

Nursing Students' Knowledge, Attitudes, And Practices Regarding Disaster Preparedness at Menelik II Medical and Health Science College in Addis Ababa, Ethiopia, 2026. An Institution-Based Cross-Sectional Study Design

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ABSTRACT

Background: Disasters are more frequent and severe worldwide, highlighting the critical need for medical personnel equipped to respond appropriately. Nursing knowledge and skills are vital for disaster preparedness. Healthcare workers must be specifically trained to deal with disasters and disaster preparedness as future healthcare providers. There is a strong need for disaster education in nursing programs in Ethiopia due to rapid urbanization and recurrent emergencies.

Objective: To assess the knowledge, attitude, and practice of nursing students regarding disaster preparedness at Menelik II Medical and Health Science College, Addis Ababa, Ethiopia, 2026.

Methods and Materials: A study was done at Menelik II Medical and Health Science College in Addis Ababa from May 1-31/2026. It was done with 657 nursing students. A pre-tested and structured self-administered questionnaire was used to collect the data, which were then coded and entered into EpiData version 4.6; cleaned and analyzed using Stata version 17.0. All variables in the binary and multivariable logistic regression analyses were analyzed. The degree of association was determined using the adjusted odds ratio (OR) with 95% confidence intervals (CI). The significance level was set at a P-value of 0.05. The Hosmer–Lemeshow test was used to assess the model's fit.

Results: 722 nursing students were invited; the response rate was 90.9%. The findings of this study showed that 62.7% (95% CI [59, 66.4]) of the nursing students had satisfactory knowledge, 54.5% (95% CI [50.7%, 58.3%]) had negative attitudes, and 85% (95% CI [81.9, 88.1]) had unfavorable practices regarding Disaster Preparedness.

Conclusion: The nursing students had satisfactory knowledge, negative attitudes, and unfavorable practices. Academic achievement (GPA) was significantly associated with nursing students' knowledge of disaster preparedness.

Keywords: Attitude, Disaster, Knowledge, Nursing Students, Practice, Preparedness

Introduction

Natural or human-made disasters can occur at any time, causing destruction [1] and posing serious risks to public safety and health [2]. Compared with high-income countries, disasters cause substantially more deaths, displacements, and economic damage in low- and middle-income countries [3]. Ethiopian disasters

have become more frequent and more devastating over recent decades due to climate, environment, and rapid urbanization [4]. Healthcare workers, especially nurses, play a vital role in reducing the effects of disasters and guaranteeing efficient response and restoration [5]. Nursing students must possess the knowledge, skills, and attitudes to handle disaster situations [6]. However, according to studies, many nursing programs do not provide thorough disaster preparedness training, leaving students ill-prepared for real-world situations [7]. This disparity

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makes it extremely difficult to guarantee that aspiring nurses are sufficiently prepared to act in emergencies [8]. Finding areas of strength and weakness in current educational programs requires a systematic evaluation of nursing students' readiness for disasters [9].

Although the significance of disaster preparedness in nursing education is increasingly recognized, little is known about the present state of nursing students' knowledge, attitudes, and practical readiness [10,11].

Nursing teachers can create specific lessons to prepare students for the complex needs of disaster response and management by addressing these problems.

This study aimed to assess what nursing students know, think, and do about disaster preparedness. It will give us a better understanding of how disaster education is taught in nursing classes.

Statement of the problems

Natural disasters, such as Hurricane Harvey, earthquakes, and man-made tragedies, such as mass shootings, are both growing threats that strain local resources to the breaking point and frequently call for national or international aid [12]. Individuals and communities are left with stories of death, trauma, and psychological anguish because of these upsetting events, which leave a wake of destruction [13]. Effective crisis response is essential for reducing fatalities and guaranteeing the welfare of impacted communities [14].

This necessitates a thorough disaster management plan that incorporates tactics for allocating resources, following triage procedures, and coordinating with emergency services [15]. Healthcare institutions need strong systems and skilled staff that can provide care in difficult situations and adjust to changing situations [16].

In some studies, 40%–60% of nursing students worldwide knew basic disaster preparedness. This includes knowing the many kinds of disasters, how to respond to them, and how to assess risks [11]. However, only 20%–30% have an advanced understanding of areas including emergency treatment, crisis management strategies, and triage [7]. Nursing students in countries like the US, Canada, and some parts of Europe usually have more knowledge because of more structured disaster preparedness training. But there are still gaps in practical implementation [10,17]. Latin America: Because of fewer resources and training possibilities in countries such as Brazil and Mexico, nursing students there report lower knowledge levels (40-50 %) [18].

Nursing students frequently report low knowledge levels in Southeast Asia, Africa, and South America. This is due to a lack of resources and curriculum integration for disaster preparedness [19]. Nursing students frequently report low knowledge levels in Southeast Asia, Africa, and South America. A study found that most Saudi Arabian nursing students have good attitudes (72%) and know enough about disaster preparedness (69%) according to a study. However, 84% of respondents indicated inadequate practice, indicating a substantial gap in practical application [1].

Disasters are becoming more frequent and severe globally, emphasizing the critical need for medical personnel equipped to respond appropriately. As the upcoming generation of medical professionals, nursing students are essential to disaster relief efforts [20].

By answering these questions, this study intends to indicate areas where nursing education needs to be improved and assist in the development of more effective disaster preparedness training programs [21].

The WHO suggests the need to integrate the curriculum, as students' knowledge levels are greater in programs that offer specialized disaster preparedness courses or modules [22].

Practical Training: Drills, simulations, and hands-on training greatly improve knowledge retention and preparedness for practical readiness [11].

Despite their varied levels of preparedness, nursing students worldwide still have significant gaps in knowledge and practice concerning disaster management. To ensure that nursing students are prepared to handle emergencies, these gaps must be filled through better education and training. No study has been conducted on the knowledge, attitudes, and practice of disaster preparedness among nursing students in the country. This study aimed to assess the knowledge, attitudes, and practice of disaster preparedness among nursing students at MIIMHSC, Addis Ababa, Ethiopia.

Literature Review

Knowledge of Disaster Preparedness

A study conducted in China knowledge regarding disaster preparedness was 66.33% [23]. According to a study conducted in Saudi Arabia, nursing students exhibited a moderate level of knowledge regarding disaster preparedness, with mean scores of 6.32 for knowledge [24]. Again, a study conducted in the Bangladeshi knowledge regarding disaster preparedness (88.1%) [25]. In another study conducted in Saudi Arabia, nursing students had adequate knowledge 69% [1]. A study conducted among Indonesian nursing students 58% [26], in Yemen 32.0% [27] and in India 8% [28], (32%) [29] had adequate knowledge regarding disaster preparedness. Studies indicate that nursing students generally have moderate knowledge about disaster preparedness, with average scores ranging from 3.17 to 3.65 on various assessment scales [24,30,31]. According to a study conducted in Pakistan, undergraduate nursing students have a moderate level of knowledge (6.32 ± 2.5) regarding disaster preparedness [32].

Attitude towards Disaster Preparedness

A study conducted among Chinese nursing students, 68.87% displayed a positive attitude toward disaster preparedness [23]. Again, a study conducted in Bangladeshi [25] (87.8%) and in Yemeni [27] 84.9% of nursing students have a positive attitude regarding disaster preparedness.

According to a study conducted in Saudi Arabia, nursing students exhibited a moderate level of attitude, 5.7 for attitude [24]. A study conducted in Pakistan, undergraduate nursing students

elicited a moderate level of attitude 5.7 ± 2.05) regarding disaster preparedness [32]. In another study conducted in Saudi Arabia [1], (72%), in Indonesian (74.6%) [26] and in India (62%) [28], (92%) [29] nursing students had a positive attitude regarding disaster preparedness.

Practical Preparedness

A study conducted among Chinese nursing students' practice regarding disaster preparedness was 67.6% [23]. Again, a study conducted in Bangladeshi nursing students' practice regarding disaster preparedness was 82.1% [25].

According to a study conducted in Saudi Arabia, nursing students exhibited a moderate level of 6.37 for practice [24]. According to a study conducted in Pakistan, undergraduate nursing students elicited a moderate-level practice (6.37 ± 2.2) regarding disaster preparedness [32] in another study conducted in Saudi Arabia, nursing students had inadequate practice (72%) regarding disaster preparedness [1]. A study conducted among Indonesian nursing students showed good practice of 68.8% of disaster management techniques [26].

Factors affecting disaster preparedness

Many factors affect nursing students' readiness for disasters, including their gender, education, and how well they are supported by their schools. A study conducted in Yemen found that students' knowledge and attitude toward disaster management greatly predict their readiness to practice disaster preparedness [33]. A study showed that students' willingness to help with disaster response is directly related to how well disaster education programs work [34]. A significant number of nursing students lack knowledge regarding emergency kits and triage protocols because of inadequate preparedness [35]. Moreover, the integration of cultural competence and interprofessional collaboration into disaster preparedness training has been identified as essential for enhancing adaptability and responsiveness to diverse community needs during emergencies [14]. A systematic review of existing literature on disaster preparedness has been conducted to identify common themes and disparities across different educational and geographical contexts. The goal is to pinpoint areas for improvement in disaster nursing education programs, ensuring that future healthcare professionals are adequately equipped to handle the complexities of disaster management [36].

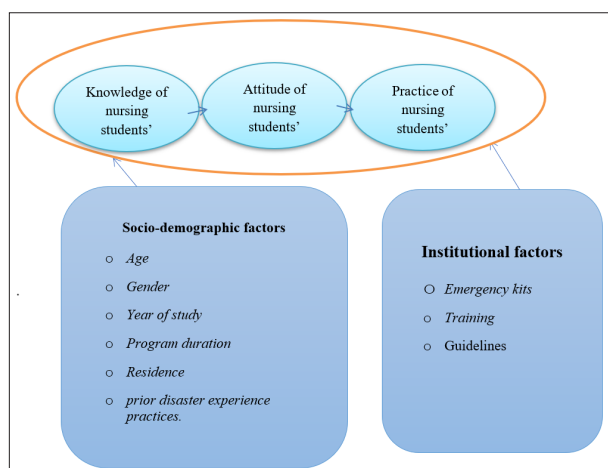


Figure 1: Conceptual framework to assess the Knowledge,

attitude and practice of nursing students regarding disaster preparedness [14,33,35,37,38] at MIIMHSC, in Addis Ababa, 2026.

Significance of the study

The results of this study will assist in identifying gaps in disaster preparedness education and aid in curriculum development for nursing programs. Enhanced nursing knowledge and skills will enable healthcare systems to anticipate and mitigate the impact of future catastrophic events. This research may also help create standard disaster preparedness training modules. This will help future nurses be able to respond well to disasters.

Methods and materials

Study Design and period

An institution-based cross-sectional survey was conducted from May 1-31/2026

Study Area and setting

The study was conducted at MIIMHSC in Addis Ababa, Ethiopia. Addis Ababa has more than 5 million people, making it the largest city in Ethiopia and one of the most populous in East Africa [39]. Menelik II Health Science College was established in 1956 and is located in Yeka Sub-city in the compound of Menelik II Hospital. It is one of the first Health Training sectors that provides unreserved services to the community from its establishment. The College works closely with the Addis Ababa City Health Bureau to provide training and services to many health professionals. The study focused on nursing students at MIIMHSC. MIIMHSC is the pioneer Health Science College in Ethiopia. This college trains many nursing programs and other fields. Nursing programs in post-basic such as Comprehensive Nursing, Surgical Nursing, Operation Theatre Nursing, Neonatal Nursing, Pediatric Nursing, Emergency and Critical Care Nursing, and Psychiatric Nursing, and regular-based such as Comprehensive Nursing, Surgical Nursing and Psychiatric Nursing.

Source and Study Populations

Source Population

Nursing students enrolled in Bachelor's in Nursing at MIIMHSC.

Study Population

Nursing students enrolled in Bachelor's in Nursing at MIIMHSC who meet the inclusion criteria and consent to participate in the study.

Study Unit

Each nursing student enrolled in accredited programs who meet the inclusion criteria and consent to participate in the study and present during data collection.

Inclusion and Exclusion Criteria

The study population included 722 nursing students (pre-clinical and clinical years) (second year and above) who were willing to provide informed consent. The survey was conducted during May1-31/2026 for the duration of 1 month. Inclusion Criteria.

The study includes those who were available during the time of data collection and willing to participate in the study

The study excludes participants who were sick/ill/absent during data collection, refused not to participate, or were exposed to any education program related to disaster management.

The dependent variables in this study are the Knowledge, Attitudes, and practices of nursing students about disaster preparedness, categorized as either yes or no. independent variables will include nursing students' related factors, such as age, gender, year of study, program duration, and prior disaster experience.

Operational Definitions

Students who scored less than 60% correct answers (up to 9 questions) were considered as unsatisfactory knowledge. Students who scored less than > 60% correct answers (more than 9 questions) were considered as satisfactory knowledge.

Attitudes toward disaster preparedness: agreeing student who scored $\geq 60\%$ were deemed to have a positive attitude; those who fell below this percentage were deemed to have a negative attitude [1].

Students who scored $\geq 60\%$ were considered to have satisfactory practice, whereas those who performed at a lower rate were considered as having unsatisfactory practice [1].

Data Collection Instrument

A structured questionnaire was used to collect data on nursing students' demographics, knowledge, attitude, and Practice regarding disaster preparedness.

Data Collection Procedure

A self-administered questionnaire with structured and open-ended questions was used after obtaining informed consent. The questionnaire included four tools to collect data of demographic information and KAP data on current disaster plans and preparedness. Questionnaires were given to internship students at their posting place.

Data Quality Control Issues

To ensure consistency and accuracy in the data collection process, data collectors underwent thorough training. Additionally, the questionnaire was pretested in a similar setting to identify and address any potential issues before the main study. A pre-test was conducted on nursing students at Yekatit 12 Teaching and Referral Hospital using 5% [35] of the study population sample size before the actual data collection started. The pretest results were 0.78, 0.75 and 0.80 for the knowledge, attitude and practice questionnaire. Regular supervision and spot-checks were implemented throughout the data collection process to maintain high standards and ensure the reliability of the gathered data.

Data Processing and Analysis

Data were checked manually for completeness and consistency of responses. Then it was entered into EPI. Data version 4.6, and exported into Stata version 17.0 software for further cleaning and analysis. Results were presented in the form of tables, figures, and charts descriptively. The Chi-square assumption test was checked for categorical variables. All variables p-value < 0.25 in the bi-variable binary logistic regression model was entered into a multi-variable binary logistic regression analysis,

and those variables with a p-value less than 0.05 with a 95% confidence interval were considered as significantly associated with outcome variables. Model fitness was checked by the Hosmer-Lemeshow goodness of fit test. Use the Adjusted Odds Ratio to determine the strength of association between the dependent and independent variables

Results

Sociodemographic characteristics of respondents regarding Disaster preparedness

Among 722 participants, 657 nursing students have participated in this study with a response rate of 90.9%. The mean age of nursing students was 27.8 (SD=4.87), and 420(64%) Nursing student age group found above 23 years old. About 544(82.8%) were female nursing students. More details were illustrated in Table1.

Table 1: Sociodemographic Characteristics of Nursing Students in Addis Ababa, At Mihsc, Ethiopia, 2026(N=657)

Sociodemographic variables	Frequency (n)	Percentage (%)
Age ≤ 20	35	5.3
>20-23	202	30.7
>23	420	64.0
Sex Male	113	17.2
Female	544	82.8
Marital status Single	219	33.4
Married	438	66.6
GPA <3.5	311	47.3
>3.5	346	52.7

Knowledge level of Nursing students regarding disaster preparedness

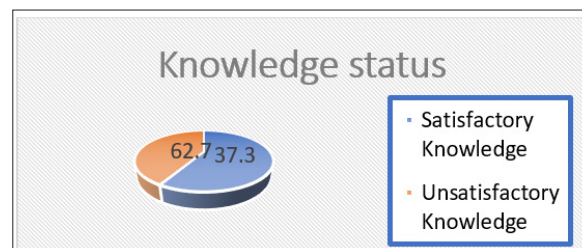
The following table (Table 2) shows the frequency and the percentage of respondents based on their correct scores to different knowledge questions. About 78.7% of nursing students knew what a disaster is, only 47.3% knew where to find the disaster plans. More than half nursing students 55.9%, knew what disaster preparedness is. About 58.8% their mismatch between event-driven needs and the resources can be met. About 48.7% of nursing students said both natural and man-made are possible. More than half 60.7% of nursing student reported that his/her city could experience a disaster one day. Less than half 42.6% of nursing student' stated a disaster might one day harm your college. 59.4% knew disaster planning for catastrophes by determining what would need to be done and how it should be done. 57.4%, identified the importance to identify and address the nearby threats could likely result in disaster for his/her college/community. 56.3%, familiar with college evacuation emergency procedure during disaster. 52.2%, distinguished the specific exit door during disaster situation. 56.6% knew the place what to do during earthquake. 58.9%, knew the safest place when the flood took place. 45.5% knew health professionals and non-healthy professionals are involved in disaster management. 62.1%, knew what drills are and 54.4%, understood its functions.

Table 2: Knowledge Level of Nursing Students Regarding Disaster Preparedness in Addis Ababa, At Miihsc, Ethiopia, 2026 (N=657)

Questions	No		Yes	
	Freq	%	Freq	%
1. Previously heard about the disaster concept?	140	21.3	517	78.7
2. Are you aware of where the plan may be found?	346	52.7	311	47.3
3. Knew about disaster planning	290	44.1	367	55.9
4. Disaster is a mismatch between event-driven needs and the resources that can be met.	271	41.2	386	58.8
5. Natural or man-made disasters are both possible.	337	51.3	320	48.7
6. His or her city could experience a disaster one day	258	39.3	399	60.7
7. A disaster might one day harm your college.	377	57.4	280	42.6
8. Planning of disaster is the process of preparing for catastrophes by determining what would need to be done and how it should be done.	267	40.6	390	59.4
9. It is important to identify and address the nearby threats that could likely result in disaster for his or her college or community.	279	42.6	378	57.4
10. Are you familiar with the college's emergency evacuation procedures during disasters?	305	46.4	352	53.6
11. Are you aware of any specific exit doors for use during the evacuation?	314	47.8	343	52.2
12. Do you know what to do when there is an earthquake?	285	43.4	372	56.6
13. Do you know where the safest place to be when a flood is?	270	41.1	387	58.9

14. Personnel from the city's health and non-health professions are involved in disaster management.	358	54.5	299	45.5
15. Do you know what drills are?	249	37.9	408	62.1
16. Do students members understand their functions during a drill?	300	45.6	357	54.4

More than half of 412(62.7%) with 95% CI (59,66.4) nursing students had satisfactory knowledge regarding disaster preparedness.

**Figure 2: Knowledge status of nursing students' regarding disaster preparedness in Addis Ababa, at MIIHSC, Ethiopia,2026(N=657).**

Attitude level of Nursing Students Regarding Disaster Preparedness in Addis Ababa, At Miihsc, Ethiopia, 2026 (N=657)

The following table (Table 3) shows the frequency and the percentage of respondents based on their correct scores to different attitude questions. The percentage of agreements attitude regarding disaster preparedness was 16.7%, the need for preparation was 40.2%, the disaster planning is for all people in the college was 65.7%, the potential hazards likely to cause disaster should be identified and dealt with was 76%, the need for training in the college for all was 68.5%, it is necessary to a disaster plan was 60%, disaster preparations must be revised frequently was 59.3%, to disasters are likely to happen in anywhere was 56.8%, to disaster management is for all-academic team, was 59.1%, to disaster simulations should occur frequently in the College, and 59.0% to drills should be conducted in the College was 61.3% .

Table 3: Attitude level of Nursing Students Regarding Disaster Preparedness in Addis Ababa, At Miihsc, Ethiopia, 2026 (N=657)

Questions	Disagree		Neutral		Agree	
	Freq	%	Freq	%	Freq	%
1. I do not require information on disaster planning preparedness.	367	55.9	180	27.4	110	16.7
2. The college administration should be adequately prepared for disasters	167	25.4	226	34.4	264	40.2
3. Disaster planning is for a few personnel in the college	72	11	153	23.3	432	65.7
4. Potential disaster-causing risks should be recognized and mitigated	39	6	99	15	519	79
5. Training is necessary for all college personnel	60	9	148	22.5	449	68.5
6. Is it necessary to have a disaster plan?	85	13	179	27	393	60
7. Disaster preparations must be revised frequently	132	20.1	135	20.6	390	59.3
8. The likelihood of disasters occurring at our college is low	138	21	146	22.2	373	56.8

9.	Only nursing staff and physicians need disaster management	161	24.5	108	16.4	388	59.1
10.	The college should hold frequent disaster simulation exercises	90	13.7	179	27.3	388	59.0
11.	Drills should be conducted in the college	116	17.7	138	21.0	403	61.3

The overall attitude status 54.5% (95% CI [50.7%, 58.3%]) of nursing students demonstrated negative attitudes toward disaster preparedness.

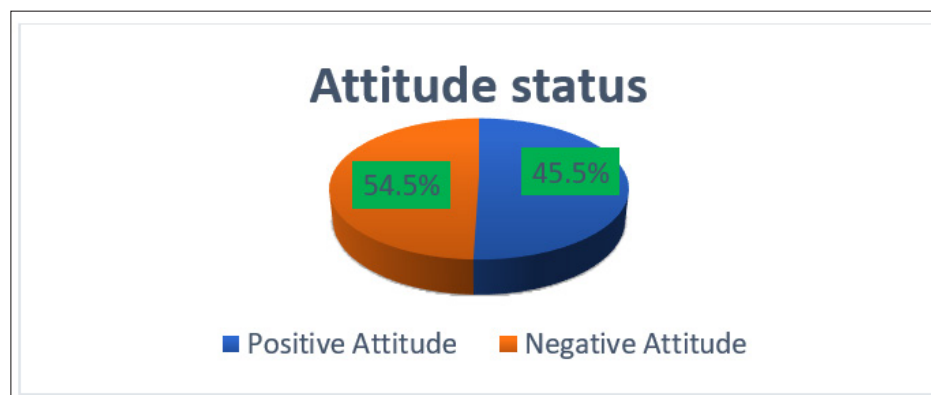


Figure 3: Attitude status of nursing students regarding disaster preparedness in Addis Ababa, at MIIHSC, Ethiopia, 2026 (N=657).

Practice level of Nursing students regarding disaster preparedness in Addis Ababa, at MIIHSC, Ethiopia, 2026 (N=657)

The following table (Table 5) shows the frequency and the percentage of respondents based on their correct scores to different practice questions. According to the reporting practice 88.9 of the study participants knew that disaster drills are done at their college. 36.8% said ongoing training and 49.9% reported there was plan updated periodically.

Table 4: Practice level of Nursing Students Regarding Disaster Preparedness in Addis Ababa, At Miihsc, Ethiopia, 2026 (N=657)

Questions	No		Yes	
	Freq	%	Freq	%
1. Are disaster drills done?	73	11.1	584	88.9
2. Is there ongoing training?	415	63.2	242	36.8
3. Is the disaster plan periodically updated?	329	50.1	328	49.9

Factors Associated with the Knowledge of Nursing students' disaster preparedness in Addis Ababa, at MIIHSC, Ethiopia, 2026 (N=657).

In both bi-variable and multi-variable analysis academic achievement (GPA) was significant associations at the p-value <0.05 with nursing students' knowledge regarding Disaster Preparedness. Nursing students who had >3.5 GPA were 2.9 times more likely to have satisfactory knowledge than nursing students had not [AOR=5%, CI. 0.4-8.8].

Table 5: Factors Associated with the Knowledge of Nursing Students' Disaster Preparedness in Addis Ababa, At Miihsc, Ethiopia, 2026 (N=657)

Variables	Knowledge (n=657)		COR (CI=95%)	AOR (CI=95%)	P-value
	Satisfactory	Unsatisfactory			
Age 18-<20(ref)	42	28	1	1	
20-23	98	69	1(0.5-1.6)	0.2(0.1-0.3)	0.200
>23	272	148	1.2(0.7-2)	0.3(0.1-1.5)	0.251
male (ref) Sex	132	42	1	1	
Female	71	341	0.9(0.6-1.5)	0.8(0.5-1.3)	0.572
Marital status/ Single(ref)	173	72	1	1	
Married	172	147	1.3(0.9-1.8)	0.6(0.3-1.2)	0.224
GPA (ref)<3.5	93	218	1	1	
>3.5	319	27	27.6(1.6-5.3)	0.2(0.6-7.9)	0.01**

Keywords p-value **=<0.01, *<0.05 Hosmer and Lemeshow= 0.3784

Factors Associated with the Attitude of Nursing Students' Disaster Preparedness in Addis Ababa, At Miihsc, Ethiopia, 2026 (N=657)

All the predictors were not statistically significant with the Attitude of Nursing students' disaster preparedness, as shown in the table below [6].

Table 6: Factors Associated with the Attitude of Nursing Students' Disaster Preparedness in Addis Ababa, At Miihsc, Ethiopia, 2026 (N=657)

Variables	Attitude (n=657)		COR (CI=95%)	AOR (CI=95%)	P-value
	Positive	Negative			
Age 18-<20(ref)	21	49	1	1	
20-23	44	123	0.2(0.5-1.6)	0.02(0.09-0.2)	0.700
>23	62	358	0.8(0.7-2)	0.08(0.1-1.5)	0.07
Sex male (ref)	30	83	1	1	
Female	30	447	0.6(0.3-0.9)	0.6(0.1-1.3)	0.09
Marital status Single(ref)	173	72	1	1	
Married	172	147	0.8(0.9-1.8)	0.6(0.2-0.4)	0.053
GPA (ref)<3.5	11	116	1	1	
>3.5	300	230	8(3-11)	0.8(0.2-0.4)	0.1

Factors Associated with the practice of Nursing students' Disaster Preparedness in Addis Ababa, At Miihsc, Ethiopia, 2026 (N=657)

All variables were not statistically significant with the practice of Nursing students' disaster preparedness.

Table 7: Factors Associated with the Practice of Nursing students' disaster preparedness in Addis Ababa, at MIIHSC, Ethiopia, 2026 (N=657)

Variables	Practice (n=657)		COR (CI=95%)	AOR (CI=95%)	P-value
	Satisfactory	Unsatisfactory			
Age 18-<20(ref)	14	56	1	1	
20-23	19	148	1(0.5-1.6)	0.2(0.1-0.3)	0.200
>23	65	355	1.2(0.7-2)	0.3(0.1-1.5)	0.251
Sex male (ref)	19	94	1	1	
Female	79	465	0.9(0.6-1.5)	0.8(0.5-1.3)	0.572
Marital status Single(ref)	53	385	1	1	
Married	45	174	1.3(0.9-1.8)	0.6(0.3-1.2)	0.224
GPA (ref)<3.5	21	290	1	1	
>3.5	77	269	5(3-11)	0.2(0.4-8.8)	0.051

Discussion

Disasters happen accidentally at any time and can harm economic status, cause disability or death, and affect health care services. The current study aimed to determine the Knowledge, attitude, and Practice of nursing students regarding disaster preparedness. The findings of this study showed that 62.7% (95% CI: 59, 66.4) of nursing students had satisfactory knowledge. The result of this study is in line with the study conducted in China (66.3%) [23]. The possible reason might be study unity, sampling methods and study design.

However, the finding of this study is slightly lower than the study conducted in Saudi Arabia (69%) [1] and Philippines [40]. The possible reason might be the previous exposure of disaster events, socio-economic status and gained from they included curriculum structured emergency preparedness content.

The result of this study is higher than the study conducted in

Indonesian nursing students (58%) [26], Yemen (32%) [41] and India (32%) [29] respectively. The possible reason might be the sample size and sampling method. The current study used a total surveying technique.

The current study findings showed that 54.5% (95% CI [50.7%, 58.3%]) of nursing students demonstrated negative attitudes toward disaster preparedness. This study finding is similar to a study conducted in India. The possible reason might be that there was no training regarding disaster preparedness both in Ethiopia and India [29].

The findings of the current study is lower than the study conducted in Saudi Arabia (28%); nursing students had negative attitudes regarding disaster preparedness [1]. The rationale might be that annual Hajj gathering in Saudi Arabia shapes disaster management and requires health professionals with strong emergency preparedness skills.

The finding of this study showed that 85% with 95% CI (81.9,88.1) of nursing students had unfavorable practice. The finding of this study is in line with the study conducted in Indonesia [42]. The possible reason could be the similarity of the study unit and study design.

The findings of this study agree with the studies conducted in Saudi Arabian nursing students [1,43] and in Latin America and the Caribbean [44]. The possible rationale might be that the study participants had not received on-the-job training that may enhance the nursing students' practice level.

The results of this study are lower than the study conducted in Indonesia [26]. The possible reason could be previous experience and training.

The present study found that GPA was the only significant predictor of disaster preparedness among nursing students. Students with higher academic achievement were more likely to demonstrate better knowledge regarding disaster preparedness than students with lower GPAs. This finding may be explained by the fact that students with higher academic performance generally have better learning abilities, stronger motivation, and greater engagement with professional education. Nursing students with better academic performance demonstrated higher disaster preparedness competencies. Nursing students who performed better academically had significantly higher disaster preparedness knowledge and confidence [11].

Conclusion and recommendation

The overall result showed that more than half of nursing students at MIIHSC in Addis Ababa had satisfactory knowledge, negative attitude and unsatisfactory practice regarding Disaster preparedness.

In this study, academic GPA level has a significant association with satisfactory knowledge regarding Disaster preparedness.

Recommendations

For Academic Administrators

There should be the availability of guidelines in each department and periodic in-service training.

For Department heads: the practical reinforcement that comes from regular drills, simulation-based training, and institutionally supported disaster response exercises.

For Researchers

Future studies should explore targeted interventional strategies including simulation, tabletop exercises, and disaster drills to bridge the knowledge-practice gap identified in this and comparable studies.

Limitations

Cross-sectional design-no causal inference.

Social desirability bias and self-reported data

Single-institution context and limited generalizability

The inability to capture the depth of practical competency

Lack of qualitative information

Consent to Publication

Not applicable.

Availability of Data and Materials

Data will be available upon request from the corresponding author.

Competing Interest

The authors declared that there were no competing interests.

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