared to provide care to IPV survivors, and a third would not consider IPV unless they saw physical evidence. Increasing knowledge may improve attitudes and support for IPV survivors.

Keywords: health workers, knowledge, attitude, intimate partner violence, Ethiopia

Introduction

Intimate partner violence (IPV) can affect a woman’s health in many ways.1–3 It can also affect the baby when the woman experiences violence during her pregnancy.4,5 According to the World Health Organization, the prevalence of lifetime IPV in 2018 for the African region and Ethiopia was 33% and 37%, respectively.6 Furthermore, the reported prevalence of IPV among pregnant women ranges from 2% to 57%, as shown in a systematic review of mainly African studies.7

Though women experiencing violence (now called “survivors”, not “victims”)8 in relationships may seek health care for ensuing emotional or physical harm, they often do not disclose the connection to partner violence.9 A finding from a study conducted among women of reproductive age in eastern Ethiopia reported that only 20% of those experiencing IPV ever reported it.10 A qualitative study in western Ethiopia revealed that traditional social norms encourage women to tolerate and hide any challenges they face.11

A study conducted in Tanzania showed that health care workers thought men should be allowed to use IPV as a disciplinary tool.12 A study conducted in Guyana also indicated that 30% of health care providers, men and women
alike, thought that physical violence was justified if the woman argues with the man, or if she spends too much time with friends, or if she is unfaithful. A majority of Jordanian nurses reported that the survivors’ personalities contributed to the violence committed against them by men. However, a recommendation by the World Health Organization suggests that health care providers should be able to recognize signs of IPV and should ensure that women who experience IPV receive appropriate care and are referred to other resources and services when necessary.

When some nurses meet women exposed to IPV seeking professional health care, they do not know how to respond. They do not know the services they could refer survivors to, and often think that reassurance was their only course of action. Other studies have shown that women experiencing violence may find little support in the health services, and health workers felt that assisting survivors of IPV was difficult, low-paying and stressful. In addition, health workers who were married have been shown more likely to feel negatively about providing services to survivors of IPV. Several factors, including lack of training on the subject, fear of getting involved in legal issues, a concept that violence is a private issue, and fear of offending the patient were identified as common barriers in routine health care work to inquiring about IPV and providing care in Nicaragua. A study from Nigeria showed that health professionals who received training were three times more likely to inquire about IPV. Health workers should be able to identify and support pregnant women who experience violence. However, unless health workers have positive, informed attitude, they might be less interested in identifying and providing care. As a result, pregnant women experiencing violence might be rarely supported by health workers. Therefore, we undertook this study to gain a better understanding of what health workers know about the issue, and what they think to develop educational initiatives to identify and provide care to survivors.

This paper is part of a larger study on IPV in the former Sidama zone, Ethiopia. In this study, we aimed 1) to assess knowledge and attitude of health workers towards pregnant IPV survivors and their professional roles, as well as 2) to assess determinants of attitude of health workers towards IPV among health workers.

**Materials and Methods**

**Study Setting**
The study was conducted in three districts of the former Sidama zone: Boricha, Gorche, and Aleta Wendo. In 2020, Sidama zone was transformed to the new Sidama regional state and now has 19 districts. Boricha, Gorche and Aleta Wendo districts are located around 300 km south of Addis Ababa, the capital city of the country, and 30–70 km south of Hawassa city, the capital city of Sidama regional state. Boricha district has 3 urban and 39 rural Kebeles (Kebele is the smallest administrative unit in Ethiopia, similar to a localized group of people). Gorche has 1 urban and 21 rural Kebeles, and Aleta Wendo has 2 urban and 27 rural Kebeles. Based on the 2007 census and a growth rate of 2.8%, the estimated projected populations in 2017 were 311,509 in Boricha, 184,237 in Gorche and 249,021 in Aleta Wendo. Boricha district has 1 primary hospital, 10 health centers and 38 health posts, while Gorche has 6 health centers and 21 health posts, and Aleta Wendo has 1 primary hospital, 7 health centers and 29 health posts serving their populations. Leku primary hospital is (22 km) the closest primary hospital for Gorche district. The closest secondary hospital with maternity care for the study population is Yirgalem general hospital for all the three districts. The coordination of mother- and child-health care is the responsibility of the district health office.

**Study Design**
This was a cross-sectional study conducted among health workers in Sidama. The main outcome variable was proportion of wrong responses of the knowledge questions, and score calculated from Likert items of attitudes to survivors of IPV during pregnancy was considered as secondary outcome.

**Sample Size**
A sample size of 139 would be sufficient to detect a difference between groups when correct knowledge is 80% in one group and 90% in the other, and with a standard deviation of 20%, a power of 80% and confidence level of 95%. To account for non response, we added 10% to the calculated sample size.
Sampling Procedure
The study employed multistage random sampling technique. First, the 20 districts found in the zone were listed alphabetically. Their list was randomized using list randomizer and the 3 districts were randomly selected using random number generator of random.org. Then, 50% of the health centers in each district were selected randomly. Accordingly, 5 health centers and 24 health posts from Boricha, 3 health centers and 13 health posts from Gorche, and 4 health centers and 18 health posts from Aleta Wendo were selected. Finally, we selected 50% of the health workers working in the health centers and 1 health extension worker from each health post by lottery method.

Data Collection
Data was collected between April and June, 2018, among health workers giving maternal health care services at the sampled health centers and health posts. All participants had been working for at least 1 year in the former Sidama zone, southern Ethiopia. Data was collected via paper using a structured self-administered questionnaire read and filled-in by the participants themselves. The questionnaire was developed by reviewing various published studies on related topics. It was first prepared in English and was then translated into Amharic then back to English language by the principal investigator. The questionnaire included socio-demographic data, 10 items assessing knowledge and 10 items assessing attitudes. It was tested on a few health care professionals and revised accordingly before the start of actual data collection. Data collection was facilitated by three trained nurses who were employed in the same district health office. If the participant was unavailable at the first visit, the nurses came back to do it later. All the completed questionnaires were checked for completeness by the principal investigator and the nurses who facilitated the data collection in the respective districts.

Variables
The main outcome variable was proportion of wrong responses of the knowledge questions and score calculated from Likert items of attitudes to survivors of IPV was considered as secondary outcome. The 10 knowledge questions about IPV required “True”, “False” or “Don’t know” response. All questions had equal weight (0 if answered wrongly or do not know, 1 if answered correctly), and hence the maximum total score was 10. The ten Likert item statements to assess attitudes about IPV had a 5-point response format from 1 (strongly disagree/most negative) to 5 (strongly agree/most positive). The participants were asked to record their degree of agreement or disagreement to the statements; seven of them required “disagree” responses to be considered a “positive attitude” and these scores were reverse scored to calculate total attitude score, to be used as a measure of attitude.

Exposure variables or determinants were age, sex, education, religion, qualification, type of job, years of experience, and previous participation in training on IPV.

Data Analysis
Data was entered in Epi-Data software and analyzed using SPSS version 20 (Armonk, NY: IBM Corp. USA) software. The characteristics of the participants were described using frequency and percentage for categorical variables and mean with standard deviation for continuous variables. Mean knowledge score was compared using independent samples t-test (when the independent variable has two categories) and one-way analysis of variance (ANOVA) (when the independent variable has greater than two categories). A Tukey’s honestly significant difference post-hoc test was performed for significant ANOVA results. Level of significance was set at \( P < 0.05 \). Knowledge and attitude scores were described using frequency and percentage of each statement. Originally, we developed 15 knowledge questions and later it was reduced to 10 as the reliability test of dichotomous items measured by Kuder-Richardson 20 Test (KR-20) was improved from a value of 0.5 to 0.7 when the 5 items were deleted. The final questionnaire showed good internal consistency. A single composite score of attitude was developed by calculating total scores from the 10 Likert items of attitude and the Cronbach’s alpha of the attitude scale was found to be 0.6, which indicated an acceptable level of internal consistency for the items in the scale. Linear regression was performed to investigate determinants of attitude after calculating the total attitude score. Assumptions for linear regression were checked. Variables with a correlation at \( p < 0.25 \) and known
confounders including age, sex and residence were selected for the regression analysis. Regression coefficient (B) with a 95% confidence interval was reported.

**Ethical Consideration**

The study complies with the Declaration of Helsinki. Ethics approval was obtained from the Institutional Review Board at the College of Medicine and Health Sciences, Hawassa University (Ref No: IRB/006/09), and from Regional Committees for Medical and Health Research Ethics, Western Norway (Ref No: 2016/1908/REK vest). Written informed consent was obtained from each participant.

**Results**

A total of 139 health workers were included. Table 1 shows the socio-demographic and institutional characteristics of the participants. The majority (78%) were females. The median age of the participants was 26 years, with the ages ranging from 20 to 45 years. Most (75%) had attained an educational level higher than certificate. A certificate level education is given after a successful completion of the 10th grade national examination plus a 1–2 year technical vocational education. Nurses and midwives accounted for 54% of the participants, health extension workers accounted for 40%.

| Characteristics of Participants | Number | %  |
|---------------------------------|--------|----|
| Residence                       |        |    |
| Rural                           | 64     | 46.0|
| Urban                           | 75     | 54.0|
| Age in years                    |        |    |
| 20–30                           | 121    | 87.1|
| 31–45                           | 18     | 12.9|
| Sex                             |        |    |
| Male                            | 31     | 22.3|
| Female                          | 108    | 77.7|
| Education                       |        |    |
| Certificate                     | 35     | 25.2|
| Diploma                         | 86     | 61.9|
| Degree                          | 18     | 12.9|
| Occupation                      |        |    |
| Health extension worker         | 55     | 39.6|
| Nurse                           | 58     | 41.7|
| Midwife                         | 17     | 12.2|
| Health officer                  | 9      | 6.5 |
| Ethnicity                       |        |    |
| Sidama                          | 114    | 82.0|
| Amhara                          | 15     | 10.8|
| Others                          | 10     | 7.2 |
| Religion                        |        |    |
| Protestant                      | 103    | 74.1|
| Orthodox                        | 20     | 14.4|
| Others                          | 16     | 11.5|

(Continued)
and health officers 7%. Only a few of the participants had received pre-service (13%) and in-service (17%) training regarding IPV. Many (77%) reported having met a pregnant client exposed to IPV seeking their medical help.

Table 2 shows the responses to the knowledge questions. The proportion of incorrect responses to the knowledge questions ranged from 5.8% to 30.9%. The 95% CI for the percentage of incorrect responses for knowledge items was fairly wide and overlapped between the groups of respondents.

Among our participants, the mean knowledge score was 8.38 (SD 1.79) out of 10. Table 3 shows a comparison of the mean knowledge scores across socio-demographic and other institutional characteristics. The mean knowledge score was higher among those aged 31–45 years than those who were younger (20–30 years; p = 0.03). However, there was no significant difference in the mean knowledge score between the different categories of residence, sex, training, years of experience and type of health institution for recruitment. A one-way ANOVA revealed that there was a statistically significant difference in the mean knowledge score for categories grouped by education and ethnicity. A post-hoc comparison using the Tukey HSD test found a statistically significant difference in the mean knowledge score between diploma and degree level health workers (p = 0.04), but no such difference between diploma and certificate level health workers (p = 0.54).

Table 4 shows the attitude towards IPV assessed among health workers through their responses to 10 attitude items measured by Likert scores. The results showed that among the health workers negative attitudes based on each of the ten attitude items ranged from 4% to 47%.

Table 5 shows the results of linear regression of determinants of total attitude score. An increase in total knowledge score was associated with an increase in total attitude score. None of the socio-demographic characteristics or training on IPV management was associated with attitude score among the health workers.
Table 2  Responses from Health Workers to 10 Knowledge Questions About Intimate Partner Violence, in Sidama Region, Southern Ethiopia, 2018

| Knowledge Questions                                                                 | Incorrect Response | Health Post (n = 55) | Health Center (n = 84) |
|-----------------------------------------------------------------------------------|--------------------|----------------------|-----------------------|
|                                                                                  |                    | n (%) 95% CI         | n (%) 95% CI          |
| IPV can occur in all settings, among all socioeconomic, religious and cultural groups (True). | 4 (7.3)            | 2.4–16.6             | 10 (11.9)            | 6.2–20.2 |
| Being slapped, pushed, shoved or pulled, hit, choked or burnt on purpose is IPV (True). | 3 (5.5)            | 1.4–14.1             | 5 (6.0)              | 2.2–12.7 |
| Being physically forced to have sexual intercourse when a woman did not want to is IPV (True). | 5 (9.1)            | 3.4–19.0             | 6 (7.1)              | 3.0–14.3 |
| Sexual intercourse when a woman did not want to because of fear of a partner is violence (True). | 14 (25.5)          | 15.3–38.2            | 19 (22.6)            | 14.6–32.5 |
| Being forced to do something sexual that is degrading or humiliating is IPV (True). | 5 (9.1)            | 3.4–19.0             | 6 (7.1)              | 3.0–14.3 |
| Insulting, humiliating in front of other people, scare or intimidate her on purpose, threatened to hurt someone she cared about is IPV (True). | 11 (20.0)          | 11.0–32.1            | 11 (13.1)            | 7.1–21.6 |
| IPV might be caused by alcohol drinking (True). | 12 (21.8)          | 12.4–34.1            | 18 (21.4)            | 13.6–31.2 |
| IPV never happens during pregnancy (False). | 15 (27.3)          | 16.8–40.1            | 21 (25.0)            | 16.6–35.1 |
| IPV in pregnancy cannot cause adverse health outcome for the pregnant woman or baby (False). | 9 (16.4)           | 8.3–27.9             | 8 (9.5)              | 4.5–17.3 |
| We cannot suspect IPV unless we see physical signs/injuries and bruises (False). | 19 (34.5)          | 22.9–47.8            | 24 (28.6)            | 20.0–38.9 |

Note: Total = 139, no missing value in all the questions.
Abbreviation: CI, confidence interval.

Table 3  Comparison of Mean Knowledge Scores (Range 0–10) by Basic Characteristics of Health Workers Included in the Study in Sidama Region, Southern Ethiopia, 2018 (n=139)

| Characteristics | Number (%) | Mean (SD) | P-value |
|-----------------|------------|-----------|---------|
| Residence       |            |           |         |
| Rural           | 64 (46.0)  | 8.1 (2.0) | 0.143*  |
| Urban           | 75 (54.0)  | 8.6 (1.6) |         |
| Age in years    |            |           | 0.032*  |
| 20–30           | 121 (87.1) | 8.3 (1.8) |         |
| 31–45           | 18 (12.9)  | 9.2 (1.2) |         |
| Sex             |            |           | 0.718*  |
| Male            | 31 (22.3)  | 8.5 (2.0) |         |
| Female          | 108 (77.7) | 8.4 (1.7) |         |
| Education*      |            |           | 0.042*  |
| Certificate     | 35 (25.2)  | 8.5 (1.3) |         |
| Diploma         | 86 (61.9)  | 8.1 (2.0) |         |
| Degree          | 18 (12.9)  | 9.3 (1.1) |         |

(Continued)
In this facility-based cross-sectional study of 139 health workers in southern Ethiopia, most (77%) of the participants reported having met a pregnant woman who had been exposed to IPV in their work. However, few had received pre-service or in-service training on IPV. More than half of the participants (57%) did not feel confident about caring for survivors of IPV. In addition, more than half of the health workers felt that dealing with violence meant interfering with privacy of the family, as well as that there was no time to discuss about IPV with the survivors. More knowledge about IPV was associated with better attitude.

Table 3 (Continued).

| Characteristics                        | Number (%) | Mean (SD) | P-value |
|----------------------------------------|------------|-----------|---------|
| Occupation                             |            |           |         |
| HEW                                    | 55 (39.6)  | 8.2 (1.7) | 0.266<sup>a</sup> |
| Nurse                                  | 58 (41.7)  | 8.3 (2.0) |         |
| Midwife                                | 17 (12.2)  | 8.8 (1.6) |         |
| Health officer                         | 9 (6.5)    | 9.3 (1.1) |         |
| Ethnicity<sup>c</sup>                  |            |           |         |
| Sidama                                 | 114 (82.0) | 8.2 (1.9) | 0.027<sup>b</sup> |
| Amhara                                 | 15 (10.8)  | 9.3 (1.1) |         |
| Others                                 | 10 (7.2)   | 9.1 (1.3) |         |
| Religion                               |            |           |         |
| Protestant                             | 103 (74.1) | 8.2 (1.8) | 0.107<sup>b</sup> |
| Orthodox                               | 20 (14.4)  | 9.0 (1.3) |         |
| Others                                 | 16 (11.5)  | 8.8 (1.9) |         |
| Marital status                         |            |           |         |
| Single                                 | 39 (28.1)  | 8.4 (2.0) | 0.650<sup>b</sup> |
| Married                                | 97 (69.8)  | 8.4 (1.7) |         |
| Others                                 | 3 (2.2)    | 9.3 (1.2) |         |
| Received pre-service training in IPV management | |         |         |
| No                                     | 121 (87.1) | 8.3 (1.8) | 0.252<sup>a</sup> |
| Yes                                    | 18 (12.9)  | 8.8 (1.3) |         |
| Received in-service training in IPV management in the last 6 months | |         |         |
| No                                     | 116 (83.5) | 8.5 (1.8) | 0.323<sup>a</sup> |
| Yes                                    | 23 (16.5)  | 8.0 (1.9) |         |
| Years of experience                    |            |           |         |
| 1–7                                    | 94 (67.6)  | 8.5 (1.8) | 0.534<sup>a</sup> |
| 8–14                                   | 45 (32.4)  | 8.2 (1.8) |         |
| Recruited from                         |            |           |         |
| Health post                            | 55 (39.6)  | 8.2 (1.7) | 0.441<sup>α</sup> |
| Health center                          | 84 (60.4)  | 8.5 (1.9) |         |
| Recruited from district                |            |           |         |
| Gorche                                 | 39 (28.1)  | 8.2 (1.8) | 0.338<sup>b</sup> |
| Boricha                                | 50 (36.0)  | 8.7 (1.4) |         |
| Aleta Wendo                            | 50 (36.0)  | 8.2 (2.1) |         |

Notes: p-value<sup>a</sup> obtained from independent sample t-test. p-value<sup>b</sup> obtained from One-way analysis of variance (ANOVA). Education<sup>c</sup>: certificate = diploma; p = 0.54, diploma < degree; p = 0.04 Ethnicity<sup>c</sup>: Sidama = Amhara = Others, though ANOVA was significant, the post-hoc test appeared non significant. This might be due to lack of statistical power, as the categories have small numbers. Bold indicates significant values.

Discussion
In this facility-based cross-sectional study of 139 health workers in southern Ethiopia, most (77%) of the participants reported having met a pregnant woman who had been exposed to IPV in their work. However, few had received pre-service or in-service training on IPV. More than half of the participants (57%) did not feel confident about caring for survivors of IPV. In addition, more than half of the health workers felt that dealing with violence meant interfering with privacy of the family, as well as that there was no time to discuss about IPV with the survivors. More knowledge about IPV was associated with better attitude.
In our study, almost one-third of the participants believed that they could not suspect IPV unless they see physical injuries such as bruises. A qualitative study conducted among health professionals working in an emergency hospital in Kenya, assessed health workers’ responses to patients who had experienced IPV. The results showed that the participants recognized IPV patients because of their obvious injuries and stated that they could not identify IPV patients in the absence of obvious physical injuries.

However, as explained earlier in the definition of IPV, the phenomena involves more than simply visible physical injuries. It is therefore recommended that health professionals should consider the following situations as possibly indicating that a woman has experienced IPV: if she has ongoing emotional health issues such as stress or anxiety, harmful behaviors such as misuse of alcohol, thoughts or acts of self-harm or (attempted) suicide, repeated sexually transmitted infections, or unexplained chronic pain or repeated health consultations with no clear diagnosis in addition to visible physical injuries. When health workers see situations like these, they are encouraged to ask about exposure to IPV to identify and respond to the violence experienced in women including during pregnancy.

Health workers expressed that personal limitations and feelings of inadequacy due to lack of interpersonal skills and knowledge were challenges to managing survivors of IPV.

We found good attitude in persons with more knowledge, but with our cross-sectional design we have not proved that giving more knowledge will improve attitude. In our study, few (13%) of the participants had received training regarding IPV. A cross-sectional study in Spain investigated factors associated with primary care professionals’ readiness to respond to IPV. Its results showed that age, type of profession, years of experience and hours of IPV training were

| Likert Items to Assess Good Attitude | Score 1 n (%) | Score 2 n (%) | Score 3 n (%) | Score 4 n (%) | Score 5 n (%) |
|-------------------------------------|--------------|--------------|--------------|--------------|--------------|
| An intimate partner is not justified to beat or insult his wife even if the pregnancy is mistimed or unwanted (agree means good). | 20 (14.4) | 15 (10.8) | 2 (1.4) | 46 (33.1) | 56 (40.3) |
| Physical violence is not an acceptable way to resolve conflict in a relationship (agree means good). | 30 (21.6) | 35 (25.2) | 7 (5.0) | 39 (28.1) | 28 (20.1) |
| Dealing with violence is pertinent not only to the fields of police and justice, but also to health (agree means good). | 12 (8.6) | 11 (7.9) | 2 (1.4) | 55 (39.6) | 59 (42.4) |
| An intimate partner can beat his wife during pregnancy unless he directly focused the abdomen (disagree means good). | 87 (62.6) | 43 (30.9) | 3 (2.2) | 3 (2.2) | 3 (2.2) |
| A woman should tolerate violence in order to keep her family together (disagree means good). | 59 (42.4) | 50 (36.0) | 1 (0.7) | 20 (14.4) | 9 (6.5) |
| Violence will not happen unless the woman has done something that would trigger the perpetrator to abuse her (disagree means good). | 37 (26.6) | 54 (38.8) | 7 (5.0) | 26 (18.7) | 15 (10.8) |
| Health care professionals should not screen for violence in order not to offend the woman (disagree means good). | 54 (38.8) | 59 (42.4) | 3 (2.2) | 16 (11.5) | 7 (5.0) |
| Dealing with violence means interfering with privacy of the family (disagree means good). | 32 (23.0) | 49 (35.3) | 4 (2.9) | 32 (23.0) | 22 (15.8) |
| Health care professionals should suggest abused women to leave their home (disagree means good). | 67 (48.2) | 61 (43.9) | 1 (0.7) | 6 (4.3) | 4 (2.9) |
| Health care professionals do not have any role except treating physical injuries caused by intimate partner violence (disagree means good). | 57 (41.0) | 57 (41.0) | 2 (1.4) | 17 (12.2) | 6 (4.3) |

Notes: Likert Scores, Score 1=strongly disagree, score 2=disagree, score 3=neutral, score 4=agree and score 5=strongly agree. “Agree” meant good attitude for score in questions 1-2-3, and “disagree” meant good attitude for questions 4–10.

In our study, almost one-third of the participants believed that they could not suspect IPV unless they see physical injuries such as bruises. A qualitative study conducted among health professionals working in an emergency hospital in Kenya, assessed health workers’ responses to patients who had experienced IPV. The results showed that the participants recognized IPV patients because of their obvious injuries and stated that they could not identify IPV patients in the absence of obvious physical injuries. However, as explained earlier in the definition of IPV, the phenomena involves more than simply visible physical injuries. It is therefore recommended that health professionals should consider the following situations as possibly indicating that a woman has experienced IPV: if she has ongoing emotional health issues such as stress or anxiety, harmful behaviors such as misuse of alcohol, thoughts or acts of self-harm or (attempted) suicide, repeated sexually transmitted infections, or unexplained chronic pain or repeated health consultations with no clear diagnosis in addition to visible physical injuries. When health workers see situations like these, they are encouraged to ask about exposure to IPV to identify and respond to the violence experienced in women including during pregnancy. Health workers expressed that personal limitations and feelings of inadequacy due to lack of interpersonal skills and knowledge were challenges to managing survivors of IPV.

We found good attitude in persons with more knowledge, but with our cross-sectional design we have not proved that giving more knowledge will improve attitude. In our study, few (13%) of the participants had received training regarding IPV. A cross-sectional study in Spain investigated factors associated with primary care professionals’ readiness to respond to IPV. Its results showed that age, type of profession, years of experience and hours of IPV training were
associated positively with knowledge, opinion and practice of health care professionals regarding IPV. Referring patients to other departments, individual counseling and information delivery about IPV were the most frequent actions reported by the health workers. The likelihood that the health workers would investigate IPV was higher among respondents who had been trained, those with advanced training level, those with knowledge of policies and programmes, and those who had an appropriate protocol and reference resources. Professionals who reported a higher level of training in IPV and provision of case management protocol asked more questions about IPV. This underlines that investing in health care personnel IPV training improved the health of many women.

Table 5 Linear Regression of Determinants of Total Attitude Scores (Range 10–50) of Health Workers from Their Responses to Questions About Intimate Partner Violence in Sidama Region, Southern Ethiopia, 2018 (n=139)

| Characteristics                      | B     | 95% CI          | P-value |
|--------------------------------------|-------|-----------------|---------|
| Residence                            |       | Reference       |         |
| Rural                                | −1.5  | −3.4 to 0.3     | 0.102   |
| Urban                                |       |                 |         |
| Age in years                         | −0.1  | −0.3 to 0.2     | 0.719   |
| Sex                                  |       | Reference       |         |
| Male                                 | −0.4  | −2.7 to 2.0     | 0.770   |
| Female                               |       |                 |         |
| Educational status                   |       | Reference       |         |
| Certificate                          | −1.7  | −6.2 to 2.7     | 0.442   |
| Diploma                              | −2.4  | −6.1 to 1.3     | 0.208   |
| Degree                               |       |                 |         |
| Occupational status                  |       | Reference       |         |
| Health extension worker              | 1.5   | −3.7 to 6.7     | 0.576   |
| Nurse                                | 0.9   | −3.6 to 5.4     | 0.688   |
| Midwife                              | 2.5   | −2.3 to 7.4     | 0.305   |
| Health officer                       |       |                 |         |
| Ethnicity                            |       | Reference       |         |
| Sidama                               | −1.6  | −4.8 to 1.5     | 0.304   |
| Others                               |       |                 |         |
| Religion                             |       | Reference       |         |
| Protestant                           | −1.3  | −3.7 to 1.1     | 0.284   |
| Others                               |       |                 |         |
| Marital status                       |       | Reference       |         |
| Single                               | −0.4  | −2.6 to 1.8     | 0.714   |
| Others                               |       |                 |         |
| Years of experience                  | 0.1   | −0.2 to 0.4     | 0.624   |
| Pre and or in-service Training on IPV|       | Reference       |         |
| No                                   |       |                 |         |
| Yes                                  | −1.1  | −3.0 to 0.8     | 0.242   |
| Cared pregnant women experiencing IPV|       | Reference       |         |
| No                                   |       |                 |         |
| Yes                                  | 1.5   | −0.5 to 3.6     | 0.144   |
| Knowledge level score                | 0.9   | 0.5 to 1.4      | <0.001  |

Note: Bold indicates significant results.

Abbreviations: CI, confidence interval; B, unstandardized beta coefficient; IPV, intimate partner violence.
workers do not know that IPV can occur in all settings and among all socioeconomic groups. The identification of possible IPV survivors can be enhanced when health care providers had higher level of awareness due to advanced training.

This study had several strengths. It had a high response rate, and the recruitment from various districts made it reflective of the situation in the area. Also, in spite of some periods of national instability, the data collection was successfully carried out without much disturbance. This study was important in helping to build an impression of the situation in the area and providing information about some risk factors for unhelpful attitudes. However, it did not give high precision findings. Another limitation is that some of the items had not been tested before. Hence, exact comparison with “scores” in other studies could not be undertaken. In addition, we cannot infer causality as temporal sequence cannot be established in this cross-sectional study.

Conclusion
Around half of the health workers felt unprepared to provide care to survivors of IPV, and a third would not consider IPV unless there was physical evidence. Increasing knowledge may improve attitudes thereby improving the situation for women suffering IPV. It is therefore recommended to give health workers training regarding when to suspect a woman has been subjected to violence and what they should do in such cases. In addition, it is important to include IPV in the curriculum of health workers. There should also be efforts to better inform the public about this matter and its potential negative consequences for mothers and babies. It is also important to inform the police that violence is not an ordinary criminal case, as health workers sometimes have to involve police based on the woman’s desire.

Abbreviations
ANOVA, one-way analysis of variance; CI, confidence interval; IPV, intimate partner violence.

Data Sharing Statement
The data underlying the study are available within the manuscript and its supporting files.

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Disclosure
The authors declare that they have no competing interests.

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