COLLEGE OF HEALTH SCIENCES

SCHOOL OF NURSING AND MIDWIFERY

KNOWLEDGE AND ATTITUDE OF TEACHERS TOWARDS ATTENTION DEFICIT HYPERACTIVITY IN SELECTED PRIMARY SCHOOLS AT ARBA MINCH TOWN, SOUTH ETHIOPIA, 2025.

PREPARED BY: NARDOS TESFAYE SIMON (BSC)

A THESIS SUBMITTED TO ADDIS ABABA UNIVERSITY, COLLEGE OF HEALTH SCIENCES, SCHOOL OF NURSING AND MIDWIFERY, DEPARTMENT OF NURSING FOR PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR MASTER'S DEGREE IN PEDIATRICS AND CHILD HEALTH NURSING.

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ADDIS ABABA, ETHIOPIA

ADDIS ABABA UNIVERSITY COLLEGE OF HEALTH SCIENCES SCHOOL OF NURSING AND MIDWIFERY DEPARTMENT OF NURSING

KNOWLEDGE AND ATTITUDE OF TEACHERS TOWARDS ATTENTION DEFICIT HYPERACTIVITY DISORDER IN SELECTED PRIMARY SCHOOLS AT ARBA MINCH TOWN, ETHIOPIA, 2025.

By: - NARDOS TESFAYE SIMON (BSC. NURSE)

Advisors: - MR. TESHOME HABTE (ASS, PROF)

SR. EMEBET B WOLDEMARIAM (ASS, PROF)

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APPROVAL SHEET

ADDS ABABA UNIVERSITY

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DEPARTMENT OF NURSING

I, the undersigned, MSc student, state that I have submitted my thesis on the title ‘knowledge and attitude of teachers towards attention deficit hyperactivity disorder in selected primary schools at arba minch town, south ethiopia, 2025.

Submitted by:

Nardos Tesfaye	_____	_____
Name of Student	Signature	Date

Approved by:

Mr. Teshome Habte (Assistant professor)	_____	_____
Name of Major Advisor	Signature	Date
Sr. Emebet B Woldemariam (Assistant professor)	_____	_____
Name of Co-Advisor	Signature	Date
_____	_____	_____
Name of Evaluator/Examiner	Signature	Date
4. _____	_____	_____
Name of Chairman,	Signature	Date
5. _____	_____	_____
Name of PG Coordinator	Signature	Date

STATEMENT OF DECLARATION

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Nardos Tesfaye	_____	_____
Name of student	Signature	Date
ADVISORS:		
Mr. Teshome Habte (Assistant professor)	_____	_____
Name of Major Advisor	Signature	Date
Sr. Emebet B Woldemariam (Assistant professor	_____	_____
Name of Co-Advisor	Signature	Date

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LIST OF ABBREVATION AND ACRONYMS

ADHD----------Attention Deficit Hyperactive Disorder

ADHD-IA----------Inattentive Subtype of Attention Deficit Hyperactive Disorder

ADHD-HI----------Hyperactive- Impulsive Subtype of Attention Deficit Hyperactive Disorder

ADHD-CT----------Combined Subtype of Attention Deficit Hyperactive Disorder

AOR---------- Adjusted Odds Ratio

CI---------- Confidence Interval

COR---------- Crude Odds Ratio

FMOE----------Federal Minister of Education

IRB----------Institutional Review Board

IQ----------Intelligence quotient

PI----------Principal investigator

SPSS----------Statistical Package for the Social Science

TAIS----------Teacher Attitudes towards Inclusion Scale

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ABSTRACT

Background: Attention Deficit Hyperactivity disorder (ADHD) is one of the most common neuropsychiatric behavioral disorders in childhood; significantly impacting the future of affected children if left undiagnosed and untreated. Typically, the first individuals to notice a child's ADHD symptoms are their teachers.Despite the crucial role teachers play in the diagnosis and treatment of ADHD studies examining their knowledge and attitudes toward the teacher are limited.

Objective: To assess knowledge and attitude regarding Attention Deficit Hyperactivity Disorder among primary school teachers in Arba Minch town, Gamo Zone, South Ethiopia, 2025.

Methods: An institution-based cross-sectional study was conducted in Arba Minch town from Jan 20 – Feb 20/2025. Data were collected using structured self -administered questionnaires**.** The collected data were entered into Epi-data version 4.7 and exported to SPSS version 27.0 for analysis. Binary Logistic regression was performed to determine the association between independent and dependent variables Results was summarized in crude and adjusted odds ratio, 95% confidence interval, and p-value, Statistical significance was declared with the P-value less than 0.05.

Result: A total of 580 questionnaires were completed, resulting in a response rate of 92% about 40.2% of primary school teachers demonstrated poor knowledge about ADHD, while 89..8% had a favorable attitude toward the disorder. Factors significantly associated with teachers' knowledge of ADHD included having a Degree (AOR = 1.397, 95% CI .997, 1.957) and masters'degree (AOR = 2.765, 95% CI .969, 7.891) as well as having completed coursework at the college or university level about ADHD (AOR = 2.366, 95% CI 1.189, 4.706) Conversely, teaching in a public school positively predicted teachers' attitudes toward ADHD (AOR = 4.279, 95% CI 2.994, 6.116).

Conclusion: The proportion of teachers with good knowledge was low and a favorable attitude towards ADHD was satisfactory. Strengthening teachers' educational qualification and coursework at collage or university level is essential. Additionally, targeted training and educational interventions are necessary to improve awareness among teachers.

Recommendations: Ministry of Education and school officials should work to enhance teachers' knowledge by providing courses on ADHD preparing in service training and raising awareness in private schools.
Keywords: knowledge, Attitude, ADHD, Primary School Teachers

1 INTRODUCTION

1.1 Background

Attention deficit hyperactivity disorder (ADHD) is a childhood psychiatric condition. A marked by a persistent pattern of hyperactivity-impulsivity and/or inattention.This symptoms significantly disrupt social, academic, or work life and must be present in more than one setting for at least six months before age of 12 (2) . The condition categorized into three subtypes; predominantly inattentive (ADHD-IA), predominantly hyperactive/ impulsive (ADHD-H/I), and a combined type (ADHD-C) (2).

The specific cause of ADHD is unclear; though genetic predisposition, maternal health, lowbirth weight, prematurity and Envirnomental factors are a potential risk factors (3,4).children with inattention may often be forgetful, easily distracted, unable to stay focused and disorganize. Conversely, children with hyperactivity may be restless, impatient, loud, and unable to stay seated, continuously chattering or babbling. (4).

ADHD treatment regimens generally fall into two categories: psychosocial interventions and pharmacotherapy. Pharmacotherapy includes stimulant medications and non-stimulants (such as antidepressants and alpha agonists), while psychosocial programs encompass training for children and psycho education for families (3).

Teachers frequently serve as the initial point of referral for children with ADHD and provide essential observational data for assessment. Meanwhile children significant time spent at school and their frequent interaction with teachers rather than with parents or doctors, elementary school teachers are key to early detection and management of ADHD. This emphasizes the importance of schools in identifying and addressing ADHD (1).

Therefore, teacher's knowledge and attitude are vital for effectively identifying and referring students with ADHD, However, many teachers lack sufficient knowledge and positive attitudes, which can hinder timely intervention and support (5,6).

1.2 Statement of the Problem

Attention deficit hyperactivity disorder (ADHD) is a prevalent and chronic childhood psychiatric disorders, often continuing into adulthood(7). And globally affects about 8.0 % of children and adolescents (8). With boys more frequently diagnosed (10 %) than girls (5 %). Within ADHD classifications, the inattentive type ADHD (ADHD-I) is the most common followed by the hyperactive (ADHD-HI) and combined types (ADHD-C) (3).

A systematic review and meta-analysis study done in Ethiopia reported that the pooled prevalence of ADHD among children and adolescents was 14.2% (9).

This disorder impacts various aspects of children's lives, particularly education. Studies indicate that children having ADHD are at a higher risk of school failure and educational non-success compared to their peers without ADHD (5,9). Additionally, they may struggle to maintain friendship and social relationship, leading to challenges for their families both at home and in the community (10).Children with ADHD also faces an increase risk of unemployment, work place problems , accidents; self-harm, suicide attempts and substance abuse. They have a mortality rate nearly double that of the general population and are three times more likely to die from unnatural causes (11). Especially in countries like Ethiopia where a significant amount of the population is young.Reasearch shows that teachers in Ethiopia, Sri Lanka and Pakistan have less than 50% knowledge about ADHD symptoms and presentation. This lack of understanding can hinder their ability to identifying affected children, limiting access to assessment, referral and treatment. Conversely, teachers with enhanced knowledge are further expected to advocate for professional evaluation (1,5,12).Moreover, teachers' attitude towards treatment plans and classroom method significantly influence the learning experiences of children with ADHD.Misunderstanding about the disorder can lead to inappropriate behavior in the classroom (7).

Teachers have a significant part in initial recognition and counseling parents on handling their children, and employing classroom and behavioral controlling approaches .As a result, elementary school teachers need to have decent understanding and satisfactory attitudes about ADHD. But, there is a lack of researches in Ethiopia addressing these matters. Thus, this research aims to evaluate the understanding and attitudes of primary school teachers regarding ADHD.

1.3 Significance of the Study

This study offers an indication of the level of teachers' knowledge and attitudes about Attention deficit hyperactivity disorder and correlated aspects between primary school instructors. Teachers are considered as the first person who plays a central part in the initial finding of its indications, risk factors and difficulties they are often involved in counseling families on handling their kids, and applying schoolroom and behavioral controlling approaches to support the transfer of kids with Attention deficit hyperactivity disorder. So, they need to have high level of understanding and awareness about Attention deficit hyperactivity disorder and also the issues associated with these matters. Having positive and adequate understanding and attitude allows the school instructors to create suitable identification and accordingly advances additional activities completed by the physician and considerably increases the recovery probabilities of kids with Attention deficit hyperactivity disorder.

Therefore, the result of this research is valuable in filling the gap with the study's limitation regarding the teachers' understanding and attitudes about Attention deficit hyperactivity disorder students and associated factors in Ethiopia

Besides this the result of this research could be used as a reference line data for other research activities.

Furthermore school representatives can use this research to address their teachers‟ require for planning on-the-job training about Attention deficit hyperactivity disorder. It can help teachers to recognize their level towards understanding Attention deficit hyperactivity disorder and familiarize themselves correspondingly.

It would help to plan new strategies, block the difficult and bring-up a healthy generation, also assist policymakers in developing context-specific and relevant policies capable of improving the knowledge and attitude of teachers about Attention deficit hyperactivity disorder.

2 LITERATURE REVIEW

2.1 Introduction

These section emphases on literature assessment on teacher's knowledge and attitude of attention Deficit Hyperactivity disorder and its associated factors in selected primary schools at Arba Minch Town, Ethiopia. It includes the global and regional literatures that are relevant to the research topic. The reviewed concept includes the overview of Prevalence, teacher's knowledge and attitude of attention deficit hyperactivity disorder and its associated factors.

2.2 Prevalence of attention deficit hyperactivity disorder

Attention deficit hyperactivity disorder, is a common childhood behavioral condition, has divers treatment options, these includes educational intervention, behavioral therapies, dietary modifications, supplemental, and in some cases medication. There are two types of management routines for ADHD: psychosocial and drug therapy: pharmacological utilizes both stimulating substance and non-stimulant medications like alpha agonists and antidepressants. Psychosocial treatment serves as the alternative treatment focus on Psycho-education for the family and teaching platforms intended for the children to handle short- and long-term goals are part of these programs. Combining these programs with pharmacotherapy proves to be very beneficial (11, 19).

Systematic reviews have shown that between 5 and 7 % of the general population worldwide suffers from ADHD (13). And about 2.2% to 17.8% of school-age children globally. With a male to female ratio of 2:1, the prevalence was determined to be 7.47% in Africa (14).

Study done in Sri Lanka shows the understanding and attitude of school instructors on Attention deficit hyperactivity disorder from a rural district which consists of a low middle-income country with 21 government schools. From those the majority (61.9%) of research participants had no adequate understanding about Attention deficit hyperactivity disorder and one-fourth of the instructors had attitude (5).

The finding in Iranian teachers shown that 65% of instructors had positive understanding toward Attention deficite hyperactivity disorder, 50% of them had a positive attitude, but only

their understanding towards Attention deficite hyperactivity disorder indications was desirable, however their understanding towards source of the condition and its management was not adequate (7)

Regarding general knowledge of 335 Makkah City, Saudi Arabian teachers, only (5.4%) of the teachers had a good level of knowledge and only 7.5% of teachers had good knowledge of Attention deficite hyperactivity disorder management, and 40.9% who had a good awareness of symptoms and diagnosis (15).

The average percentage of knowledge of Ha'il City teachers about ADHD was symptoms/diagnosis; general knowledge and awareness of treatment measures were 45.3%, 32.3%, and 31.2%, respectively. 34.9% was the average percentage score of overall knowledge regarding ADHD (17). The knowledge among elementary school teachers in Ha'il city towards Attention deficit hyperactivity disorder was insufficient (16).

A study carried out in Burkina Faso employs a strict scientific methodology and trustworthy measurement instruments to ensure the reliability of the prevalence statistics, which are estimated to be 13.74%. A mixed subtype accounts 35.20%, in the second, followed by the inattentive subtype with 43.58 %, and the subtype with 21.13%.the differences observed across various studies highlight concerns about the diagnostic methods employed. The findings provide fresh opportunities to look into the variables linked to the development about ADHD (22).

In Ethiopia, the incidence rates of Attention deficit hyperactivity disorder are reported as, in the zone Guji (6%), in town of Mekelle (18.5%), and in the region of Oromia (13.7%) (17).

The incidence of Attention deficit hyperactivity disorder in Ethiopian kids is about 8% overall. Of these, 0.2 % had hyperactive/impulsive ADHD, 0.7 % had inattentive ADHD, and 5 % had the mixed subtype of Attention deficit hyperactivity disorder. With a male to female ratio of 1:4, the incidence of Attention deficit hyperactivity disorder was higher in male children (73%) than in female children (0 to 26 %). From the subtype hyperactive/impulsive was more common in males than in females, while the inattentive subtype was more common in girls (1 to 3). The incidence of Attention deficit hyperactivity disorder was higher in children aged 6 to 11 (85% versus 15%) than in those aged 12 to 15 (18).

Study done Gondar town Ethiopia from 636 respondents of elementary school teachers having good knowledge and a favorable attitude towards ADHD is about 44.8% and 84.1%, respectively. The percentage of teachers' knowledge towards ADHD was low; when compared to, their attitude shown relatively satisfactory (1).

The teachers' mean score shown that 41.6 ± 5.4 (95% CI; 41.12, 42.16)of teachers had an attitude toward Attention deficit hyperactivity disorder and 46% of the participants had unfavorable attitudes in Debre Markos and Dejen Towns, Northwest Ethiopia (19).

The studies conducted across various regions, including Sri Lanka, Iran, Saudi Arabia, and Ethiopia, reveal a concerning trend regarding the knowledge and attitudes of school teachers towards Attention Deficit Hyperactivity Disorder **.**Overall, these findings highlight a critical gap in knowledge among teachers regarding ADHD across different countries, particularly concerning its causes and treatment options. While some regions show relatively favorable attitudes towards ADHD among educators, there remains an urgent need for improved training and education to enhance their understanding and support for affected students.

2.3 Knowledge and Attitude of teachers towards attention deficit hyperactivity disorder

2.3.1 Knowledge of Teacher's towards Attention Deficit Hyperactivity Disorder and affecting factors

A study conducted in Sri Lanka examined attitudes and knowledge of teachers regarding ADHD among 456 teachers across 21 governmental schools in rural area of low-to-middle income country. One-fourth of the instructors had misconceptions about Attention Deficit Hyperactivity Disorder, and the majority of study participants 278(61 %) lacked adequate knowledge about the condition. Comparing this study to other nations, they had lower score of average knowledge (11 out of 39). In a multi-country study that used the same scale to measure knowledge of Attention Deficit Hyperactivity Disorder, the USA had (22 points) the highest mean score, while Saudi Arabia and Vietnam had the lowest (5 points and 11 points), respectively. Comparable research in South Africa and the Caribbean has revealed that teachers' understanding of ADHD in children is lacking. The average overall score in both studies was below 50% (2).

Another study done in Jordan shown that teachers' knowledge on the Attention Deficit Hyperactivity Disorder with the mean score scale was 6.9, ranging between 4 and 11 with a maximum score of 12 with no one achieving these score (20).

In Riyadh, Saudi Arabia a study conducted shown that the average percentage of ADHD knowledge based on the total number of right answers was 17.2%.According to international research; around 42.6% of the schoolteachers in Kleynhans, South Africa had found that right answers about ADHD (11.)

Another study done in Riyadh City, Saudi Arabia, shows overall knowledge score regarding ADHD was 38 ± 11.3 with the average percentage of knowledge regarding Attention Deficit Hyperactivity Disorder general information were 41.6 ± 15.1, symptoms/diagnosis were 41.7 ± 15, and treatment were 30.7 ± 16.6 (3).

A study done in assiut city Saudi Arabia found that a significant lack of knowledge about Attention Deficit Hyperactivity Disorder among 429 primary school teachers, with over three quarters of teachers 326 (76.1%) having unsatisfactory knowledge based on the overall score of teachers' knowledge about the disorder. According to the findings, teachers recognize further about the general features of ADHD 279(65%) than they did about its symptoms , diagnosis, and courses of treatment 154 (36%) (21).

Out of a total of 130 teachers in Jordan only 27(20.8%) believed that the challenges associated with ADHD would persist throughout a person's lifetime, the majority of them 99(76.2%) considered ADHD to be a serious issue that requires effective management. The majority of participants 99(76.2%) stated that poor parenting techniques and parental spoiling can cause ADHD, despite the fact that over 75% of them said that biologic and genetic factors are linked to ADHD. Similarly, 62(48%) of respondents thought that chaotic and dysfunctional families environment might play a role in causing ADHD. Approximately 46(35%) of the educators believed that food additives or sugar could be a factors contributing to ADHD (20)

Among 416 teachers of Saudi Arabia the average knowledge score of ADHD was 38 ± 11.3(22).In Makkah, Saudi Arabia a related research conducted in elementary and kindergarten teachers gave an overall accuracy rate of 218(58.9%) on questions about ADHD. Another study conducted in Riyadh, Saudi Arabia, revealed percentage of correct answers

(17.2%) were few respondents of the total score. Similar findings were reported in studies conducted abroad. According to Kleynhans, elementary school teachers in South Africa gave an average of 42.6 percent of accurate responses about ADHD. According to Sciutto et al., primary school teachers in the USA gave an average of 47.8% of the right answers. Kos et al. in Australia revealed that 60.7% of teachers correctly responded on the Attention Deficit Hyperactivity Disorder regarding knowledge questionnaire (22).

In this study teacher's pimarily based on personal familiarity to recognize students with Attention Deficit Hyperactivity Disorder Due to the present unavailability of proper training which is likely why their period of service positively correlated with their Instructors Attitudes about Inclusion Scale (TAIS 2) score. According to a study done in the Caribbean country, the mean knowledge scores moved from 8. 8 to 13.5 depending on the instructor's scholastic background, from secondary school to master level. These results show that teachers' exposure and experience lead to their knowledge achievement and positive attitude development. However most teachers reported receiving insufficient instruction or training on ADHD either during their education or while on the job (2).

In Gonder town, among the 636 respondent, teachers did not take any training, workshop, and/or courses regarding Attention Deficit Hyperactivity Disorder accounts about 77.8%. Nearly two-thirds of the respondents had experience of teaching students with Attention Deficit Hyperactivity Disorder accounts about 63.8%. regarding means of receiving information from mass media, books, and articles, reading the pamphlet and searching from the internet of the respondents is about 37.1%, 36.2%, 29.2%, and 13.7%, respectively (1)**.**

Around 158 (38%) of teachers were uninformed that a child's symptoms need to have been exist earlier before the age of 7 in order for the child to be identified with Attention Deficit Hyperactivity Disorder. Additionally, only a few percentage of teachers 21 (<5%) correctly identified that ADHD symptoms must be observed prior to diagnosis. As for treatment, only50 (≤12%) of teachers were aware that antidepressant medications used as potent in alleviating indications for several kids with ADHD (22).

Teachers are naturally had more knowledge towards the basic indications and identifications of Attention Deficit Hyperactivity Disorder than about management and similar features (e.g., situational variation), and the causes of Attention Deficit Hyperactivity Disorder (23).

From 417 teachers in Debre Markos and Dejen Towns, there were teachers who reported having no ADHD related training accounts 409 (98.1%) and who reported knowing somewhat about the condition was around 49(11.8%) (21).

A study conducted in Nekemte Town, Oromiya Region, Western Ethiopia, involving 206 teachers found that approximately 154 (74.8 %) were unaware of ADHD. Among the respondents 52(25.2%) obtained their information about ADHD from the internet 10(4.9%), books and magazines 64(31%), and television53 (25.7%). This is low in comparison to a study conducted in Egypt that found that 64 (31%) of teachers knew nothing about ADHD and that the majority of them learned about it from television54 (26%), books and magazines41 (20%), friends, and the internet 21(10%). About 116 (56.4%) of study participants had good knowledge, according to this study (24).

A study done in Gonder, Ethiopia shows that the percentage of possessing knowledge towards Attention Deficit Hyperactivity Disorder out of elementary school teachers was 44.8%, which showed that about the problem there is a knowledge gap in this population (1).

2.3.2 Teachers Attitude towards Attention Deficit Hyperactivity Disorder

Research on teachers' understanding of ADHD consistently highlights the presence of common misconceptions. For example, many educators in countries like Iran, Canada, South Africa, Australia and the United States believe that sugar consumption considerably influences hyperactivity. several researches referenced additional extensive misconceptions, like the aim that continuous use of stimulant leads to addiction or abuse and poor parenting is the root cause of ADHD (23). However, ADHD does not occur as a result of parents' poor performance; rather, some parents are concerned about stimulants and the possibility that their child may abuse or become dependent on them. There isn't any solid scientific proof that this is an issue (4).

In Sri Lankan a study shows that school teachers hold significant the misbelief (incorrect answers) about childhood Attention Deficit Hyperactivity Disorder. Several other studies have

also identified misconceptions related to the indications and management Sciutto et al found that the average misbelief rate shown that highest in Iraq (11.95) and lowest in the USA (5.7) and Saudi Arabia (5.3).overall ,the reported mean misconception rate of 24.5% (5).

Riyadh City, Saudi Arabia teachers commonly believed that Attention Deficit Hyperactivity Disorder can be occurred from unreliable parenting and family issue like consuming of alcohol or marital dysfunction. However majority thought that children may manifest indications of Attention Deficit Hyperactivity Disorder due to they need further devotion or insufficient behavioral control by the child. This confusion of etiology of the disease could adversely affects their attitude when handling with children with Attention Deficit Hyperactivity Disorder (3).

A study done in Riyadh City, Saudi Arabia, using 12 questions to assess attitude of teacher's towards managing children with Attention Deficit Hyperactivity Disorder. Around 87.5% of teacher's believed that the special teaching techniques are effective in managing Attention Deficit Hyperactivity Disorder, comprising 53.4% who agreed and 34.1% who strongly agree, on the other hand, 2.4% of teachers disagreed with it and 10% remained neutral in estimating that question. However, while a majority 84.8% also believed in the effectiveness of behavior controlling is an effective in management for Attention Deficit Hyperactivity Disorder about 57.20% agree and 27.60% strongly agree, while 2.1% disagreed with it and 13% remained neutral on this matter. Regarding the significance of training teachers in behavior management for Attention Deficit Hyperactivity Disorder, 88.9% of teachers agreed on its importance, with 2.1% disagreeing and 8.9% remaining neutral. The Majority of teachers believed that Attention Deficit Hyperactivity Disorder is caused by parents being inconsistent with rules and consequences with 74.3% approving this view .in contrast, 4.3% disagreed and nearly quarter of them had neutral position (3).

A study done in Iran 50% a majority of the participants held favorable attitude towards Attention Deficit Hyperactivity Disorder (7).

In this study conducted in Debre Markos and Dejen Towns, the average teachers attitude score toward students with Attention Deficit Hyperactivity Disorder was 41.6 ± 5.4 (95% CI 41.12,

42.16), additionally 192 participants accounts 46% of the sample scored below the mean attitudes score (19).

2.3.3 Factors associated with Knowledge and Attitude of teachers towards Attention Deficit Hyperactivity Disorder

In study done in Gondar town elementary school teachers with a diploma were 3.0 times more likely to have good knowledge compared to those with a certificate (AOR = 3.028, 95% CI 1.630, 5.625) similarly teachers holding a degree or higher educational qualification were approximately 3.1 times more likely to have good knowledge compared to those with only certificate (AOR = 3.134, 95% CI 1.664, 5.900). Teachers who had experience reading leaflets related to the topic were about two times more likely to have good knowledge compared to those without experience (AOR = 2.035, 95% CI 1.391, 2.950). Additionally teachers who had searched the internet for information were about 1.79 times more likely to have good knowledge than to their counterparts (AOR = 1.793, 95% CI 1.090, 2.950) (1).

The study done in Debre Markos and Dejen Towns found a positive association between training and teachers attitudes toward students with Attention Deficit Hyperactivity Disorder. Teachers who received training demonstrated a significantly more positive attitude with an increase of 2.79 units (B; 2.79, CI; 0.33, 5.24) compared to those without Attention Deficit Hyperactivity Disorder-related training. Additionally, teaching experience was positively correlated with an attitude, after adjusting for the other variables, each additional year of teaching was associated with a 0.18 units increase in attitude score (B; 0.18, CI; 0.15, 0.22). In this study, participants with a certificate-level education showed a decrease of 4.92 units in attitude score compared to teachers holding a degree (B; −4.92, CI; −6.44, −3.39 (19).

Primary school teachers in Gonder Town with educational experience of students with Attention Deficit Hyperactivity Disorder and those watch mass media were considerably correlated with a favorable attitude towards these students. Teacher's with experience were nearly 1.85 times higher to have a favorable attitude compared to those who do not have experience (AOR = 1.852, 95% CI 1.195, 2. 87). Similarly ,teachers who watch mass media were 1.7 times higher to have a favorable attitude than teachers who do not watch mass media (AOR = 1.72, 95% CI 1.056, 2.8) (1).

This review of literature indicated that teachers‟ knowledge towards ADHD varied among different countries and most of them indicated limited knowledge. Educational qualification (1,19), years of teaching experience (19), in-service trainings (12, 13), courses taken in college/ University about ADHD (12), reading leaflet and (1) were found to be contributing factors for having more knowledge about ADHD.

And regarding attitude teachers revealed some negative feelings towards ADHD.from different reviewd of literatures teachers in various regions generally hold positive attitudes toward supporting students with ADHD and recognize the importance of management strategies and training. However, widespread misconceptions about the causes of ADHD such as beliefs that it results from poor parenting, family issues, or dietary factors persist among teachers. Despite these misconceptions, teachers demonstrate a willingness to implement effective interventions and favor training, indicating an overall supportive attitude toward children with ADHD from those,ADHD results from parents being inconsistent with rules and consequences(3) and long-term stimulant leads to addiction or abuse and poor parenting is the root cause of ADHD(23), Teachrs with experience And teachers who watch mass media were more likely to have a favorable attitude (1,19) And Teachers who recived training had a significantly more positive attitude.

2.4 Conceptual Framework

A conceptual framework was developed after reviewing a variety of literatures focusing on teachers' Understanding and Attitude about Attention deficit hyperactivity disorder. An instructor who teaches student with Attention deficit hyperactivity disorder encounters various challenges from different perspectives. The figure below illustrates the factors influencing teachers Knowledge and Attitude about ADHD.This study aims to examine whether socio-demographic factors (e.g., age, sex, educational qualification, marital status) and information sources (e.g., training received, access to information, experience teaching children with ADHD) affect the Knowledge and Attitude of teacher about ADHD (1,3,5,22).

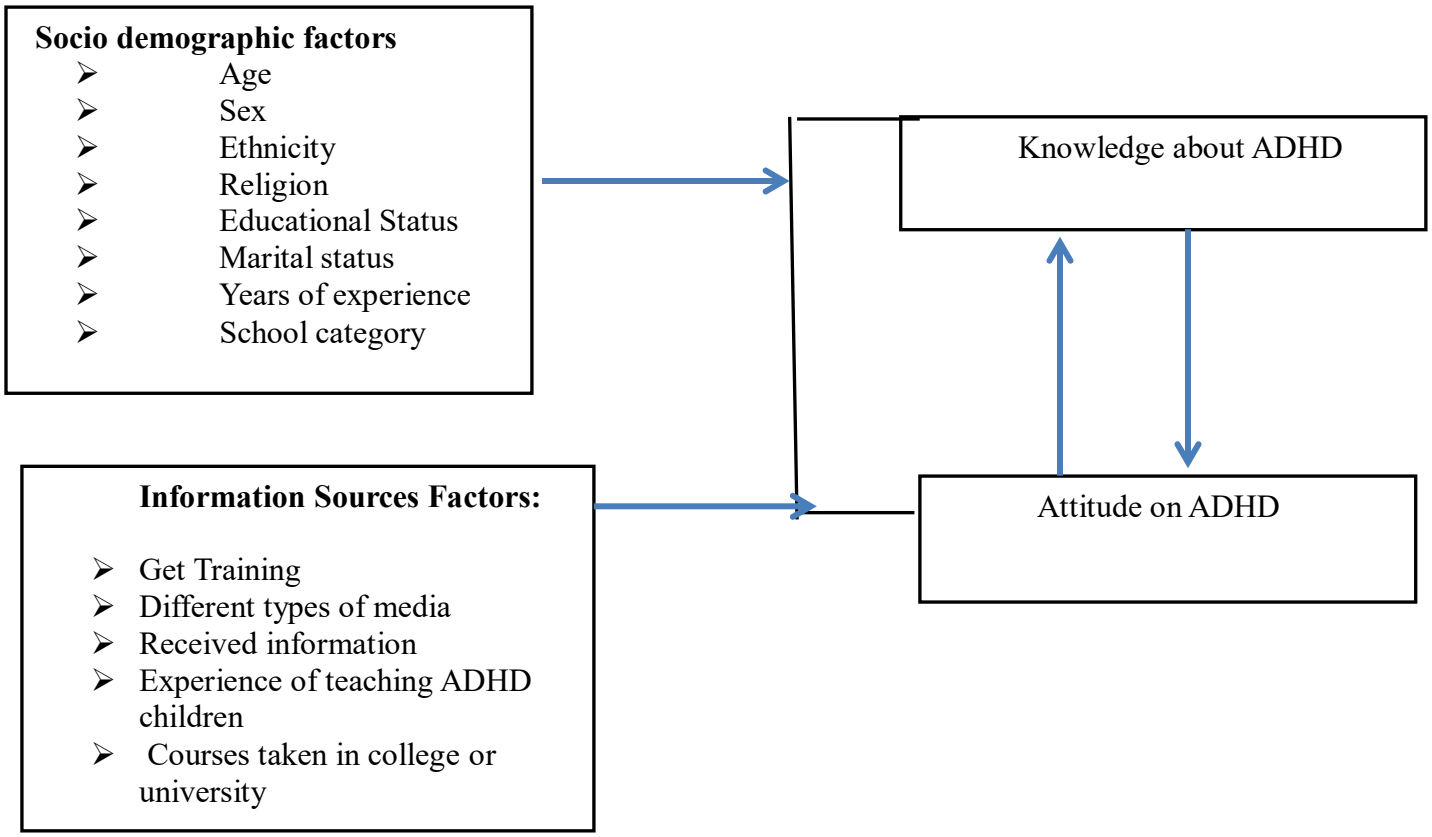

Figure 1 Conceptual Framework showing factors affecting knowledge and attitude of primary school teachers in Arba Minch town, South Ethiopia, June 2025

3 OBJECTIVES OF THE STUDY

3.1 General objective

- To assess the knowledge and attitude of primary school teachers about ADHD, in Arba Minch town, Gamo Zone, South Ethiopia, 2025.

3.2 Specific objectives

- To identify the level of knowledge and attitude of primary school teachers toward ADHD
- To identify factors associated with the knowledge of primary school teachers regarding ADHD
- To identify associated factors with the attitude of primary school teachers toward ADHD

4 MATERIALS AND METHODS

4.1 Study area

This research done in Arba Minch town, the administrative center of Gamo Zone, in South Ethiopia.Arba Minch is situated between the Gamo Highlands and two notable rift valley lakes: the town drives its name from the local springs that a groundwater jungle found at the base of the western side of the Great Rift Valley.The town serves as the capital city of Gamo Zone and Arba Minch Zuria Woreda. It is found at an elevation of 1285 meters above sea level and is situated at a distance of 500 km south of Addis Ababa, the capital city of Ethiopia. Arba Minch town is administratively composed of 11 kebeles.The estimated total population of Arba Minch town is approximately 201,049 (25). The city has an average temperature of 30o C and rainfall of 575 mm.The town administration has 38 primary schools majority of them 25 (66%) were nongovernmental and 13 (44%) were governmental. From the selected 19 Public schools Chano Dorga,Chamo,Sikela,A/minch,Kulefo and Bere Edeger Ber will be included,from private schools also the following schools will be selected; Wisdom,Abune Gorgoriyos,Kidus Gebriel,Future Hope,New vesion,Abenezer,Chain,Holly Savior ,New Paradise,Birhu Tesfa,Betel,Liyunehe Dubale and Yahewe Nesi,A total of 729 teachers are available in selected primary schools

4.2 Study design and study period

Institution based cross-sectional study design was employed to collect data from Jan 20 to Fab 20, 2025 G.C

4.3 Source population

All primary school teachers currently who are working in primary schools in Gamo zone, South Ethiopia, 2025.

4.4 Study population

Primary school teachers who are teaching in Arbaminch town Gamo Zone, Southern Ethiopia, 2025.

4.5 Study units

Primary school teachers who are teaching in the selected primary schools.

4.6 Inclusion and exclusion criteria

4.6.1 Inclusion criteria

Teachers the one that are permanently employed, currently teaching in the selected primary schools in Arbaminch town, and willing to participate in the study were included.

4.6.2 Exclusion criteria

Teachers hired recently (with less than 6 months of work experience) were excluded from the study.

4.7 Sample size determination

The sample size for the first two objectives knowledge and attitude was calculated by using single population proportion formula based on the following assumptions 95% confidence level of Z α/2=1.96, the margin of error=5%.

$$n = \frac{(Z\alpha/2)^2 * P(1-P)}{d^2}$$

n= sample size required for the study

P= assumed 44.8% knowledgeable population about ADHD in Gonder town (1).

Z /2 = Z value at (α = 0.05) = 1.96 corresponding to a 95% confidence level.

d = the margin of error =0.05

$$n = \frac{(1.96)^2 \times 0.448 (1-0.448)}{(0.05)^2} = 380$$

Therefore, by adding 10% for possible non-response rate (38) and applying 1.5 design effect (1) the overall sample size became=**627**

4.8 Sampling procedures

A multistage sampling procedure was used to identify study participants.First stage, Gamo Zone; were chosen randomly to conduct this study.Second stage, Arba Minch town selected randomly. Third stage, all primary school in Arba Minch, there are 38 primary schools in Arba Minch town, comprising 13 public or governmental schools and 25 private schools (25). Fifty percent of the schools (19 schools) were selected using a lottery method, including 6 public schools and 13 private schools. There are 403 teachers in the 6 public schools and 323 teachers in the 13 private schools, resulting in a total of 726 teachers actively working. 627 instructors were then selected using a simple random sampling technique via the lottery method from each school.

To achive representativeness, proportional allocation was utilized based on the following formula: ni= (n/N) ×Ni

Where:

- n = total sample size to be selected,
- N = total population,
- Ni = total population of each school,
- ni= sample size from each school.

This formula was employed to determine the number of teachers participating in the study from each school.

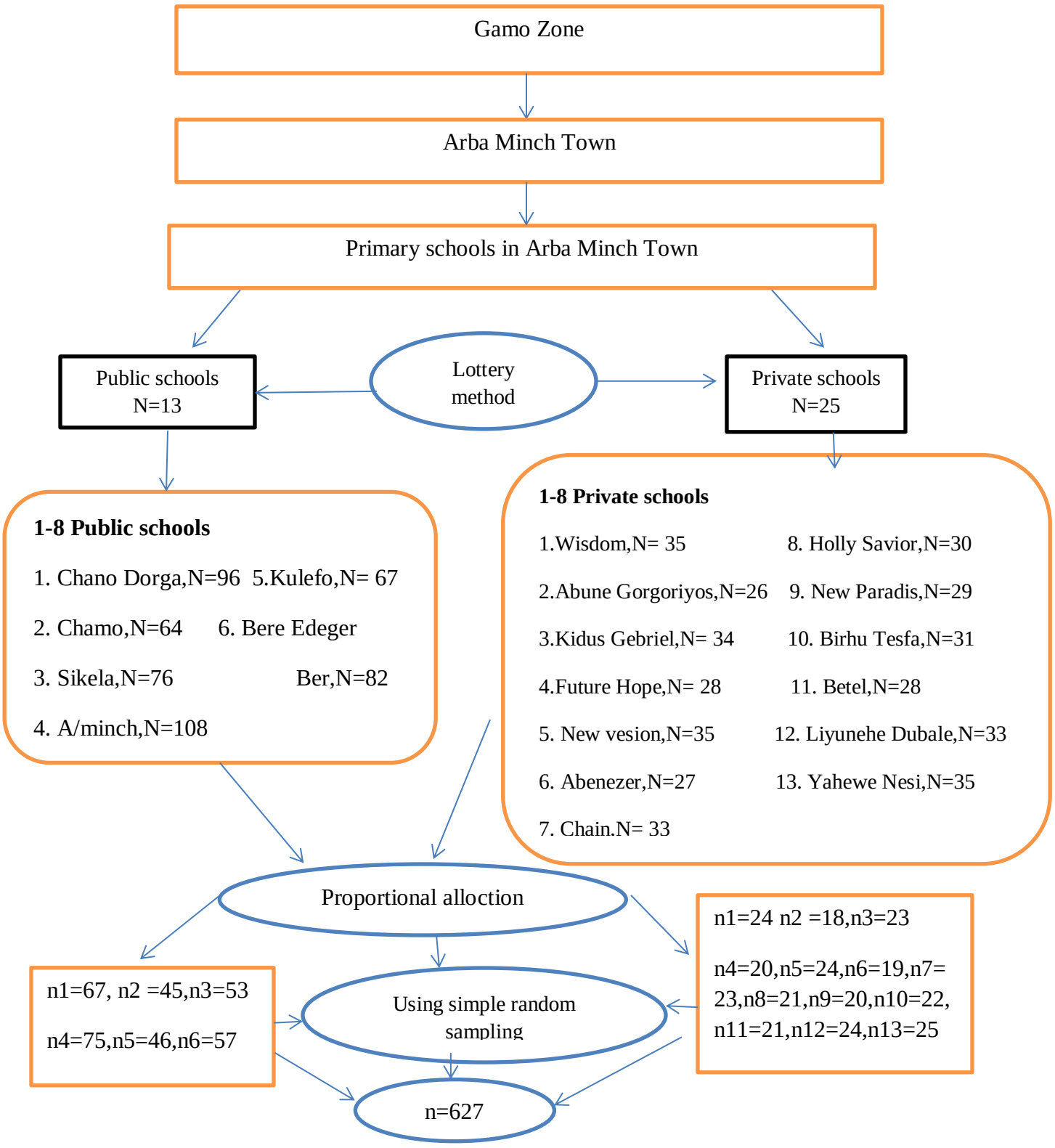

Figure 2 Schematic presentation of the sampling procedure among selected schools in Arba Minch Town, South Ethiopia, June 2025

4.9 Operational Definition

Attention Dificit Hyperactivity Disorder: Refers to students with a disorder that affects a person's ability to focus and control their behavior.

Knowledge of teachers towards ADHD: Refers to the comprehension or understanding of the teachers toward ADHD.

Poor knowledge: Those teachers who score <50% of overall scores (16).

Good knowledge: Those teachers who score >50% of overall scores(16).

Attitude of teachers towards ADHD: Refers to the perception of teachers about ADHD

Favorable attitude: when teachers are responding to the attitude questions who scored ≥ 60.0%(26).

Unfavarable attitude: when teachers are responding to the attitude questions who scored ≤60.0% (26).

Primary school teacher: an educator who specializes in teaching young children (age 7-14 years) from grades 1–8

4.10 Variables of the study

4.10.1 Dependent variables

Knowledge of primary school teachers towards Attention Dificit Hyperactivity Disorder

Attitude of primary school teachers towards ADHD

4.10.2 Independent variables

Demographic characteristics

Age

Gender

Ethnicity

Religion

Marital status

Educational status

School Catagory

Previous teaching exposure to a child with ADHD symptoms

Other sources of inforrmation

Trainings or courses about ADHD

In-service

Pre-service

Courses taken in college /university about ADHD

Different types of media sources

4.11 DATA COLLECTION TOOLS AND PROCEDURES

4.11.1 Data collection instruments

A structured self-administered questionnaire was employed to gather information from the research participants. The questionnaire consisted of three parts. Part Iincludes nine questions about socio-demographic features and five questions regarding participants' experiences with ADHD. These questions were adapted from various sources in the literatures with some modifications made for clarity.

Part II involves 29 questions assessing teachers'knowledge about ADHD, adapted from multiple sources in the literatures. Responses were recorded as "Yes" or "No," answers with some modification(1,27–29). Right answers were scored "1"; wrong answers scores "0". Total score and score percentages were computed for each participant.

Part III involves 23 questions regarding teachers' attitudes towards ADHD, also adapted from different literature sourse (19,30). Responses were measured using a 5-point Likert scale.the overall score was determined by adding the individual scores and then converted into percentage

Validity_ Content validity of the Knowledge and attitude questionnaire was ensured through Furthermore, validity was increased through the pretest, and additionally the clinical knowledge and experience of the researcher one Associate Professor and one Assistant Professor, as well as consulting with the experts in the field in addition to the views of the supervisor

4.11.2 Data Collection Procedure

Data was gathered from teachers working in the selected primary schools. And it was guided by trained data collectors. Two Bachelor of Science (BSc) student nurses were recruited for this task and they received one day training that includes guidelines on sampling procedures. The questionnaire was distributed for teachers in the break or lunch time with explanations of the purpose of the study and how to fill them. The questionnaire was left with the teachers in order to fill it during their free time and it was collected back after a day by the data collectors. Data was checked for completeness and entered in to computer by the investigator.

4.11.3 Data Quality Control Management

To guarantee the uniformity of the questionnaire, the English version was translated into Amharic and again back to English. The questionnaire was pretested in 5% of subjects was conducted on 29 teachers other than the study population and corrections for spelling errors were done accordingly prior to the actual data collection period and it was excluded from the sample size. It was conducted to determine the appropriateness of the questionnaire, and accessibility of data and to estimate the time required for the data collection. Training on the importance of revealing the possible benefits and purposes of the study to the study participants; the processes of data collection and the mechanisms of keeping the confidentiality of the participants were given to data collectors for one day prior to the study.

4.11.4 Data Analysis

The data was checked, coded and entered into statistical software Epidata 4.7 then exported to SPSS version 27 by the principal investigator. Binary Logistic regression was performed. COR along with 95% confidence interval was used to determine the existence of an association between independent and dependent variables. To determine the strength of associations, multivariable logistic regression was performed and statistical significance with an adjusted odds ratio was used to determine the strength of associations. Statistical

significance was declared with p-value less than 0.05 for multivariate and 0.25 for bivariate regressions. Finally, the result is presented using table's representation.

4.11.5 Ethics approval and consent to participate

Written ethical clearance was obtained using the protocol number (ref. Number): SNM/11/2025 from the Institutional Review Board (IRB) of Addis Ababa University (AAU), College of Health Sciences, School of Nursing and Midwifery. A formal letter was submitted from Arba Minch town Educational Bureau and written permission was obtained from the institution for each schools. After a detailed explanation of the aim, procedure, benefits, acquired from the study and rights of the participants Informed consent was obtained from all the study participants. Confidentiality of information was maintained under secured custody; no unauthorized person had access to the information and names or other identifiers were not recorded. The study was performed in accordance with the Declaration of Helsinki guidelines and regulations.

4.11.6 Dissemination of the result

These research findings used as a reference line data for other researchers and various levels of policy makers. The result of this research submitted to Addis Ababa University, the college of health sciences Department of Nursing, and FMOE. Efforts will be made to present the findings at scientific conferences and publish in international and peer-reviewed journals.

5 RESULTS

5.1 Socio demographic characteristics

From 627 questionnaires administered, a total of 580 were completed, resulting in a response rate of 92%. Among the 580 teachers who participated in the research, the mean age was 36.78 ± 8.92 years, with over half of the participants being female (52.8%). Most respondents were married (66.9%), followed by single (22.4%).In terms of education, more than half of the teachers (53.4%) held a diploma, while 42.9% had a bachelor's degree. Regarding teaching experience, 25.5% had 6-10 years, and 22.4% had 11-15 years of experience, and 56.9% identified as Orthodox Christians (see Table 1).

Table 1 Socio-demographic characterstics of knowledge and attitude towards ADHD among primary school teachers in Arba Minch town, Ethiopia, June 2025 (n=580)

Variables	frequency (n)	percent (%)
Age		
18-24	25	4.2
25-34	259	44.7
35-44	172	29.7
>45	124	21.4
Sex		
Male	274	47.2
Female	306	52.8
Marital Status		
Single	130	22.4
Married	388	66.9
Divorced	32	5.5
Widowed	16	2.8
Separated	14	2.4
Teaching Experience		
<5	87	15.0
6-10	148	25.5
11-15	130	22.4
16-20	126	21.7
>20	89	15.4
Religion		
Orthodox	330	56.9
Muslim	18	3.1
Catholic	8	1.4
Protestant	203	35.0
other	21	3.6
Experience of teaching children with ADHD		
Yes	349	60.2
No	231	39.8
Educational level		
Certificate	0	0
Diploma	310	53.4
Bachelor's degree	249	42.9
Master's degree	21	3.7
Other	0	0
Teaching grades		
1-4	286	49.3
5-8	294	50.7

5.2 Source of information and experience ot teaching regarding knowledge and attitude towards ADHD among primary school teachers' in Arba Minch town, Ethiopia, June 2025 (n = 580)

Approximately 59.0% of the teachers reported having experience teaching students with ADHD. 92.8% of the teachers reported that they had not taken any classes or coursework at the college or university level specifically about ADHD. Furthermore, most teachers (75.9%) had not attended in-service training on ADHD. Regarding information acquisition, 74.5% of teachers received information about ADHD, with 42.2% of them obtaining information from, followed by research journals (22.2%) (See Table 2).

Table 2 Source of information and experience ot teaching regarding knowledge and attitude towards ADHD among primary school teachers' in Arba Minch town, Ethiopia, June 2025 (n = 580)

Variables	Response	Frequency(n)	Percentage(n)
Have you ever taught students you believed to have ADHD?	Yes	342	59.0
	No	238	41.0
Have you taken classes/ coursework at the College/university Level about ADHD?	Yes	42	7.2
	No	538	92.8
Have you ever received training about (ADHD)?	Yes	140	24.1
	No	440	75.9
Have you ever received any information About ADHD in Children?	Yes	432	74.5
	No	148	25.5
From which of the following sources did you get information About ADHD			
1.Through books		33	5.7
2.Magazines		45	7.8
3.Research journals		129	22.2
4.Other medias		245	42.2
5.Friendes		128	22.1

5.3 Knowledge of teachers' towards ADHD among primary school teachers' in Arba Minch town, Ethiopia, June 2025

Regarding teachers' understanding of various aspects of ADHD; this study revealed that the majority (74.7%) had heard of the term "Attention Deficit Hyperactivity Disorder." Additionally, 62.4% of teachers believed that ADHD is a childhood psychiatric disorder, and 62.8% identified that children are more affected by ADHD than adults. When asked about the subtypes of ADHD, 63.8% of teachers recognized Inattention and Hyperactive/Impulsive as subtypes.

A majority of respondents (63.4%) believed that genetic factors play a role in the development of ADHD, and more than half (54.8%) agreed that ADHD can be inherited within families. In terms of prevalence, ADHD was reported to be more common in boys, with 59.0% of teachers acknowledging this trend. Nearly half (47.8%) of respondents attributed ADHD to poor parenting practices, and a majority (58.1%) perceived that children with ADHD are often from single-parent families (See Table 3).

Table 3 Knowledge of teachers on different aspects of ADHD among primary school teachers' in Arba Minch town, Ethiopia, June 2025 (n = 580)

Variable	Category	Frequency	Percent
Have you ever heard of the word attention deficit hyperactive disorder (ADHD)?	Yes	433	74.7
	No	147	25.3
ADHD is a childhood psychiatric disorder?	Yes	362	62.4
	No	218	37.6
Children are more affected than adults by ADHD?	Yes	364	62.8
	No	216	37.2
Inattention and Hyperactive/impulsive are subtypes of ADHD?	Yes	370	63.8
	No	210	36.2
Do you believe that genetic factors play a role in causing ADHD?	Yes	368	63.4
	No	212	36.6
Could someone get ADHD from family?	Yes	318	54.8
	No	262	45.2
ADHD is more	Yes	342	59.0

prevalent in boys than girls?	No	238	41.0
ADHD is the result of poor parenting practices	Yes	277	47.8
	No	303	52.2
ADHD children are usually from single-parent families	Yes	337	58.1
	No	243	41.9

5.4 Total Number of Teachers Percentage Response to Knowledge Items of ADHD among primary school teachers' in Arba Minch town, Ethiopia, June 2025 (n = 580)

The total scores and percentage scores were calculated for each participants.among the study participants 40.2% scored below the overall knowledge score, indicating that these individuals have poor knowledge.Total number of teacher's percentage response to the knowledge items correctly answered and incorrectly answered responses (See Table 4)

Table 4. Total Number of Teachers Percentage Response to Knowledge Items of ADHD among primary school teachers' in Arba Minch town, Ethiopia, June 2025 (n = 580)

Item	% correct	% incorrect
1. Have you ever heard of the word attention deficit hyperactive disorder (ADHD)? [T]	74.7(n=433)	25.3(n=147)
2.ADHD is a childhood psychiatric disorder?[T]	62.4(n=362)	37.6(n=218)
3.Children are more affected than adults by ADHD?[T]	62.8(n=364)	37.2(n=216)
4.Do you believe that genetic factors play a role in causing ADHD?[T]	63.4(n=368)	36.6(n=212)
5.Could someone get ADHD from family?[T]	54.8(n=318)	45.2(n=262)
6. Do individuals with ADHD frequently talk excessively and have difficulty paying attention?[T]	64.0(n=371)	36.0(n=209)
7.Inattention and Hyperactive/impulsive are subtypes of ADHD?[T]	63.8(n=370)	36.2(n=210)
8.ADHD is more prevalent in boys than girls?[T]	59.0(n=342)	41.0(n=238)
9.In order to be diagnosed with ADHD, the child's symptoms must have been present before age 12.[T]	43.4(n=252)	56.6(n=328)
10.Approximately 5% of school-aged children have ADHD[T]	42.8(n=248)	57.2(n=332)
11.ADHD is the result of poor parenting practices[F]	52.2(n=303)	47.8 (n=277)
12.ADHD children are usually from single-parent families[F]	58.1(n=337)	41.9(n=243)

13.Family dysfunction may increase the likelihood that a child will be diagnosed with ADHD[T]	65.5(n=380)	34.5(n=200)
14.Symptoms of depression are found more frequently in ADHD children than in non-ADHD children[T]	56.2(n=326)	43.8(n=254)
15.A diagnosis of ADHD by itself makes a child eligible for placement in special education[F].	51.4(n=298)	48.6(n=282)
16.ADHD children generally experience more problems in new situations than in familiar situations.[T]	60.3(n=350)	39.7(n=230)
17.Children with ADHD are more distinguishable from normal children in a classroom setting than in a free play situation.[T]	63.8(n=370)	36.2(n=210)
18.The majority of ADHD children evidence some degree of poor school performance in the elementary school years[T]	57.9(n=336)	42.1(n=244)
19.There is approximately 1 child in every classroom with a diagnosis of ADHD[T]	48.6(n=282)	51.4(n=298)
20.Children with ADHD usually have good peer relations because of their outgoing nature[F]	36.6(n=212)	63.4(n=368)
21.ADHD is often caused by food additives and much sugar in the diet[F]	36.7(n=213)	63.3(n=367)
22.Children with ADHD generally display an inflexible adherence to specific routines or rituals[F]	56.6(n=328)	43.4(n=252)
23.Children from any walk of life can have ADHD[T]	61.6(n=357)	38.4(n=223)
24.Children with ADHD always need a quiet environment to concentrate[F]	59.1(n=343)	40.9(n=237)
25.If medication is prescribed, educational interventions are often unnecessary[F]	59.1(n=343)	40.9(n=237)
26.Antidepressant drugs have been effective in reducing symptoms for many ADHD children[T]	60.5(n=351)	39.5(n=229)
27.Reducing dietary intake of sugar or food additives is generally effective in reducing the symptoms of ADHD.[T]	52.4(n=304)	47.6(n=276)
28.Treatments for ADHD which focus primarily on punishment have been found to be the most effective in reducing the symptoms of ADHD[F]	57.4(n=333)	42.6(n=247)
29.Does Medication cure ADHD[F]	49.7(n=288)	50.3(n=292)

T: True, F: False

5.5 Factors Associated with primary school teachers Knowledge of ADHD in Arba Minch town, Ethiopia, June 2025

The bivariable logistic regression analysis indicated that marital status, educational status, ethnicity, courses taken in college/University, and sources of information about ADHD were significantly associated with knowledge of ADHD among primary school teachers.

After conducting a multivariate analysis, educational status (diploma, degree, and master's) and courses taken in college remained significant.

The odds of having good knowledge were 1.3 times higher among primary school teachers with a degree (AOR = 1.397, 95% CI 0.997, 1.957) and 2.7 times higher among those with a (AOR = 2.765, 95% CI .969, 7.891) compared to teachers with a diploma. Additionally, the odds of having good knowledge were approximately 2.3 times higher among primary school teachers who had taken coursework on ADHD at the college or university level compared to their counterparts (AOR = 2.366, 95% CI 1.189, 4.706) (See Table 5).

Table 5: Bivariate and Multivariate Logistic Regression Analysis of Knowledge Score With Demographic Characteristics and Experience with ADHD among Primary School Teachers in Arba Minch town, Ethiopia, June 2025 (n = 580)

Variables	Catagories	Level Of Knowledge		95%Confidence Interval (95 CI %)			
		Good	Poor	COR	P-value	AOR	P-value
Marital Status	Single	70	60	1	.242	1	.486
	Married	193	195	.848(.570,1.263)		.918(.600,1.403)	
	Divorced	14	18	.667(.306,1.453)		.648(.2841.482)	
	Widowed	7	9	.667(.234,1.898)		.897(.298,2.698)	
	Separated	3	11	.234(.062,.877)		.348(.089,1.359)	
Ethnicity	Gamo	199	187	1	.137	1	.274
	Amhara	38	35	1.020(.618,1.683)		.938(.558,1.576)	
	Gurage	4	15	.251(.082,.769)		.841(.427,1.658)	
	Oromo	18	22	.769(.400,1.479		.867(.493,1.523)	
	Other	28	34	.774(.452,1.326)		.463(.228,.937)	
Educational status	Diploma	162	148	1	.009	1	.032
	Degree	109	140	1.406(1.006,1.966)		1.397(.997,1.957)	
	Masters	16	5	2.923(1.460,11.569)		2.765(.969,7.891) *	
Sourses taken in college/University	Yes	274	264	.432(.220,.849)	.015	2.366(1.189,4.706) *	.025
	No	13	29	1		1	
Sources of Information about ADHD	Other medias	112	133	1	.024	1	.489
	Through books	10	23	.829(.541,1.271)		.784(.504,1.219)	
	Magazines	24	21	.428(.189,.971_		.465(.199,1.084)	
	Research journals	65	64	1.125(.570,2.221)		1.110(.548,2.251)	
	Friendes	76	52	1.439(.879,2.357)		1.412(.847,2.353)	

*= significantly associated, COR=Crude odds ratio, AOR= Adjusted odds ratio

5.6 Attitude of teachers on ADHD among primary school teachers' in Arba Minch town, Ethiopia, June 2025

The total scores and percentage scores were calculated for each participants.among the study participants 89.8% scored below the overall Attitude score, indicating that these individuals have Favorable Attitude towards ADHD.

We can observe that the most strongly agreed items were "ADHD children misbehave because they do not like following rules." And "I would like to know more about ADHD and its associated behaviors." And it suggests that teachers had the interest to know about the disorder and its associated behaviors. On the other side the most disagreed items were "How much do you agree with the idea that ADHD is a valid diagnosis." And "I believe ADHD is an excuse for neglectful parenting."

Lastly, teachers did not exhibit a particularly positive or negative attitude toward statements such as "Children with ADHD should be taught by specially trained teachers" and "I find it rewarding to see the accomplishments of students who display ADHD-type behaviors."(See Table 6).

Table 6 Attitude of teachers on different aspects of ADHD among primary school teachers' in Arba Minch town, Ethiopia, June 2025 (n = 580)

Variables	SD%	D%	NU%	A%	SA%	Mean	SD
1.How much do you agree with the idea that ADHD is a valid diagnosis	57 (9.8)	110 (19.0)	157 (27.1)	210 (36.2)	46 (7.9)	3.13	1.116
2.ADHD children should be taught by specially trained teachers	20 (3.4)	98 (16.9)	208 (35.9)	177 (30.5)	77 13.3	3.33	1.017
3.ADHD is a behavioral disorder that should not be treated with medication	17 2.9	133 22.9	186 32.1	193 33.3	51 8.8	3.22	0.992
4.Students who exhibit behaviors associated with ADHD perform well in some subjects	16 2.6	104 17.9	104 17.9	304 52.4	53 9.1	3.48	0.973
5.ADHD is an excuse for children to misbehave in the school	23 4.0	50 8.6	97 16.7	305 52.6	105 18.1	3.72	0.987
6.I believe ADHD is an excuse for neglectful parenting	51 8.8	232 40.0	106 18.3	141 24.3	50 8.6	2.84	1.147
7.I found that behaviors associated with ADHD irritating in the classroom	30 5.2	95 16.4	124 21.4	236 40.7	95 16.4	3.47	1.103

8.I found that students who exhibit ADHD-type behaviors rude to other children	23 4.0	103 17.8	153 26.4	194 33.4	107 18.4	3.45	1.101
9.I found that rewarding to see the accomplishments of students who display ADHD-type behaviors	16 (2.8)	118 (20.3)	174 (30.0)	162 (27.9)	110 (19.0)	3.40	1.093
10.Children with ADHD could control their behavior if they really wanted to	41 (7.1)	104 (17.9)	133 (22.9)	179 (30.9)	123 (21.2)	3.41	1.205
11.ADHD children misbehave because they do not like following rules	31 (5.3)	124 (21.4)	130 (22.4)	166 (28.6)	129 (22.2)	3.41	1.199
12.Students who exhibit behaviors associated with ADHD are rewarding to work with	29 (5.00)	147 (25.3)	133 (22.9)	159 (27.4)	112 (19.3)	3.31	1.187
13.Students who exhibit behaviors associated with ADHD interfere with my ability to effectively teach my class	20 (3.4)	99 (17.1)	132 (22.8)	210 (36.2)	119 (20.5)	3.53	1.100
14.I would like to know more about ADHD and its associated behaviors	21 (3.6)	66 (11.4)	141 (24.3)	223 (38.4)	129 (22.2)	3.64	1.059
15.I would like to have more information about classroom interventions to assist me with educating the students with ADHD-type behaviors	23 (4.0)	59 (10.2)	135 (23.3)	235 (40.5)	128 (22.1)	3.67	1.052
16.I found it challenging to teach students who exhibit behaviors associated with ADHD	16 (2.80)	71 (12.20)	137 (23.60)	232 (40.0)	124 (21.4)	3.65	1.033
17.I feel like I have received adequate professional development about managing ADHD-type behaviors	16 (2.80)	75 (12.90)	152 (26.20)	215 (37.10)	122 (21.00)	3.61	1.042
18.I feel like I can effectively teach students who exhibit behaviors	13 (2.2)	100 (17.2)	172 (29.7)	199 (34.3)	96 (16.6)	3.46	1.030

associated with ADHD							
19.You cannot expect as much from an ADHD child as you can from other children	18 (3.1)	64 (11.0)	150 (25.9)	260 (44.8)	88 (15.2)	3.58	0.978
20.I change my teaching styles and differentiate my lessons for students who exhibit ADHD-type behaviors	11 (1.9)	46 (7.9)	132 (22.8)	280 (36.40)	111 (19.1)	3.75	0.919
21.Students with ADHD-type behaviors bring new perspectives to the topics I am teaching	50 (8.6)	256 (44.1)	118 (20.3)	106 (18.3)	50 (8.6)	2.74	1.118
22.Students who display behaviors associated with ADHD do not need assistance with their academic work; they need more structure and discipline	17 (2.9)	49 (8.4)	95 (16.4)	310 (53.4)	109 (18.8)	3.77	0.949
23.If students with ADHD receive appropriate treatment, they can achieve well in their academics like any other student	12 (2.1)	41 (7.1)	92 (15.9)	341 (58.8)	94 (16.2)	3.80	0.867

Note; N=580 SD= strongly disagree, D= Disagree, NU= Neutral, A= Agree, SD= strongly agree-

5.7 Factors Associated with Primary School teachers Attitude towards ADHD in Arba Minch town, Ethiopia, June 2025

To identify factors associated with the teachers' attitude scores; bivariate analysis was conducted for each of the independent variables, bivariable logistic regression analysis indicated that sex and school category associated with Attitude of ADHD among primary school teachers.

The multivariate logistic regression analysis revealed that school category was significantly associated with the attitudes of elementary school teachers. The odds of having a favorable attitude were 4.2 times higher among primary school teachers in public schools (AOR = 4.279, 95% CI 2.994, 6.116) compared to those in private schools (SeeTable 7).

Table7 Bivariate and Multivariate Logistic Regression Analysis of Attitude With Demographic Characteristics and Experience with ADHD among Primary School Teachers in Arba Minch town, Ethiopia, June 2025 (n = 580)

Variables	**Catagories**	**Level Of Attitude**		**95%Confidence Interval (95 CI %)**			
		Favorable	Favorable	COR	P-value	AOR	P-value
Sex	Male	137	169	1	.008	1	.188
	Female	141	133	1.308(.943,1.814)		1.264(.892,1.791)	
School Category	Public	108	92	4.193(2.963,5.933)	<.001	4.279(2.994,6.116) *	.000
	private	98	210	1		1	

*= significantly associated, COR=Crude odds ratio, AOR= Adjusted odds ratio

6 DISCUSSION

This research was conducred among primary school teachers working in both private and governmental primary schools in Arba Minch, Ethiopia. The pimary objective was to evaluate teachers' knowledge and attitude regarding Attention-Deficit/Hyperactivity Disorder (ADHD), and to identify the factors that affecting these variables. Teachers had a crucial part in the timely identification and referral of students with Attention Deficit Hyperactivity Disorder, as well as in providing support throughout their treatment and care. Having a good knowledge base and a positive attitude can significantly contribute to this process.

6.1 Knowledge Score of the Participants among primary school teachers' in Arba Minch town, Ethiopia, June 2025

This study intended to determine the knowledge, attitude, and associated factors regarding Attention Deficit Hyperactivity Disorder in primary school teachers in Arba Minch towns, Ethiopia. In the present research, the percentage of the participants 40.2% scored below the overall knowledge score, indicating that these individuales have poor knowledge. This finding consistent with research conducted in and Taif City, Saudi Arabia (40%), in Nekemte 43.7% (25,30) indicating a knowledge gap within this population. So, an all-inclusive and well-designed plan is essential to provide timely solutions and decrease the risk of delayed diagnosis and mistreatment of Attention Deficit Hyperactivity Disorder in the classroom.

However, the result was higher than those of researches conducted in Ha'il, Saudi Arabia.at (34.9%), (18). Although these studies employed a cross-sectional design similar to current research, the perceived difference may be attributed to, such as sample size (405) and sampling methods (an electronic questionnaire), as well as variations in cultural characteristics. Conversely, the present result was lower than studies done in Iran 65% and Pakistan (94.7%) of teachers had good knowledge (12,7). Additionally, in Gonder, Nekemte and South Africa , teachers scored higher with 48%, 43.7% and 45% respectively (1,24,31). The differences in average knowledge scores between the teachers in our study and those in other studies may be due to the existence of awareness programs in the populations being studied.

6.2 Factors Associated with Knowledge towards ADHD

In the present study, having good knowledge about Attention Deficit Hyperactivity Disorder was considerably related with participants' educational levels of degree and masters compared to those with a diploma. Similar findings have been reported by others, in Gonder suggesting that a higher educational level enhances the capacity to acquire knowledge on various issues, including ADHD (1). Therefore, to improve understanding of Attention Deficit Hyperactivity Disorder and the application of behavioral approaches, teachers with lower educational experiences should be cheered to pursue training on Attention Deficit Hyperactivity Disorder.

This research also found that good knowledge was statistically significant among teachers who had taken courses on ADHD in college. This finding was supported by the results from a study done in Nifas Silk Lafto ,Ethiopia (32) which found a strong significant relationship between teachers training courses and teachers‟ knowledge of ADHD. Riyadh City, Saudi Arabia Most of the teachers indicated that they had attended courses/ training about Attention Deficit Hyperactivity Disorder (76.7%) (3). Makkah City in Saudi Arabia ,25% of teachers with a postgraduate degree had an overall good level of knowledge ,Also, on a cross-national study (23) done on teachers‟ knowledge and misconceptions about ADHD it was implied that taking at least one course about ADHD was found to be one of the predictors of overall ADHD knowledge. This could be explained by that receiving the courses about ADHD in college, i.e. learning in institutions as it‟s one of the formal ways of acquiring knowledge, it could have induced having good knowledge about the disorder This may be attributed to the enhanced understanding gained through formal education and increased awareness.

6.3 Attitude Score of the participants among primary school teachers' in Arba Minch town, Ethiopia, June 2025

A significant discovery of this research is the participants' attitudes towards Attention Deficit Hyperactivity Disorder.The research shown that 89.8% of Primaryry School teachers exhibited a favorable attitude, this suggest that the overall attitude of Attention Deficit Hyperactivity Disorder is positive. To tackle the problems faced by the remaining participants with unfavorable attitudes, a well-designed strategy and policy can be needed. The present discovery were comparable to previous studies conducted in Gonder town (84.1%)(1), was greater than that of a research done in Debre Markos and Dejen Towns (46%), Dublin (42%), Palestine (49.8%) and Egypt (85.8%), where teachers had poor Attitude levels about Attention-Deficit/Hyperactivity Disorder (19, 32, 33). The inconsistencies may be endorsed to alterations in sample sizes (n = 417, 499, 160 and 255) and sampling methods (random sampling) in Debre Markos and Dejen Towns, Dublin, (Convenience sampling) in Plaestine and (multistage) Egypt studies the same as the present study and the change in traditional feature too (19, 32).

However, the outcome of this research is lesser than that of a research done in Pakistan, where 96.2% of teachers exhibited a favorable attitude (12).

6.4 Factors Associated with Attitude towards ADHD

Teaching in public school was identified as a predictor of the outcome variable, with an odds ratio of [AOR = 4.279(2.994,6.116)]. This finding consistent with a study done in Iran, which showed that teachers in public schools had positive Attitude than those in private schools, with mean values of 20.50 for public schools and 14.76 for private schools (7). But the other demographic characteristics were not significantly associated with the outcome variable.

7 STRENGTHS AND LIMITATIONS OF THE STUDY

7.1 Strengths of the Study

1. Relevant Topic: The focus on ADHD is crucial, as early identification and intervention can signifycantly impact students' academic and social outcomes. This study addresses an important area in educational psychology.

2. Targeted Population: By concentrating on primary school teachers, the research provides insights into the knowledge and attitudes of those directly involved in the education and care of children with ADHD.

3. Local Context: Conducting the study in Arba Minch Town provides valuable data relevant to the local educational environment, which can inform Teachers-specific interventions and training programs.

4. Potential for Impact: The findings can inform policy and practice, guiding the development of training programs for teachers to improve their understanding and management of ADHD in the classroom.

7.2 Limitations of the Study

• Data were collected at a single point in time, which may not accurately reflect changes in attitudes, knowledge, or behaviors over time.

• Selection Bias: The sample may not be representative of the larger population, leading to potential biases in the findings.

• Response Bias: Participants may provide socially anticipated answers rather than truthful responses, affecting the validity of the data.

8 CONCLUSION AND RECOMMENDATIONS

8.1 Conclusion

The proportion of primary school teachers with good knowledge was low,and a positive attitude toward Attention Deficit Hyperactivity Disorder was high. Educational attainment, specifically holding a diploma or master's degree and taking courses on ADHD in college, was significantly associated with teachers' knowledge of the disorder. Additionally, teaching in public schools was significantly linked to the attitudes of primary school teachers concerning Attention Deficit Hyperactivity Disorder.To improve teachers' Knowledge of ADHD and the application of behavioral approaches in the schoolroom, to pursue further preparation on Attention Deficit Hyperactivity Disorder. Additionally, policymakers must think through incorporating Attention Deficit Hyperactivity Disorder and other childhood psychological well-being concerns into the primary school teachers' program.

Furthermore, specialized workshops or training sessions focused on ADHD should be developed and offered for private school teachers. Emphasizing the importance of understanding ADHD, effective classroom management strategies, and fostering a good knowledge will contribute to better educational outcomes for students with ADHD.

8.2 Recommendations

Based on this study results, the following recommendations are suggested:

For the Ministry of Education: The findings indicate that teachers who received training on Attention Deficit Hyperactivity Disorder in college/ university remained additional possess good knowledge compared to those who did not take such courses. Therefore, offering courses that specifically address ADHD for teacher trainees is essential for enhancing their knowledge. The Ministry of Education should prioritize the incorporation of courses on common childhood neurobehavioral disorders, such as ADHD, into the curriculum for all upcoming teachers.

For School Officials: School officials accountable for the qualified expansion of teachers developement on training programs focused on ADHD to increase awareness and understanding among staff, tailored to their specific needs.

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10 Appendix

Annex I

Information sheet and verbal Consent

Addis Ababa University, College of Health Sciences, Department of Nursing and Midwifery

DD/MM/YY ___/____/_____

My name is ---------- I am from the AAU. As a partial fulfillment requirement for an MSc degree in Pediatrics and Child Health Nursing, I will conduct a study on the Knowledge and attitude of teachers towards attention deficit hyperactivity disorder (ADHD) in selected primary schools in Arba Minch town you are kindly requested to respond to all statements or questions based on the instructions given. Your information is used only for research purposes and is kept confidential. The following is some general information about the study:

Purpose of the Research Project; this study can be used as a reference for other researchers to do further study on the topic area. And also it can assist curriculum designers of primary school teachers to design curriculum that can address the issue.

Additionally school officials can use this study to address their teacher's need of in service trainings towards ADHD. Plus it will also aid teachers to know their status towards understanding ADHD and update themselves accordingly.

The objective of the study is to assess primary school teachers‟ knowledge and attitude towards ADHD in Arbaminch town, Gamo Zone, Southern Ethiopia, 2024.

All information obtained from you will be kept private and will not be shared with any third parties; your name won't be recorded on the question sheet, ensuring that you won't be known for any reason.

Risks of the study: The study procedure does not cause any physical or psychological trauma. Furthermore, you will not be forced to respond or give information that you do not know.

Consent: Your willingness to take part in the study will determine your participation. You have the option to either not participate at all or to stop participating at any time after you have begun.

Right to Refusal or Withdraw: You have full right to refuse from participating in this research. You have also the full right to withdraw from this study at any time you wish.Please feel free to contact me if you have any questions about the study. It is entirely up to you

whether or not you participate in this study. Also, I hope you will take part in this survey because your opinions are extremely valuable.

If you have question about the study the address of the principal investigator is:

Name: Nardos Tesfaye

Phone No: 0916344493

E-mail: narditesfaye93@gmail.com

Informed consent: Are you voluntarily participating in this study? 1. Yes 2. No

Annex II

Questionnaire

Questions on Knowledge and Attitude of Primary School Teachers Towards Attention Deficit Hyperactivity Disorder (ADHD) in Selected Primary Schools in Arba Minch, Ethiopia.

01. Questionnaire identification number----------

02. Date of data collection ---------- 03. School code ----------

Part one: - Socio-demographic characteristics of the participants

No	Questions	Response
101	How old are you? (fill in years)	----------
102	What is your gender category	1. Male 2. Female
103	What is your current marital status?	1. Single 4. Widowed 2. Married 5. Separated 3. Divorced
104	How long have you been teaching? (in years)	1.<5 4.16-20 2.6-10 5.>20 3 11-15
105	What is the highest educational level you have completed?	1. Certificate 4. Master's degree 2. Diploma 5.Other 3. Bachelor's degree
106	What is your ethnicity?	1. Gamo 4. Oromo 2.Amhara 5.Other 3.Gurage
107	What is your religion?	1. Orthodox 3. Catholic 2. Muslim 4. Protestant 5.other
108	Do you have previous experience of teaching children with ADHD	1.Yes 2.No
109	What is the category of school you are teaching in?	1.Private 2.Public
110	Which grade students are you teaching	1.1-4 2.5-8
111	Have you ever taught students you believed to have ADHD?	1. Yes 2. No
112	Have you taken classes/ coursework at the College/university level about ADHD?	1. Yes 2. No

113	Have you ever received training about (ADHD)?	1. Yes 2. No
114	Have you ever received any information About ADHD in children?	1. Yes 2. No
115	From which of the following sources did you get information	1.Through books 2.Magazines 3.Research journals 4.Other medias 5.Friendes

Part Two: - Questions towards knowledge of ADHD

No	Question	Response
1.	Have you ever heard of the word attention deficit hyperactive disorder (ADHD)?	1.Yes 2.No
2.	ADHD is a childhood psychiatric disorder?	1.Yes 2.No
3.	Children are more affected than adults by ADHD?	1.Yes 2.No
4.	Do you believe that genetic factors play a role in causing ADHD?	1.Yes 2.No
5.	Could someone get ADHD from family?	1.Yes 2.No
6.	Do individuals with ADHD frequently talk excessively and have difficulty paying attention?	1.Yes 2.No
7.	Inattention and Hyperactive/impulsive are subtypes of ADHD?	1.yes 2.No
8.	ADHD is more prevalent in boys than girls?	1.Yes 2.No
9.	In order to be diagnosed with ADHD, the child's symptoms must have been present before age 12.	1.Yes 2.No
10.	Approximately 5% of school-aged children have ADHD	1.Yes 2.No
11.	ADHD is the result of poor parenting practices	1.Yes 2.No
12.	ADHD children are usually from single-parent families	1.Yes 2.No
13.	Family dysfunction may increase the likelihood that a child will be diagnosed with ADHD	1.Yes 2.No

14.	Symptoms of depression are found more frequently in ADHD children than in non-ADHD children	1.Yes 2.No
15.	A diagnosis of ADHD by itself makes a child eligible for placement in special education.	1.Yes 2.No
16.	ADHD children generally experience more problems in new situations than in familiar situations.	1.Yes 2.No
17.	Children with ADHD are more distinguishable from normal children in a classroom setting than in a free play situation.	1.Yes 2.No
18.	The majority of ADHD children evidence some degree of poor school performance in the elementary school years	1.Yes 2.No
19.	There is approximately 1 child in every classroom with a diagnosis of ADHD	1.Yes 2.No
20.	Children with ADHD usually have good peer relations because of their outgoing nature	1.Yes 2.No
21.	ADHD is often caused by food additives and much sugar in the diet	1.Yes 2.No
22.	Children with ADHD generally display an inflexible adherence to specific routines or rituals	1.Yes 2.No
23.	Children from any walk of life can have ADHD	1.Yes 2.No
24.	Children with ADHD always need a quiet environment to concentrate	1.Yes 2.No
25.	If medication is prescribed, educational interventions are often unnecessary	1.Yes 2.No
26.	Antidepressant drugs have been effective in reducing symptoms for many ADHD children	1.Yes 2.No
27.	Reducing dietary intake of sugar or food additives is generally effective in reducing the symptoms of ADHD.	1.Yes 2.No
28.	Treatments for ADHD which focus primarily on punishment have been found to be the most effective in reducing the symptoms of ADHD	1.Yes 2.No
29.	Does Medication cure ADHD	1.Yes 2.No

Part Three: - Questions towards attitude of ADHD

No	Question	Response
301	How much do you agree with the idea that ADHD is a valid diagnosis	1.Strongly disagree 2.Disagree 3.Neutral 4.Agree 5.Strongly agree
302	ADHD children should be taught by specially trained teachers	1.Strongly disagree 2.Disagree 3.Neutral 4.Agree 5.Strongly agree
303	ADHD is a behavioral disorder that should not be treated with medication	1.Strongly disagree 2.Disagree 3.Neutral 4.Agree 5.Strongly agree
304	Students who exhibit behaviors associated with ADHD perform well in some subjects	1.Strongly disagree 2.Disagree 3.Neutral 4.Agree 5.Strongly agree
305	ADHD is an excuse for children to misbehave in the school	1.Strongly disagree 2.Disagree 3.Neutral 4.Agree 5.Strongly agree
306	I believe ADHD is an excuse for neglectful parenting	1.Strongly disagree 2.Disagree 3.Neutral 4.Agree 5.Strongly agree
307	I found that behaviors associated with ADHD irritating in the classroom	1.Strongly disagree 2.Disagree 3.Neutral 4.Agree 5.Strongly agree
308	I found that students who exhibit ADHD-type behaviors rude to other children	1.Strongly disagree 2.Disagree 3.Neutral 4.Agree 5.Strongly agree
309	I found that rewarding to see the accomplishments of students who display ADHD-type behaviors	1.Strongly disagree 2.Disagree 3.Neutral

		4.Agree 5.Strongly agree
310	Children with ADHD could control their behavior if they really wanted to	1.Strongly disagree 2.Disagree 3.Neutral 4.Agree 5.Strongly agree
311	ADHD children misbehave because they do not like following rules	1.Strongly disagree 2.Disagree 3.Neutral 4.Agree 5.Strongly agree
312	Students who exhibit behaviors associated with ADHD are rewarding to work with	1.Strongly disagree 2.Disagree 3.Neutral 4.Agree 5.Strongly agree
313	Students who exhibit behaviors associated with ADHD interfere with my ability to effectively teach my class	1.Strongly disagree 2.Disagree 3.Neutral 4.Agree 5.Strongly agree
314	I would like to know more about ADHD and its associated behaviors	1.Strongly disagree 2.Disagree 3.Neutral 4.Agree 5.Strongly agree
315	I would like to have more information about classroom interventions to assist me with educating the students with ADHD-type behaviors	1.Strongly disagree 2.Disagree 3.Neutral 4.Agree 5.Strongly agree
316	I found it challenging to teach students who exhibit behaviors associated with ADHD	1.Strongly disagree 2.Disagree 3.Neutral 4.Agree 5.Strongly agree
317	I feel I have received adequate professional development about managing ADHD-type behaviors	1.Strongly disagree 2.Disagree 3.Neutral 4.Agree 5.Strongly agree
318	I feel I can effectively teach students who exhibit behaviors associated with ADHD	1.Strongly disagree 2.Disagree 3.Neutral 4.Agree

		5.Strongly agree
319	You cannot expect as much from an ADHD child as you can from other children	1.Strongly disagree 2.Disagree 3.Neutral 4.Agree 5.Strongly agree
320	I change my teaching styles and differentiate my lessons for students who exhibit ADHD-type behaviors	1.Strongly disagree 2.Disagree 3.Neutral 4.Agree 5.Strongly agree
321	Students with ADHD-type behaviors bring new perspectives to the topics I am teaching	1.Strongly disagree 2.Disagree 3.Neutral 4.Agree 5.Strongly agree
322	Students who display behaviors associated with ADHD do not need assistance with their academic work; they need more structure and discipline	1.Strongly disagree 2.Disagree 3.Neutral 4.Agree 5.Strongly agree
323	If students with ADHD receive appropriate treatment, they can achieve well in their academics like any other student	1.Strongly disagree 2.Disagree 3.Neutral 4.Agree 5.Strongly agree

Annex III

Amharic Version Information Sheet

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