MAGNITUDE OF ELIMINATION DISORDERS AND ASSOCIATED FACTORS AMONG CHILDREN AGE 5–14 YEAR-OLD ATTENDING PEDIATRIC OUTPATIENT AT WOLAITA SODO UNIVERSITY COMPREHENSIVE SPECIALIZED HOSPITAL, WOLAITA SODO, SOUTH ETHIOPIA

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A RESEARCH THESIS TO BE SUBMITTED TO JIMMA UNIVERSITY, INSTITUTE OF HEALTH, FACULITY OF MEDICAL SCIENCES, DEPARTMENT OF PSYCHIATRY, IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR MASTERS OF SCIENCE DEGREE IN INTEGRATED CLINICAL AND COMMUNITY MENTAL HEALTH

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JIMMA , ETHIOPIA

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Abstract

Background: *Elimination disorder occurs when a child aged five and above urinate urine or aged four and above defecates feces in inappropriate locations voluntary or involuntary. Pediatric elimination disorders are not well understood by parents, teachers, medical professionals, and mental health practitioners. However, this problem is stressful for both children and parents. Despite this, the magnitude and its associated factors of this problem are rarely investigated in Ethiopia.*

Objective: *This study aimed at assessing the magnitude of elimination disorder and its associated factors in children aged 5–14 years old.*

Method*: A hospital-based cross-sectional study was conducted from September 22 to November 22, 2022 at Wolaita Sodo University Comprehensive Specialized Hospital in Wolaita Sodo, South Ethiopia. A systematic random sampling technique was employed to select 423 study subjects. The data were gathered using a structured face-to-face interviewer administered questionnaire. Development of symptom score for dysfunctional elimination syndrome tool of vancover questionnaire was used to screen elimination disorders. Logistic regression model was used to determine the association between the outcome and independent variables and the 95% CI odds ratio and p-value < 0.05 were used to determine the strength of association between the outcome variable and explanatory variables.*

Result: *Atotal of 417 children were included in this study with response rate of 98.6%. The overall magnitude of elimination disorder among children age 5-14 year old in this syudy was (n 70, 16.8%), in boys (n 47, 17.3%) and girls (n 23, 15.75%). Specifically, the prevalence of enuresis was (n 64, 15.3%), encopresis (n 15, 3.6%), both enuresis and encopresis or combined elimination disorder (n 9, 2.2%). Age 9-11year (AOR=3.2;CI:1.09, 9.43), family size (AOR= 3.4; CI:1.78, 6.56), family history of elimination disorder (AOR=3.9; CI:2.12, 7.45), emotional problem (AOR=2.2; CI:1.18, 4.05), hyperactive problem (AOR= 3.8; CI:1.83, 7.83), child had low toilet training skill (AOR=5.9; CI:2.61, 13.33) and bad parenting practices were poor suprevesion (AOR=4.4; CI:1.29, 14.69) were significantliy associated with elimination disorder.*

Conclusion and Recommendation*: In this study, approxiametly one in five children had elimination disorder and factors associated with elimination disorders are child age, large family size, positive family history of elimination disorder, emotional and hyperactive problem, bad parenting practices and low toilet traing skill. Therefore, wholestic approach, early detection and management are important to referse the impact of the problem.*

Key words: *Elimination Disorder, Enuresis, Encopresis, Children, Wolaita, South Ethiopia.*

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Table of content

CONTENTS

List of tables

List of figures

Acronyms and Abbreviations

ABH	Abnormal Bowel Habit
APQ	Alabama Parenting Questionnaire
CBE	Community Based Education
CI	Confidence Interval
CSTQ	Child Trauma Screening Questionnaire
DE	Diurnal Enuresis
DSM-5	Diagnostic And Statistical Manual Of Mental Disorders Fifth Edition
DSSDES	Development of Symptom Score for Dysfunctional Elimination syndrome
DVISS	Dysfunctional Voiding and Incontinence Symptoms Score
ED	Elimination Disorder
FI	Fecal Incontinence
GDeFeCQ	Groningen Pediatric Defecation and Fecal Continence Questionnaire
ICCS	International Children's Continence Society
ICI	International Consultation on Incontinence
IRB	Institutional Review Board
NE	Nocturnal Enuresis
OR	Odds Ratio
PQ_EnU	Parental Questionnaire Enuresis/Urinary Incontinence
SDQ-PR	Strength and Difficulty Questionnaire Parent Report
SIM	Sudan Interior Mission
UK	United Kingdom
US	United State
VSSDES	Vancover Symptom Score for Dysfunctional Elimination Syndrome
WHO	World Health Organization
WSU	Wolaita Sodo University
WSUCSH	Wolaita Sodo University Comprehensive Specialized Hospital
WSUTRH	Wolaita Sodo University Teaching Referral Hospital

CHAPTER ONE

INTRODUCTION

1.1. Background

Elimination disorder can occurs without any deficity in two distinct organ systems: the lower gastro-intestinal tract for defecation and the genito-urinary tract for urination, these two organ systems share an embryonic origin (endoderm) as well as anatomical space (abdomen and pelvis), they also require a functioning peripheral nervous system (sacral pelvic nerves/plexus/spine) and central nervous system to coordinate their activities(1). Elimination disorders are common in children and are defined by the absence of bladder or bowel control that would be expected based on the child's age or current stage of development(2) and also elimination disorder (ED) or Dysfunctional elimination syndrome (DES) defined as an abnormal pattern of elimination of unknown etiology characterized by bowel and bladder incontinence and withholding, the symptoms of DES defined as voiding dysfunction (enuresis or encopresis), usually present in toilet-trained children who have no underlying anatomic or neurologic abnormalities(3). Daytime bladder and bowel control is achieved at various times and is considered a normal developmental milestone for most children between the ages 2 and 4years who are consistently dry and clean during a day (4).

An elimination disorder occurs when a child urinates or defecates in inappropriate locations, such as their underpants or the floor and this behavior must be out of step with their developmental stage and cannot be the result of a substance's direct effects, or it can't be a medical problem (5). Elimination disorders includes enuresis, the repeated voiding of urine into inappropriate places a frequency of at least twice a week for at least 3 consecutive months, whether involuntary or intentional age at least 5 years, it can be nocturnal wetting occurs at night and diurnal wetting ocures a day time and encopresis, the repeated passage of feces into inappropriate places whether involuntary/intentional at least one such event occurs each month for at least 3 months age at least 4 years (6).

Incorrect excretion in children is common but parents, teachers and health care professionals often do not well understand the reasons and options for managing such children, most of the parents interviewed did not seek medical attention for their child's urinary incontinence (7).

1.2. Statement of problem

Elimination disorder found to be prevalent worldwide problem, it affects around 0.7 percent to 29.6 percent of pediatric population, according to an epidemiological study done in the Netherlands among children (8) and also elimination disorder is a serious condition for millions of children (9).

Enuresis is one of the most complex and common problems of excretion in children around the world it can last into adolescence (10), as result elimination disorder affect child quality of life and around 23% of affected children resisted the given treatment (11).

The community prevalence of encopresis in pediatric population ranges from 0.8% to 7.8% worldwide and fecal incontinence affects approximately 15% of children(12). Approximately 40% of children seen in pediatric outpatient clinics have elimination disorder with daytime or nocturnal enuresis and fecal incontinence (13).

A daytime and nighttime wetting can be occur concurrently, Diurnal enuresis may present in several ways including frequency, urgency, constant dribbling, or post –void involuntary loss of urine, painful voiding and straining to urinate, A pattern of daytime only frequency and/or urgency problem that "hums on" in the morning and "turns off" at night usually suggests a behavioral or dysfunctional voiding syndrome as opposed to an anatomic anomaly, biogenic and neurogenic cause (14).

Elimination disorder leads to social, family and psychological problems; this puts the child at risk of social isolation, peer conflict, teasing, and classroom challenges. As a result, children with elimination disorders often suffer from low self-esteem and psychological distress. But in so many other areas of human life, the scientific approach to human waste elimination disorders has dramatically less investigated and reduced the meanings attributed to it and almost all of the problems it can cause (15).

Significant emotional and social difficulties in children with elimination disorder usually include diminished self-esteem, occupational impairment, social embarrassment and limitation. Furthermore the outcome of elimination disorder influenced by the willingness and ability of the family to participate in the treatment and the ability and motivation of the child to engage in the treatment (16).

Elimination disorder was less understood by families and society as result it is less organized than many other symptoms, for this reason it have far more effects than physical symptoms, leaving many children away from social life and also the shame, embarrassment, and stigma

associated with these conditions pose a significant barrier to seeking professional treatment and prevent many children from seeking help (17).

Parents and teachers are poorly informed about barriers to Pediatric elimination disorder as result its magnitude were under reported and children have elimination disorder less understood by medical and mental health professionals (18), due to this reason most kids with these problems don't even get treatment, often suffer for years and about a third of parents mistakenly believe the cause for child's defecation is "emotional" in nature, while other parents cite attention-seeking and laziness as the causes(19) despite having many factors affecting elimination disorder among children (20).

Elimination disorders account for 2.5 million doctor's visits annually in the United States, costing $2,500 per patient for diagnostic work and $3,000 per treated child annually. It greatly contributes to the health care financial burden (21). Despite its serious effects on patients, families and society, the magnitude of elimination disorder is disproportionate to the amount of its impact on child due to hindered by limited research on it (17). Furthermore the prevalence of enuresis and encopresis has rarely been studied in developing countries despite there is factors in these countries that could affect it (22).

Studying prevalence and associated factors of elimination disorder have critical input to the good physical function and outcomes in kids. However despite this widespread problem, there is little studies focus on elimination disorder (23).

Elimination disorder and its associated factors result frequent psychiatric problems in children (24). However up to the level of the researchers search and knowledge there is lack of adequate information about elimination disorders, and there is scarcity of a completed and published article on elimination disorders in the pediatric population in Ethiopian. So, this study particularly interested in studying of elimination disorder and its associated factors in children aged 5–14 years old attending pediatric outpatient at Wolaita Sodo University Comprehensive Specialized Hospital in Wolaita Sodo, South Ethiopia.

1.3. Significance of study

Elimination disorder is one of the most common and complex child and adolescent health problem in the world, affecting millions of children. It can cause a variety of physiological and psychological problems, including reduced self-esteem, embarrassment and adverse effects on social interactions. Furthermore, the problem is distressing for parents and children's; however, there is one study in Ethiopia on enuresis among children in adama city; which is not completed article on elimination disorder. Thus, this study is designed to determine the prevalence and associated factors of elimination disorder in which the finding of this study would have prominent advantage in the field of child health by generating new evidence about the magnitude of the problem and its associated factors. It also helps the program planners in designing community based interventions that helps the larger community. It will give critical input to WSUCSH to focuse on childhood elimination disoreder and strength its mangment program, furthermore the finding of this study gives an insight on elimination disorder and it will be initial study attempts to include all profile or components of elimination disorder in which it will helps as a baseline study for further studies in this field.

CHAPTER TWO

LITERATURE REVIEW

2.1. Magnitude of elimination disorder among pediatric population

Fourth International Consultation on Incontinence (4th ICI) world experts identified, collected and systemically reviewed the best available evidence on elimination disorder and estimates of its prevalence from different studies indicate that the magnitude of daytime urinary incontinence at age 7 varies from 6.3% to 9.0%, about 10% to 20% of 7-year-olds get their beds wet on a regular basis and magnitude of encopresis among pediatric population ranges from 0.3% to 8% of children in Western society (25).

Systematic review of studies done on elimination disorder at public pediatric hospital among children age 5 to 17 year at Netherlands US indicated that inappropriate defecation is common problems in worldwide but only a small proportion of patients seek medical attention, as a result reports of its prevalence vary widely, ranging from 0.7% to 29.6% in Europe, Oceania, and North America (8).

A hospital based cross-sectional study done on the prevalence of urinary incontinence among children aged 8 to 17 year old in University of Medical Center at Netherlands hospital using Groningen Pediatric Defecation and Fecal Continence Questionnaire (DeFeC) and International Children's Continence Society (ICCS) definition found a prevalence of 21.7% of urinary incontinence (26).

A population-based cross-sectional study done on the association between attention deficits hyperactive disorder and elimination disorder at Saarland University Hospital in Germany found that the prevalence of elimination disorders in enrolled children was 13.4% enuresis and 1.4% encopresis (27).

A cross-sectional study conducted on the prevalence of urinary and fecal incontinence and association to childhood obesity at Danish school children using semi-structured questioners interview included questions on whether fecal or urinary incontinence or nocturia were experienced at least once per month showed the magnitude of elimination disorders; diurnal enuresis 11.2%, fecal incontinence 21.8% and nocturnal enuresis 16.8% and incontinence being very common in children and one-third of children experience excretion problems (28).

A cross-sectional study done on the prevalence of elimination disorder and comorbid psychiatric disorder in Iranian children aged 6 to 18 year old using semi- structured questionnaires developed from "Kiddie-Schedule for Affective Disorders and Schizophrenia

for School-Age Children-Present and Lifetime Version found that enuresis was 5.4% and encopresis 0.13% this figure is moderate compared to others studies elsewhere (29).

A cross-sectional study conducted on risk factors for elimination disorder among school children in Sydney, Australia using DSM hallmark criteria for screening showed the magnitude of elimination disorder 18.2% (30). A cross-sectional study conducted on the magnitude of enuresis and voiding habit of 10- to 14-year-old Belgian school children in Belgium showed episodes of enuresis or encopresis 12% (31).

According to a population-based cross-sectional study on the voiding dysfunction in urban areas of southern Brazil, using "Farhat et al. score for voiding dysfunction" for voiding and fecal pattern indicate that the prevalence of urinary incontinence was 35.2%, with only 10.5% of parents of children with urinary voiding problem consulting a doctor about the problem (32).

A cross-sectional descriptive study design conducted on self-reported effects of childhood incontinence on the quality of life at Chinese University of Hong Kong children aged 6-17 years old, which has similar report with the same study conducted in different countries such as United States, Netherlands, Germany, Australia, Belgium, Japan, Denmark, Italy, Hong Kong and Turkey were all these countries reported the same result of elimination disorder 41% for urine incontinence and 18% for fecal incontinence) (33).

A cohort study conducted to determine the magnitude of urinary and fecal incontinence in first- and fourth-grade Swedish school children in Eskilstina figured that enuresis was 20.4% (10.6% diurnal urinary incontinence, 9.8% nocturnal enuresis) and fecal incontinence 15.4% were enuresis found to be the most common elimination disorders and semi-structured questioners employed to screen elimination disorder (34).

A cross-sectional study conducted on the voiding and bowel habit nationwide in the Republic of Korea among children 5 to 13 years old, examined the elimination disorder using International Children's Continence Society definition of DVS show that the prevalence of elimination disorder was 46.4% were enuresis 31.3% and 18.4% were encopresis which is found to be similar report in other Asian countries (35).

A cross-sectional study done on prevalence, causative factors and management of nocturnal enuresis among South African children aged 5 to 10 years old found that the incidence of nocturnal enuresis was 16.0% and daytime urinary incontinence 1.6% (36). A hospital based cross-sectional study done on elimination disorder in the group of South African children age 4-14 years at Chris Hani Baragwanath Hospital pediatric outpatient department show that the magnitude of elimination disorder was 31.2% (37).

A cross-sectional study conducted on toilet training and parental help seeking behavior toward elimination disorders at the pediatric outpatient department of Birnin Kebbi's Federal Medical Center Bayero University Kano, Nigeria shows that the elimination disorder is widespread and 80.6% of children affected by nocturnal enuresis (38). Similar a hospital-based cross-sectional descriptive study on association of nocturnal enuresis with behavioral problems and school performance among children aged 6 years and older in Nigeria using structured questionnaire reported a prevalence of nocturnal enuresis was 37%, the observed difference is due to data collection instruments and age category (39).

Another cross-sectional study carried out on frequency of bedwetting among children age 5 to 12 years old in Benha city, Egypt, found a magnitude of elimination disorder was 15.7% (40).
A school-based cross-sectional study conducted on the prevalence of nocturnal enuresis and associated factors among children age 6–14 year old assessed using parental questioners in Kenya found that 14.5% of elimination disorder in which enuresis the most common (41). Community based cross sectional study was conducted in the Adama city, Ethiopia among children age 6-15 year old by using DSM-5 criterion to discriminate enuresis reported that the magnitude of 26.6% (42).

2.2. Factors Associated With Elimination Disorder among Pediatric Population

2.2.1 Socio-demographic factors

A population-based cross-sectional study was conducted on prevalence and risk factors of enuresis among school children age 6 to 16 year in Istanbul, Turkey showed that age, residence, parental educational level and employment status of the parents, number of family members and monthly income of the family are risk factors for elimination disorder (43). A cross-sectional epidemiological study was conducted on magnitude and risk factors of enuresis among elementary school children age 6 to 12 year in Tikritt and Veggie, Iraq, indicate that enuresis was significantly associated with; male gender, younger age, low parental education level, increased number of siblings (44). A cross-sectional case study conducted on Turkish children with enuresis and encopresis between the ages of 5 and 18 year old conclude that both conditions are extremely distressing for the child and their family, for this both condition; children and parent low educational level, family income and a large or divorced family are all risk factors (45). A cross-sectional study carried out to determine the prevalence of nocturnal enuresis and its associated factors among children age 5-12 year old at College of Medicine, University of Ibadan hospital, in rural community southwestern

Nigeria reported that living circumstance, ethnicity and religious have significantly association with elimination disorder in children (46). Mental health survey conducted on Socio-demographic and psychopathologic correlates of enuresis among urban Ethiopian children age 6 to 15 year old showed that young age, male sex, children educational level were significantly associated with pediatric elimination disorder (47)

2.2.2 Clinical factors

A population-based cross-sectional survey done to determine the prevalence, severity and associated factors of daytime enuresis among school children age 5-12 year in Sydney, Australia, reported that enuresis was common problem among children in the first year of primary school, reported that family history of enuresis and blocked nose or snoring among affected children was the main risk factor (37,48,49). Descriptive cross-sectional hospital based study on childhood enuresis and encopresis in Istanbul turkey evidenced that childhood and adult life elimination disorders share common risk factors such as; maternal smoking of cigarette, family history elimination disorder, route of delivery, duration of labour (50). A cross-sectional study conducted on the prevalence of enuresis and its associated risk factors with elimination disorder among children age 6 to 16 year old in college of medicine, king faisal university, Dammam, Saudi Arabia shows that exclusive breastfeeding method, maternal substance use like alcohol and khat, terms of pregnancy and family history of enuresis associated with elimination disorders in children (51,52).

2.2.3 Psychosocial related factors

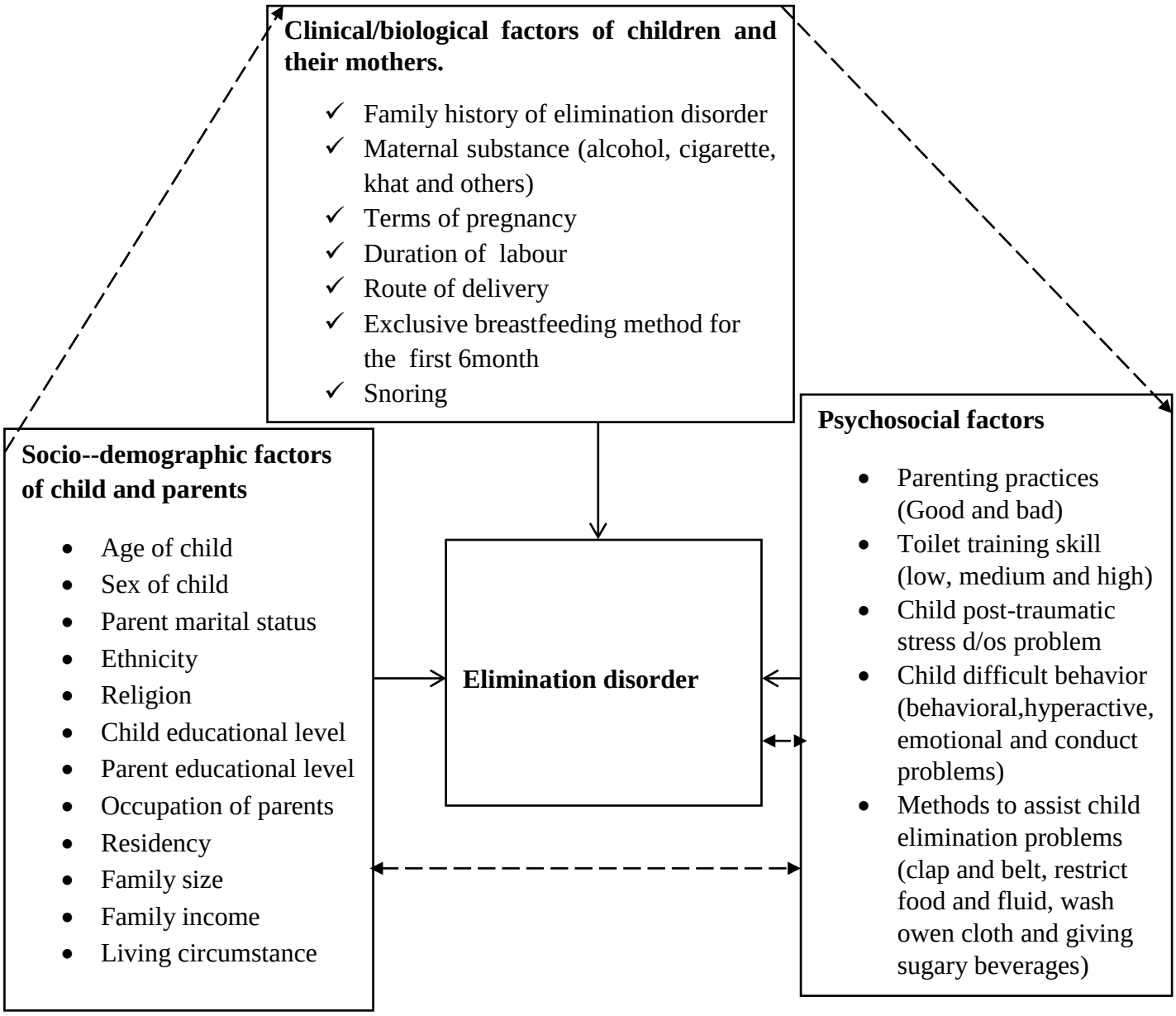
A cross-sectional study conducted on prevalence and associated factors of nocturnal enuresis among children aged 5–12 years in Xi'an, China, reported that low toilet training skill, parenting practice (positive parenting, inconsistence discipline, poor supervision) and punishment as discipline to assist their child's problems by (restricting or giving fluid and food, clap and belting ,washing his own cloth) and drinking sugary beverages are associated with elimination disorder (53). Cross-sectional study conducted on prevalence, risk factors and treatment of nocturnal enuresis in south African children conclude that parenting practices can often cause psychological damage to children suffering from elimination disorders through; punishment as discipline and also families tend to self-treat their children with behavioral strategies such as fluid and food restriction, are associated with children's elimination disorder (54). Hospital based cross-sectional study conducted on psychological and psychiatric issues of enuresis and encopresis among children at child psychology Ghent

university hospital in Germany Show that child behavioral problems and emotional problems have association with elimination disorder(55)**.**

A population-based cross-sectional study done on the association between attention deficits hyperactive disorder and elimination disorder at Saarland University Hospital in Germany found hyperactive-inattentive behavioral problems have strong association with elimination disorder (27). A cross-sectional study done on the prevalence of elimination disorder and comorbid psychiatric disorder in Iranian children aged 6 to 18 year old indicate that hyperactive –inattentive, conduct and emotional problems have significant association with elimination disorder (29).

According to population based cross-sectional a study conducted on prevalence of encopresis and its factors among children age 5-12 year old in Netherlands report that behavioral and emotional problems were associated with elimination disorder(56). Another hospital-based cross-sectional study conducted on elimination disorder and its associated factors in the group of South Africa children age 4 to 14 year old found that factors related to elimination disorders were behavioral problems, emotional problems and conduct problems have significant association with elimination disorder and also experiences to traumatic stressful life events at home during the early years of toilet training , furthermore this traumatic life events beyond the child's capacity to cope often can cause encopresis and enuresis (37).

2.3 Conceptual framework



Key: Broken line indicates possible associations which are not part of the analysis of this study.

Figure1: Conceptual frame work developed from literatures review on Magnitude of elimination disorder and associated factors among Pediatric population (57–59).

CHAPTER THREE

OBJECTIVES

3.1. General objective

- To assess the magnitude and associated factors of elimination disorder among children aged 5–14-year-old attending pediatric outpatient at Wolaita Sodo university comprehensive specialized hospital, Wolaita Sodo, South Ethiopia 2022

3.2. Specific objective

- To determine magnitude of elimination disorder among children aged 5–14-year-old attending pediatric outpatient at Wolaita Sodo university comprehensive specialized hospital, Wolaita Sodo, South Ethiopia, 2022

- To identify factors associated with elimination disorder among children aged 5–14-year-old attending pediatric outpatient at Wolaita Sodo university comprehensive specialized hospital, Wolaita Sodo, South Ethiopia, 2022

CHAPTER FOUR

METHODS

4.1. Study area and period

A study was conducted at Wolaita Sodo University Comprehensive Specialized Hospital (WSUCSH) from September 22 to November 22, 2022. The hospital is located in Wolaita sodo town, 329km south of Addis Ababa and 151km from Hawassa, the capital city of south nation's nationality and people's regional state. In 2012G.C, Wolaita Sodo University took over the hospital as Wolaita Sodo University teaching referral hospital (WSUTRH) with academic, research and community service responsibility. In the clinical part; it delivers different medical services for outpatients, emergency patients and inpatients for approximately 450-500 patients per day and total service coverage of the hospital is about more than 3 million people in its catchment areas. The pediatric department composed of pediatrician, general practitioner, nursing professionals and other technical and supportive staff to deliver services. The pediatrics department has four major wings: pediatric outpateint, pediatric Emergency (admission and outpatent unit), Neonatal Intensive Care Unit (NICU), pediatric surgical admission ward, pediatric medical admission ward and stabilization center (SC) unit.

4.2. Study design

- A hospital based cross-sectional study design was conducted.

4.3. Population

4.3.1. Source population

- The source population was all children age 5–14 years old attending WSUCSH Pediatric outpatient department.

4.3.2. Study population

- Study population was all sampled children age 5–14 years old attending WSUCSH Pediatric outpatient department during data collection period.

4.4. Inclusion and exclusion criteria

4.4.1. Inclusion criteria

- ❖ All children were age 5–14 years old who attend WSUCSH Pediatric outpatient department services during the data collection period.

4.4.2. Exclusion criteria

- ❖ Children who had known anatomical abnormalities of the urinary tract or bowel, medical (biogenic or neurological) and medication related cause were excluded by from self-report history and medical chart review.
- ❖ Children were critically ill to the extent of being unable to communicate during data collection.

4.5. Sampling technique and procedure

4.5.1 Sample size determination

The required sample size for this study was determined by using a single population proportion formula with the following assumption: As there is lack of fully published study that shows the magnitude of elimination disorder in our country Ethiopia, therefore the estimated prevalence of elimination disorder was taken as 50% (CI=95%, W-5% margin of error)

Where n= minimum sample size for the study

Z= the reliability of the coefficient corresponding to 95% (z= 1.96)

P=expected proportion of elimination disorder

W=margin error

Formula to calculate sample size

$n= (Z\alpha/2)2*P (1-P)/w2.$

$n= (1.96)2x0.5 (1-0.5)/0.05x0.05.$

$n= 384.$

By considering 10% of non-response rate and uncompleted questionnaires as contingence the final sample size was NF = 384+10%*384 = ~ 423

4.5.2 Sampling procedure

Systematic random sampling technique was used to select the study participants. To select the desired sample, the average number of pediatrics patients who visited the pediatric outpateint department within the last three months before the study was identified from the client registration in health management information system. On the base of this, the expected client flow rate during the study period was estimated to be 2350. Then the sampling interval (k) was calculated by dividing the expected number of pateint visiting the unit during the study period (N) to the determined sample size (n) of respondents(2350/423=5). Simple random sampling techniques was applied to select first sample from interval 1-K, then every K interval of the sample were selected up to collect required sample size.

4.6 Study Variable

4.6.1. Dependent variable

- Elimination disorder (presence/absence)

4.6.2. Independent variables.

- Socio-demographic characteristics of parents and children; child sex, child age, ethnicity, religion, residence, child educational level, family marital status, parents educational level, parental occupation, living circumstance, family size and family average mothly income.
- Clinical/biological factors of children and their mothers; maternal substance use, family history of elimination disorder, terms of pregnancy, route of delivery, duration of labour, snoring and child exclusive breastfeeding method during the first six months.
- Psychosocial factors; history of post-traumatic or stressful events, child's difficult behavior (behavioral problems, hyperactive, conduct and emotional problems), parenting practices good(positive) parenting and bad parenting (inconsistent discipline and poor supervision), toilet training skill (low, medium and high) and method to assist child's problem (Punishment as discipline and giving sugary beverage).

4.7. Operational Definition

4.7.1 Elimination disorder (presence or absence)

- Elimination disorder is enuresis or encopresis in which child urinate urine or defecate faces in inappropriate place age beyond five year, who have DSSDES score of ≥11(60).

4.7.2 Enuresis

- Enuresis is inappropriate voiding of urine in children who have score ≥8.5 for item number 1 to 10 in DSSDES (60)
- **Nocturnal enuresis** defined by frequency of weting at night at least 2times per week for consicative 3moth based on DSM-5 for iteam number 7 for DSSDES of vancover quesationres.
- **Diurnal enuresis** defined by frequency of wetting during a day time at least 2times per week for conscative 3moth based on DSM-5 for iteam number 1 for DSSDES of vancover quesationres (63).

4.7.3 Encopresis

- Encopresis is inappropriate defecation of feces in children who have score ≥3.5 for item number 11 to 13 in DSSDES (60).

4.7.4 Trauma

- Trauma is psychological or physical overwhelming situation, for children who have CTSQ score ≥ 5 (64).

4.7.6 Child difficult behavioral problems

- Childs difficult behavioral problems are the behavioral problems of children that challenge parents, teachers and his or her relatives, for children who have SDQ-PR overall optimum cutoff score ≥17 and which include subscale (hyperactive problems which have cutoff score ≥7 for hyperactive subscale, cutoff score ≥4 for conduct and cutoff score ≥5 for emotional subscale from SDQ-PR)(65).

4.7.7 Parenting practices

- ❖ Parenting practices defined as child-parents parenting style it can be good (Positive Parenting) and bad (Inconsistent Discipline and Poor Supervision) based on APQ-9 mean score. The mean score 4.48 and above indicate good(positive parenting), bad parenting (mean score 2.73 to 4.48 indicate inconsistent discipline and mean score 1 to 2.73 indicate poor supervision) (66).

4.7.7.8 Toilet training skill

- ❖ Toilet training skill defined as the mastery of aquring skills necessary for urinating and defecating in a socially acceptable time and manner for children who have score $\geq$30 have low toilet training skill, children who have score 17–29 have medium toilet training skill and children who have score $\leq$16 have high toilet training skill from pediatric-Assessment-Tool of toilet training for Issuing of Products(67).

4.7.7.9 Substance use

- ❖ Maternal substance use defined as ever use of substances any dose and frequency (alcohol, khat or tobacco) product of any type (yes or no) from parent report (68).

4.7.10 Family monthly income

- ❖ Using the world bank poverty line cut point for those family who have average monthly income of less than 3400 ETB(2.15$/day) were taken as low income, taking 1 US$=53 ETB (69).

4.7.11 Residency

- ❖ Rural residency is self-reported geographic location that located outside town and city
- ❖ Urban residency is self-reported geographic location that located with in the town and city.

4.7.12 Family history of elimination disorder

- ❖ Family histoy of elimination disorder defined as a preson who had elimination disorder in the family members from parent report.

4.8 Data collection procedure and instrument

4.8.1 Data collection Instrument

4.8.11 Development of Symptom Score for Dysfunctional Elimination Syndrome (DSSDES)

The presence of elimination disorder among children aged 5–14year old was assessed using a new valid Development of Symptom Score for Dysfunctional Elimination Syndrome (DSSDES) tool (60), which validated from Vancover Symptom Score for Dysfunctional Elimination Syndrome (VSSDES), this instrument was widely used for children to detect elimination disorders, enuresis and encopresis (70) and validated for children(age 6–16 years old in Netherland and age 4-16 years old in Canada (60,71,72). The questionnaire contained 2 measures in which vancover /DSS/DES quesationres has a 14-item condition specific measure to evaluate symptoms of bladder/enuresis (item 1-10) and bowel dysfunction/encopresis (item 11-13). The last item number14, which evaluates the difficulty of the measure, is not included in the score since the tool recommend to not include during scoring and all remaining items are weighted equally and all item responses are scored using a 5-point Likert scale, with scores ranging from 0 (no complaints) to 4 (severe symptoms). Total scores range from 0 to 52, with a cutoff score of $\geq$11 for the DSSDES of vancover quesationres with a sensitivity of 80% and a specificity of 91% have ability detect pediatric elimination disorders, it also measure frequency, urgency, constant dribbling, or post –void involuntary loss of urine, painful voiding and straining to urinate symptoms in diurnal enuresis that "hums on" in the morning and "turns off" at night that usually suggests a behavioral or dysfunctional voiding syndrome as opposed to an anatomic anomaly, biogenic and neurogenic cause (14). The presence of enuresis was assessed by cutoff score $\geq$8.5 for item number 1 to 10 in DSSDES of vancover quesationres, which is adopted and validated from dysfunctional voiding symptom score (DVISS) (61) and encopresis was assessed by using cutoff score $\geq$3.5 for item number 11 to 13 in DSSDES of vancover quesationres, which is adopted and validated from parental questionnaire enuresis/urinary incontinence PQ_EnU (62). The presence of nocturonal and diurunal enuresis assessed by DSM-5 definition, wetting at night or aday a frequency of at least twice a week for at least 3 consecutive months (63). The DSSDES Rating Scale was pretested for reliability in the current study setting and was found to be easily understood by the participants with internal consistency (Cronbach's alpha= 0.866). In this study, the DSSDES tool performed similarly to the DSM-5 in terms of discriminating elimination disorders and both produced comparable results in the study sample.

4.8.12 Strengths and Difficulties Questionnaire Parent Report (SDQ-PR)

Child's difficult behavioral problems were assessed using validated strengths and difficulties questionnaire parent report (SDQ-PR). It is composed of 25 items subdivided into five subscales of five items each, which measure hyperactivity, emotional symptoms, conduct problem symptoms, interpersonal relationships and pro-social behavior. Scoring of SDQ-PR can be conducted through calculating the total score of each subscale or calculating the total difficulties score which is the sum of 4 subscales (emotional disorder, conduct disorder, hyperactive-inattentive and peer-problem). A 25-item, 3-point Likert scale tool with total score ranged 0-40 without pro-social behavioral subscale. 'Somewhat true' is always scored as 1, but the scoring of 'Not True' and 'Certainly True' varies with the item. For each of the 5 scales the score can range from 0 to 10 if all items were completed.

Overall optimum cutoff point $\geq$17 of SDQ-PR has ability to screen behavioral problems with sensitivity of 70.96% and specificity of 69.15% and optimum cutoff score for subscales (cutoff score $\geq$7 for hyperactive-inattentive problems subscale and cutoff score $\geq$4 for conduct and $\geq$5 for emotional problems subscale). In this study SDQ-PR 20 item was used to screen child default behavioral problems because the last pro-social subscale 5 items were not indicated to incorporate with total rating scale for screening in its psychometric properties of validity and reliability (65). The SDQ-PR Rating Scale were pretested for reliability in our setup and was found to be understood by the participants with internal consistency (Cronbach's alpha= 0.79).

4.8.13 Child Trauma Screening Questionnaire (CTSQ)

Trauma history of children was assessed using CTSQ. The CTSQ assesses for re-experiencing (5 items) and hyper-arousal symptoms (5 items). The response format requires participants to respond with yes (scored 1) or no (scored 0) to whether they have experienced the symptoms since the event. Avoidance items were not incorporated in the CTSQ, because avoidance items (i.e., amnesia and foreshortened future symptoms) are not easily comprehended by children in the acute post-trauma timeframe and an optimal cutoff score of $\geq$5 was derived as providing the best prediction of child's have trauma (64). The CTSQ Rating Scale was pretested for reliability in our setup and was found to be understood by the participants with internal consistency (Cronbach's alpha= 0.76).

4.8.14 Alabama Parenting Questionnaire APQ-9

Child parenting practices of parents was assessed using APQ-**9** which is a short version of the APQ. From APQ three items were chosen for each of factors good(Positive) Parenting and bad (Inconsistent Discipline and Poor Supervision) parenting for inclusion in the APQ-9 item and APQ-9 item 5-point Likert scale with mean score 4.48 and above indicate good(positive) parenting and bad parenting (mean score 2.73 to 4.48 indicate inconsistent discipline and mean score 1 to 2.73 indicate poor supervision), The response format requires participants or child parents to respond with Never (1), Almost Never (2), Sometimes (3), Often (4), Always (5) (73). The APQ-9 Rating Scale was pretested for reliability in our setup and was found to be easily understood by the participants with internal consistency (Cronbach's alpha= 0.871).

4.8.15 Pediatric-Assessment-Tool/Toilet Training/-For-Issuing-of-Products

Toilet training skill for children was assessed by using pediatric-Assessment-Tool of toilet training skill for Issuing of Products. The tool has 11-items with different Likert scale which scored as SCORE $\geq$30 a HIGH clinical need and have low toilet training skill, score 17 – 29 MEDIUM clinical need and have medium toilet training skill, score $\leq$ 16 LOW clinical need and have well or high toilet training skill (67). The tool was pretested for reliability in our setup and was found to be easily understood by the participants with internal consistency (Cronbach's alpha= 0.799). Other questionnaire was adopted from previous studies for possible associated factors related to elimination disorder (ED) were attached to the inquiry to assess factors like; methods to assist childes elimination disorder, socio-demographic variables and biological or clinical factors (40)(74).

4.8.2 Data collection procedure

Data was collected from parents for children aged 5 to 8 years and from the children aged 9 to 14 year old according to items were interviewed face-to-face interviewer administered techniques by using the the DSSDES, SDQ-PR, CTSQ, APQ-9, and Pediatric-Assessment-Tool/Toilet Training/-For-Issuing-of-Products rating scale items and structured questionnaires that were translated into to the local language Amharic and Wolaita language to cheek consistency. Data collected by trained six BSc in Psychiatry professional and supervised by two Mental Health Specialists alongside with the investigator.

4.9 Data quality management

The questionnaire was prepared first in English and translated into Amharic and Wolaita language and then re-translated into English by experts in three languages including mental

health specialist and investigator to check its consistency. Two days training was given for data collectors and supervisors. Reliability of tools were checked and a pre-test was conducted for 5%(n = 22) of the sample size at Humbbo Tebela primary hospital 20km away from the study area to identify potential problems in data collection tools and modification of the questionnaires. Regular supervision and support were given to data collectors by the supervisors and principal investigator. Data was checked for completeness and consistency by supervisors and principal investigators on a daily basis during data collection time.

4.10 Data processing, analysis and presentation

Data were entered into Epi Data Version 4.6 and analyzed using SPSS version 25 statistical software; descriptive statistics was used to describe the sample characteristics and assess the magnitude of ED. Multicollinearity was checked by Variance Inflation Factor (VIF<2) which indicates that independent variables are not correlated to each other or there is no multicollinearity and the selected model was agood logstic regression model fit, since the Hosmer-Lemeshow goodness-of-fit P-value was 0.58 it is greater than 0.05, therefore the logistic model is good fit for the data set. The association between independent variables and the outcome variable were investigated using logistic regression. Variables p-value <0.25 in bivariate binary logistic regression analysis were entered into multivariable logistic regression analysis and variables with p<0.05 in multivariable logistic regression analysis was considered to have a significant association. 95% CI OR and p-value < 0.05 were used to determine the strength of association between the outcome variables and possible explanatory variables.

4.11 Ethical consideration

Ethical approval for this study was obtained from the Institutional Review Board (IRB)) of Jimma University Institute of Health (Ref.No-JUIH/IRB/63/22. The data collectors were clearly explained the aims of the study to the parents or caregivers of study participants. Written informed consent was obtained from all parents of children participating and the children were verbally assented to participating. A consent letter was prepared and attached to the questionnaire on a separate page and explain the participation was voluntary. In the consent sheet, the purpose of this study were stated and there was an explanation that there is no way to cause any harm to the study subjects. Before the participants sign their written consent, they were provided with a verbal explanation of the purpose of the study and assurance of the maintenance of confidentiality and anonymity as well. Appropriate measurement for COVID-19 was considered during the data collection period to secure data

collectors and participants. Children's have elimination disorder, after screen were link to health care service for treatment.

11. Dissemination plan

The findings of this study will be presented to Jimma University, Institute of Health, Faculty of Medicine, and Department of Psychiatry. It will be submitted to Wolaita Sodo University College of Health Science and Medicine, Wolaita sodo university comprehensive specialized hospital and department of psychiatry and pediatrics. It will be disseminated through publication in peer-reviewed local or international journals. Furthermore, efforts will have made to present the findings at annual workshops and conferences within the country and outside.

CHAPTER FIVE

RESULT

5.1. Socio-demographic characteristics

A total of 423 children were invited to participate in the study and 417 completed the interview with a response rate of 98.6 % and (n 6, 1.4%) participants were non response rate due to they leaved participation at the middle of interview without completing the questionaires. Out of the total children (n 271, 65%) were males and educational level of children (n 270, 64.7%) were primary school and above. More than half of participants (n 241 , 57.8%) were urban residents, likewise the mean age of participated children were 8.3 years with standered deviation of (SD ±2.31), nearly two-third of of the study participants (n 247, 59.2%) were between the ages of 5 and 8 years old and the majority of the participants (n 185, 44.4%) were Protestant by religion. The majority of participants (n 287, 68.8%) were belonging to Wolaita ethnic group. Regarding to living circumstance of children (n 297, 71.2%) were living with their parents and half of participants (n 214, 51.3%) lives in a family size of less than four. Out of the total mothers (n 298, 71.5%) were married (Table 2).

Table 2: *Socio-demographic and family related characteristics of children age 5-14 year old attending pediatric outpatient, at Wolaita sodo university comprehensive specialized hospital, Wolaita sodo, south Ethiopia, 2022*

Variable	Category	Frequency	Percentage (%)
Age	5-8 year old	247	59.2
	9-11 year old	113	27.1
	12-14 year old	57	13.7
Child sex	Male	271	65.0
	Female	146	35.0
Residency	Urban	241	57.8
	Rural	176	42.2
Religion	Orthodox	124	29.7
	Muslim	64	15.3
	Protestant	185	44.4
	Others*	44	10.6
Ethnicity	Wolaita	287	68.8

	Amhara	56	13.4
	Gurage	38	9.1
	Oromo	13	3.1
	Others**	23	5.5
Educational level of child	Kindergarten (KG)	147	35.3
	Primary and above	270	64.7
Currently living	With parents	297	71.2
	Steep parents	62	14.9
	Residential institution	30	7.2
	Gordian	28	6.7
Family size	< 4	214	51.3
	>= 4	203	48.7
Occupation of parents	Government employ	144	34.5
	Private	54	12.9
	Merchant	64	15.3
	Farmer	62	14.9
	Housewife	19	4.6
	Unemployed	35	8.4
	Daily labor	39	9.4
Educational status of parents	Illiterate	84	20.1
	Primary school	182	43.6
	High school and above	151	36.2
Parents marital status	Married	298	71.5
	Divorced	48	11.5
	Separated	37	8.9
	Widowed	23	5.5
	Single	11	2.6
Average family monthly income	< 1000	61	14.6
	1000-2500	60	14.4
	2500-3400	70	16.8
	>= 3400	226	54.2

**Others religion (7th day adiventist, Catholic) **Ethnicity (Gamo, Konso, Hadiya, Kambata, Maraqo*)

5.2. Clinical or biological factors of children and their mothers.

From total of 417 children participated in this study (n 315, 75.5%) had full term pregnancy, greater than half of children (n 243, 58.3%) had duration of labour less than ten hours and (n 311, 74.6%) children were delivered by vaginal delivery. After delivery for the first six month exclusive breastfeeding method (n 327, 78.4%) children were mixed (Breast and bottle) feeding. Regarding matrenal substance use (n 110, 26.4%) of mother reported substance use, from which (n 43, 10.3%) were used alcohol, (n 13, 3.1%) was smoked cigarette. In this study (n 122, 29.3%) children had family history of elimination disorder and (n 188, 45.1%) children had snoring (Table 3).

Table 3*: Clinical or biological factors of children aged 5-14 year old attending pediatric outpatient in Wolaita sodo university comprehensive specialized hospital, Wolaita sodo, south Ethiopia, 2022*

Variable	Category	Frequency	Percentage (%)
Period of gestation	Full term	315	75.5
	Pre-term	75	18.0
	Post term	27	6.5
Duration of labour	< 10 hours	243	58.3
	>= 10 hours	174	41.7
Mode of delivery	Normal vaginal	311	74.6
	Vacuum delivery	60	14.4
	Cesarean-section	46	11.0
Child exclusive breastfeeding method first six month	Bottle only	90	21.6
	Breast and bottle	327	78.4
Matrenal substance use	Yes	110	26.4
	No	307	73.6
Alcohol	Yes	43	10.3
	No	374	89.7
Cigarette	Yes	13	3.1
	No	404	96.9
Khat	Yes	32	7.7
	No	385	92.3
Others**	Yes	26	6.2

	No	391	93.8
Family history of elimination disorder	Yes	122	29.3
	No	295	70.7
Does child have snoring	Yes	188	45.1
	No	229	54.9

**Others substance (shesha, cannabis, opioids)

5.3. Psychosocial related factors of children

From a total of 417 children (n 154, 36.9%) were exposed to traumatic life events, among children who exposed to traumatic situation (n 73, 17.5%) had post-traumatic stress problem. Children parents think that out of 417 participated children (n 172, 41.2%) have elimination problem and in order to improve their child's elimination problem parents have tried limiting food and fluids (n 62, 14.9%), washing their own clothes (n 50, 12%) and giving sugary beverages (n 99, 23.7%). Among participated children (n 117, 28.1%) had behavioral problems, (n 137, 32.9%) had emotional problem, (n 89, 21.3%) had conduct problem and (n 73, 17.5%) had hyperactive problems. Regarding parenting practice (n 42, 10.1%) were good (positive) parenting practices and bad parenting practices (n 113, 27.1% inconsistent-discipline and n 262, 62.8% poor supervision). Out of the total participated children (n 262, 62.8%) had high toilet training skill (n 88, 21.1%) had medium toilet training skill and (n 67, 16.1%) had low toilet training skill (Table 4).

Table 4: *Psychosocial characteristics of respondents and their children age 5-14 year old attending pediatric outpatient, at Wolaita sodo university comprehensive specialized hospital, Wolaita sodo, south, Ethiopia 2022*

Variable	Category	Frequency	Percentage (%)
Do you have exprinced accidents or stress full life events any?	Yes	154	36.9
	No	263	63.1
Child post-traumatic stress problem	Yes	73	17.5
	No	344	82.5
Child behavioral problem	Yes	117	28.1
	No	300	71.9
Child emotional problem	Yes	137	32.9
	No	280	67.1

Child conduct problem	Yes	89	21.3
	No	328	78.7
Child hyperactive problem	Yes	73	17.5
	No	344	82.5
Parenting practices of child	Positive parenting	42	10.1
	Inconsistent-discipline	113	27.1
	Poor supervision	262	62.8
Do you think your child had elimination problem?	Yes	172	41.2
	No	245	58.8
Clap and belt child to punshimnt	Yes	61	14.6
	No	356	85.4
Restrict food and fluid to assist	Yes	62	14.9
	No	355	85.1
Wash own cloth to punshiment	Yes	50	12
	No	367	88
Giving sugary beverages to assist child elimination problem	Yes	99	23.7
	No	318	76.3
Child toilet training skill	High	262	62.8
	Medium	88	21.1
	Low	67	16.1

5.4. Magnitude of Elimination disorder

Magnitude of overall elimination disorder among children age 5-14 year old was (n 70, 16.8%) with 95%CI [13.3, 20.7] (Figure 2)

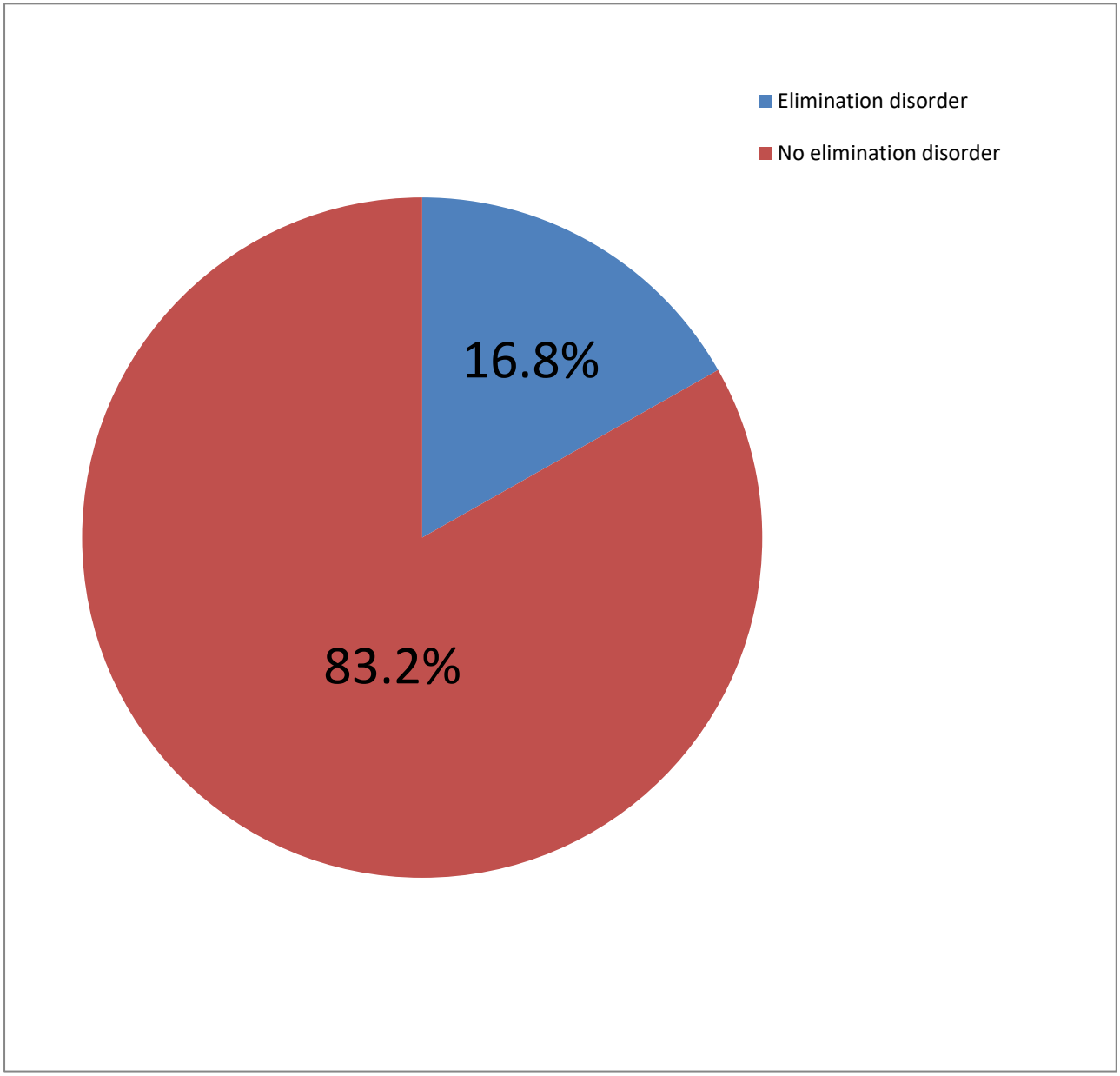


Figure 2 *Magnitude of elimination disorder among children age 5-14 year old attending pediatric outpatient at Wolaita sodo university comprehensive specialized hospital, Wolaita sodo, south Ethiopia 2022*

5.5. Description of Elimination disorder domains

Elimination disorder has two domains which are enuresis and encopresis. Overall prevalence of enuresis was (n 64, 15.3%) and encopresis (n 15, 3.6%), children who have both enuresis and encopresis or combined elimination disorder (n 9, 2.2%). In this study total prevalence of Nucturonal enuresis was (n 57, 13.7%); [NE in age 5-8year (n 33, 13.4%), 9-11year (n 18, 7.3%) and 12-14year (n 6,2.4%)] and Diurnal enuresis (n 13, 3.1%); [DE in age 5-8year (n 10, 4.05%), 9-11year (n 2, 0.8%) and 12-14year (n 1, 0.4%)] (Figure 3).

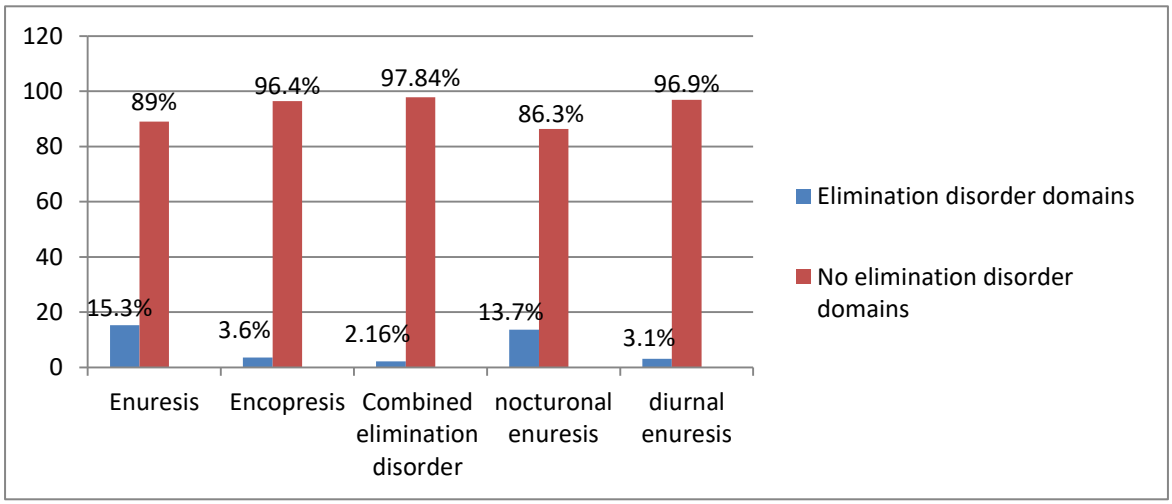


Figure 3 *Description of elimination disorder domains among children age 5-14 year old attending pediatric outpatient at Wolaita sodo university comprehensive specialized hospital, Wolaita sodo, south Ethiopia 2022*

5.6 Description of elimination disorder by sex and age of the children

In this study out of 417 participated children, the total magnitude of elimination disorder in boys (n 47, 17.3%) and girls (n 23, 15.75%). Similarly (n 35, 14.2%) in age 5-8 year old, (n 29, 25.6%) in age 9-11 year old and (n=6, 10.5%) in 12-14 year old children (figure 4)

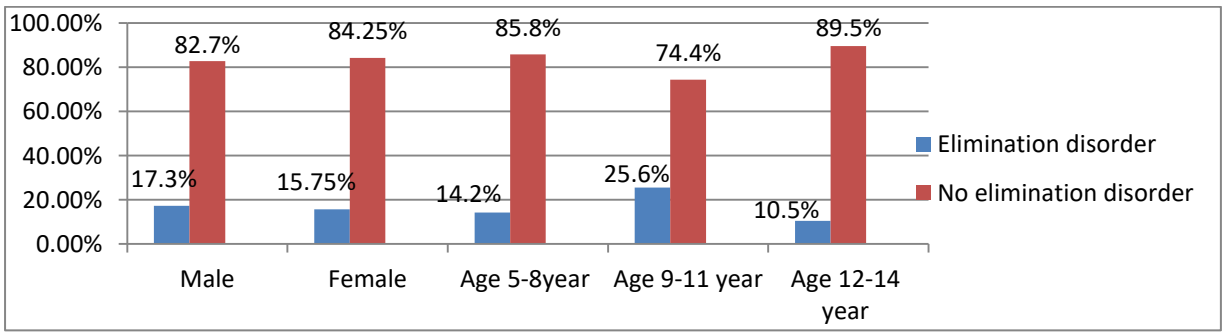


Figure4*. Description of elimination disorder by age and sex among children age 5-14 year old attending pediatric outpatient at Wolaita sodo university comprehensive specialized hospital, Wolaita sodo, south Ethiopia 2022*

In this study Enuresis was the most common elimination disorder, nocturnal enuresis were higher than diurnal enuresis and their magnitude decrease as age increase (figure 5).

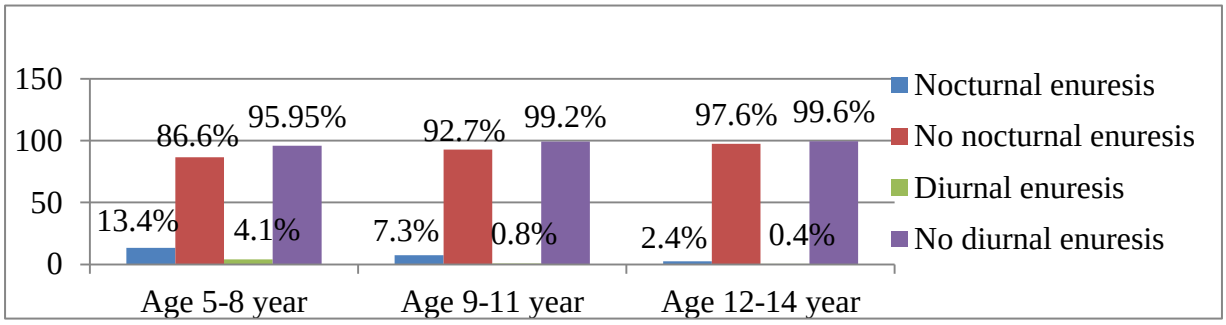


Figure 5 *Description of nocturnal and diurnal enuresis by age among children age 5-14 year old attending pediatric outpatient at Wolaita sodo university comprehensive specialized hospital, Wolaita sodo, south Ethiopia 2022*

5.7. Factors associated with elimination disorder

5.71 Bivariate logistic regression analysis

In the bivariable analysis child age 9-11years old, educational level of child being KG, family size greater than four, rural residency, parents being farmer by occupation, single parental marital status, average family monthly income below poverty line, positive family history of elimination disorder, behavioral problem of child, child emotional and hyperactive problem, bad parenting practices were poor supervision, low toilet training skill of children found to be p-value <0.25 associated with elimination disorder among children age 5-14 year old and entered to multivariable analysis (Table 5 and 6).

Table 5: *Bivariable analysis of socio-demographic and family related factors of children aged 5-14 year old at Wolaita sodo university comprehensive specialized hospital, Wolaita sodo, south Ethiopia 2022*

Variable	Category	Elimination disorder		COR (95% CI)	P-value
		Yes n (%)	No n (%)		
Age of child	5-8 year	35(14.2%)	212(85.8%)	1.4(0.56, 3.52)	0.47
	9-11 year	29(25.6%)	84(74.4%)	2.9(1.14, 7.55)	0.026*
	12-14 year	6(10.5%)	51(89.5%)	1	1
Child sex	Male	47(17.3%)	224(82.7%)	1.1(0.65, 1.93)	0.68

	Female	23(15.75%)	123(84.25%)	1	1
Residency	Urban	29(12%)	212(88%)	1	1
	Rural	41(23.3%)	135(76.7%)	2.2(1.32, 3.74)	0.003*
Educational level of child	Kindergarten (KG)	29(19.7%)	118(80.3%)	1.4(0.81, 2.32)	0.23*
	Primary and above	41(15.2%)	229(84.8%)	1	1
Currently living	With parents	49(16.5%)	248(83.5%)	1	1
	Steep parents	8(12.9%)	54(87.1%)	0.75(0.34, 1.67)	0.48
	Residential institution	6(20%)	24(80%)	1.3(0.49, 3.26)	0.63
	Guardian	7(25%)	21(75%)	1.7(0.68, 4.18)	0.26
Family size	< 4	25(11.7%)	189(88.3%)	1	1
	>= 4	45(22.2%)	158(77.8%)	2.2(1.26, 3.67)	0.005*
Occupation of parents	Government	28(19.4%)	116(80.4%)	1	1
	Private	9(16.7%)	45(83.3%)	0.83(0.36, 1.89)	0.65
	Merchant	12(18.75%)	52(81.25%)	0.96(0.45, 2.03)	0.9
	Farmer	6(9.67%)	56(90.3%)	0.4(0.17, 1.13)	0.09*
	Housewife	5(26.3%)	14(73.7%)	1.4(0.49, 4.45)	0.48
	Unemployed	5(14.3%)	30(85.7%)	0.69(0.25, 1.94)	0.48
	Daily labor	5(12.8%)	34(87.2%)	0.6(0.22, 1.69)	0.34
Educational level of parents	Illiterate	13(15.5%)	71(84.5%)	0.88(0.43, 1.82)	0.73
	Primary school	31(17%)	151(83%)	0.98(0.56, 1.75)	0.96
	High school and above	26(17.2%)	125(82.8%)	1	1
Parental marital status	Married	48(16%)	250(84%)	1	1
	Divorced	5(10.4%)	43(89.6%)	0.61(0.23, 1.61)	0.3
	Separated	7(18.9%)	30(81.1%)	1.2(0.51, 2.93)	0.7
	Widowed	5(21.7%)	18(78.3%)	1.4(0.51, 4.08)	0.49
	Single	5(45.5%)	6(54.5%)	4.3(1.27, 14.8)	0.019*
Average family income	<1000	6(9.84%)	55(90.16%)	0.507(0.204,1.26)	0.14*
	1000-2500	8(13.3%)	52(86.7%)	0.72(0.32, 1.62)	0.42
	2500-3400	16(22.85%)	54(77.15%)	1.37(0.72, 2.65)	0.34
	>= 3400	40(17.7%)	186(82.3%)	1	1

*Factors that have association at p-value <0.25 1= reference category

***Table 6**: Bivariable analysis of clinical, psychosocial and family related factors of children aged 5-14 year old attending pediatric outpatient at Wolaita sodo university comprehensive specialized hospital, Wolaita sodo, south Ethiopia 2022*

Variable	Category	Elimination disorder		COR (95% CI)	P-Value
		Yes n (%)	No n (%)		
Gestational period	Full term	51(16.2%)	264(83.8%)	1	1
	Pre-term	14(18.7%)	61(81.3%)	1.18(0.62, 2.28)	0.61
	Post-term	5(18.5%)	22(81.5%)	1.17(0.43, 3.25)	0.75
Duration of labour	< 10 hours	39(16.1%)	204(83.9%)	1	1
	>= 10 hours	31(17.8%)	143(82.2%)	1.13(0.67, 1.90)	0.63
Mode of delivery	Normal vaginal	53(17%)	258(83%)	1	1
	Vacuum	10(16.7%)	50(83.3%)	0.97(0.46, 2.04)	0.94
	Cesarean-section	7(15.2%)	39(84.8%)	0.87(0.37, 2.06)	0.76
Execlusive breastfeeding method 1st 6month	Only bottle feeding	16(17.7%)	74(82.3%)	1.09(0.59, 2.02)	0.78
	Bottle and Breast-feeding	54(16.5%)	273(83.5%)	1	1
Mathernal Substance use	Yes	19(17.3%)	91(82.7%)	1.05(0.59, 1.87)	0.87
	No	51(16.6%)	256(83.4%)	1	1
Alcohol	Yes	6(13.9%)	37(86.1%)	0.78(0.32, 1.94	0.6
	No	64(17.1%)	310(82.9%)	1	1
Cigarette	Yes	2(15.4%)	11(84.6)	0.89(0.19, 4.14	0.9
	No	68(16.8%)	336(83.2%)	1	1
Khat	Yes	7(21.8%)	25(78.2)	1.4(0.59, 3.45)	0.43
	No	63(16.4%)	322(83.6%)	1	1
Others	Yes	6(23%)	20(77%)	1.5(0.59, 3.96)	0.38
	No	64(16.4%)	327(83.6%)		
Family history of elimination disorder	Yes	38(31%)	84(69%)	3.72(2.19, 6.32)	<0.001*
	No	32(10.8%)	263(89.2%)	1	1
Your child have snoring	Yes	34(18.1%)	154(81.9%)	1.18(0.71, 1.98)	0.52
	No	36(15.7%)	193(84.3%)	1	1

Post-traumatic stress disorder	Yes	14(19.2%)	59(80.8%)	1.2(0.64, 2.34)	0.54
	No	56(16.3%)	288(83,7%)	1	1
Behavioral problem	Yes	25(21.4%)	92(78.6%)	1.54(0.89, 2.65)	0.12*
	No	45(15%)	255(85%)	1	1
Emotional problem	Yes	36(26.3%)	101(73.7%)	2.57(1.53, 4.35)	<0.001*
	No	34(12%)	246(88%)	1	1
Conduct problem	Yes	13(14.6%)	76(85.4%)	0.81(0.42, 1.56)	0.54
	No	57(17.4%)	271(82.6%)	1	1
Hyperactive problem	Yes	24(32.9%)	49(67.1%)	3.17(1.78, 5.66)	<0.001*
	No	46(13.4%)	298(86.6%)	1	1
Parenting practices of child	Positive	5(11.9%)	37(88.1%)	1	1
	Inconsistent discipline	8(7.1%)	105(92.9%)	0.56(0.17, 1.83)	0.34
	Poor supervision	57(21.7%)	205(78.3%)	2.1(0.77, 5.47)	0.15*
Clap and belt the child	Yes	13(21.3%)	48(78.7%)	1.4(0.72, 2.79)	0.31
	No	57(16%)	299(84%)	1	1
Restrict food and fluid	Yes	12(19.3%)	50(80.7%)	1.2(0.62, 2.45)	0.56
	No	58(16.3%)	297(83.7%)	1	1
Wash own cloth	Yes	11(22%)	39(78%)	1.5(0.71, 3.04)	0.3
	No	59(16%)	308(84%)	1	1
Giving sugary beverage	Yes	20(20.2%)	79(79.8%)	1.3(0.76, 2.41)	0.3
	No	50(15.7%)	268(84.3%)	1	1
Child toilet training skill	High	41(15.6%)	221(84.4%)	1	1
	Medium	10(11.4%)	78(88.6%)	0.69(0.33, 1.44)	0.33
	Low	19(28.4%)	48(71.6%)	2.1(1.14, 3.99)	0.018*

*Factors that have association at p-value <0.25 on bivariate analysis 1= reference category

5.72. Multivariable logstic regression analysis

After controlling for confounders using multivariable logistic regression, age between 9 &11years, large family size, family history of elimination disorder, emotional problem, hyperactive problem, bad parenting practices were poor supervision and low toilet training skill were associated with elimination disorder. Younger age 9-11 year was 3.2 times more likely to have elimination disorder than age 12-14 year (AOR=3.2, 95% CI 1.09, 9.43) likewise children living in family size of four and above were 3.4 times more likely to have elimination disorder than who reside in below four (AOR=3.4, 95% CI 1.78, 6.56). Similarly children who have family history of elimination disorder were nearly four times more likely to have elimination disorder than those who have no family history of elimination disorder (AOR=3.9, 95% CI 2.12, 7.45). Additionally, the odds of having elimination disorder was 2.2 times (AOR=2.2, 95% CI 1.18, 4.05) higher among children have emotional problem compared to those have no emotional problem, similarly the odds of having elimination disorder approximately four times (AOR=3.8, 95% CI 1.83, 7.83) higher among children who have hyperactive problem compared to those have no hyperactive problem. This study has revealed that children had bad parenting practices were poor suprevesion nearly four and half times more likely to have elimination disorder than those have good (positive) parenting practices (AOR=4.4, 95% CI 1.29, 14.69). Finally, children who have low toilet training skill were nearly six times more likely to have elimination disorder than those who have high toilet training skill (AOR=5.9, 95% CI 2.61, 13.33) (Table 7).

Table 7: *Multivariable analysis of factors associated with Elimination disorder among children age 5-14 year old attending pediatric outpatient at Wolaita sodo university comprehensive specialized hospital, Wolaita sodo, south Ethiopia 2022*

Variable	Category	Elimination disorder		COR (95% CI)	AOR (95% CI)	P-value
		Yes n (%)	No n (%)			
Age	5-8 year	35(14.2%)	212(85.8%)	1.4(0.56, 3.52)	1.06(0.38, 2.98)	0.91
	9-11year	29(25.6%)	84(74.4%)	2.9(1.14, 7.55)	3.2(1.09, 9.43)	0.03*
	12-14 year	6(10.5%)	51(89.5%)	1	1	1
Family size	< 4	25(11.7%)	189(88.3%)	1	1	1
	>= 4	45(22.2%)	158(77.8%)	2.2(1.26, 3.67)	3.4(1.78, 6.56)	<0.001*
Family history	Yes	38(31%)	84(69%)	3.7(2.19, 6.32)	3.9(2.12, 7.45)	<0.001*

of elimination disorder	No	32(10.8%)	263(89.2%)	1	1	1
Emotional problem	Yes	36(26.3%)	101(73.7%)	2.6(1.53, 4.35)	2.2(1.18, 4.05)	0.013*
	No	34(12%)	246(88%)	1	1	1
Hyperactive problem	Yes	24(32.9%)	49(67.1%)	3.2(1.78, 5.66)	3.8(1.83, 7.83)	<0.001*
	No	46(13.4%)	298(86.6%)	1	1	1
Child parenting practice	Positive	5(11.9%)	37(88.1%)	1	1	1
	Inconsistent discipline	8(7.1%)	105(92.9%)	0.6(0.17, 1.83)	0.93(0.23, 3.70)	0.92
	Poor supervision	57(21.7%)	205(78.3%)	2.1(0.77, 5.47)	4.4(1.29, 14.69)	0.018*
Child toilet training skill	High	41(15.6%)	221(84.4%)	1	1	1
	Medium	10(11.4%)	78(88.6%)	0.7(0.33, 1.44)	1.2(0.49, 2.78)	0.73
	Low	19(28.4%)	48(71.6%)	2.1(1.14, 3.99)	5.9(2.61, 13.33)	<0.001*

*Factors that have association at p-value <0.05 on multivariable analysis, 1= reference category

CHAPTER SIX

DISCUSSION

The current hospital based cross-sectional study with a sample size of 417 can adequately reflect the magnitude of elimination disorders among children age 5-14 year old attending pediatric outpatient at Wolaita sodo university comprehensive specialized hospital, Wolaita sodo, south Ethiopia. It is more likely the initial study of its kind in the WSUCSH pediatric population with such a large number of participants and tried to include complete profiles of elimination disorder in children. In this study the total magnitude of elimination disorders is 16.8% which is in consistent with a similar study conducted in Germany, which reported a magnitude of 14.8% elimination disorder (27). Although slightly higher and lower, similar results were reported from studies conducted in Australia, Egypt and Kenya with magnitude of 18.2%, 15.7%, and 14.5%) respectively (30,39,41).

However, the magnitude of elimination disorder in this study is higher than the studies conducted in Iran (5.4%), the United States (4.45%) and Hong Kong (3.1%) (29,75,76). The possible reason for difference between the Iran study and the current study is that the former was done in the community among children age 6–18 years and used the Kiddie-Schedule for Affective Disorders and Schizophrenia for School-Age Children-Present and Lifetime Version (K-SADS-PL DSM-IV) to discriminate elimination disorders, whereas the present study is hospital-based among children aged 5–14 years and used the DSSDES tool and DSM-5 to identify elimination disorders. Furthermore, differences between the United States study and the present study might be explained by differences in the data collection tools employed, as they used a computerized version of the Diagnostic Interview Schedule for Children (C-DISC 4.0) to detect elimination disorder and their ages ranged from 8 to 11 years. Furthermore, the Hong Kong study differed from this one could be in that it was conducted in a school setting and used only symptoms criteria to differentiate elimination disorder, such as frequency of wetting or soling. However, this study applied standard instruments, the DSSDES tool and the DSM-5, to detect elimination disorder.

The magnitude of elimination disorder found in this study is lower than studies conducted in the southern Brazil (35.2%), Chian (59%) and Korea (46.4%) covering both enuresis and encopresis (32,33,35). The difference between the study conducted in southern Brazil and the present study might be the former was performed by using DVISS to measure elimination

disorder among 580 samples of children in an urban community; however, the present study is conducted in a hospital setting among 417 samples of children and this study is used the DSM-5 and DSSDES tools to identify elimination disorder. Additionally, the difference between the Chian and current studies could be the former were performed by using pediatric dysfunctional voiding scales to measure the frequency of enuresis or encopresis to identify elimination disorders in 156 samples from 10 different countries; the present study collected 417 participants from a single study area. Another possible difference between the Korea and current studies is that the former involved 19240 children (5-13 years old) and elimination disorder was measured using dysfunctional voiding symptoms (DVSs) and abnormal bowel habits (ABHs). Whereas the current study is conducted in 417 children (5–14 years old) and DSM-5 criteria are used to identify elimination disorder in addition to the Korea study.

In this study, younger age 9-11year were 3.2 times more likely to have elimination disorder than older age 12-14year (AOR=3.2, 95% CI 1.09, 9.43), which is in line with studies conducted in Turkey, Iraq and Santo Domingo Dominican Republic(43,44,52). For a number of reasons, an association between elimination disorder and age has been described. The most crucial reason was that as age increased, elimination disorders decreased. Furthermore, it appeared to be an elimination disorder related to children's age, psychological and physical development to achieve bladder and bowel control at the expected age (24,76,77). According to evidence, elimination disorder drops by 20% in 5-year-old children and by 1-2% by the end of adolescence. The prevalence of enuresis was similarly found in this study [NE in age 5-8year 13.4%, 9-11year 7.3%, 12-14year 2.4% and DE in age 5-8year 4.05%, 9-11year 0.8% and 12-14year 0.4%] with a mean age of 8.3 years. This is consistent with the study mentioned in Kaplan's book which reported that by age 7 years the prevalence was reported to be 15.2%, by age 10 the overall prevalence was reported to be 3% and the rate drops dramatically for teenagers aged 14 years where the prevalence is only 1.5 percent (78) Another possible explanation might be children get better at understanding problems as they get older. However, younger kids have a harder time understanding how to rationally solve problems than older kids, which makes them less aware of elimination disorders and more likely to accept inappropriate urination or defecation as a solution to their problem rather than reporting their parents to obtain medical care (79)

Similarly, the odd of elimination disorder among children living in family size of four and above were 3.4 times (AOR=3.4, 95% CI 1.78, 6.56) higher than odds in childern who reside in family size below four, which is in agreement with a study done in Turkish (45) who

discovered that the odds of elimination disorder were higher in children from large families than in children from small families; This could be due to a lack of family support for the child or a kids refusal to use the bathroom to gain unsatisfiyed psychological need due to family size, which exposes children to elimination disorders. Elimination disorder was also more common in larger families, the main reason may be the stress associated with jealousy and anxiety that exists in the family, where attention is diverted toward other relatives who live in the house (43,80). Furthermore in large family size most of time family problems usually arise when there is a lot of conflict or tension for different reason. In such families, children do not feel safe or secure. Such children tend to internalize their feelings and bottle them deep inside. It can lead to elimination disorders as they try to find a way to express them and release their suppressed emotions(81).

In this study, children who have family history of elimination disorder were 3.9 times more likely to have elimination disorder than those who have no family history of elimination disorder (AOR=3.9, 95% CI 2.12, 7.45); this was also reported in previous studies conducted in Croatia and explained by genetic relationship, since children with parents who have elimination disorder increase the occurrence of this disorder in kids (52). Another evedince on the previous study has shown that regions on chromosomes 8, 12 and 13 were associated with a higher risk of elimination disorder in the childern (82)

According to the findings of this study, the odds of having elimination disorder were 2.2 times (AOR=2.2, 95% CI 1.18, 4.05) higher among children who have emotional problem compared to those have no emotional problem. This finding was supported by previous studies conducted in Germany and Iran (55,83). This association might be linked to elimination disorder because it can lead to embarrassment for the child and disappointment for parents. Children with emotional problems can have conduct problems that interfere with toilet training and refusal to use the bathroom, so children with ED are at higher risk for emotional problems (55,57,83,84). Nevertheless, elimination disorder in children with psychological disorders like emotional problems is the most common and vice versa (85,86).

This study observed that the odds of having elimination disorder were 3.8 times (AOR=3.8, 95% CI 1.83, 7.83) higher among children who have hyperactive problem compared to those have no hyperactive problem. This is in agreement with a study conducted in Germany (27). One possible explanation for this association is that children who have a hyperactive problem accept elimination disorder as a normal occurrence and they sometimes have a reluctance to

use the toilet room due to a preoccupation with play activities that may aggravate elimination symptoms or put them at high risk to develop elimination disorder (39,87).

According to this study, the odds of having an elimination disorder were 4.4 times (AOR=4.4, 95% CI 1.29, 14.69) higher in children who have bad parenting practices (poor supervision) than odds in children who have good (positive) parenting practices. This finding was similar to previous studies conducted in China and South Africa (53,54). One possible reason might be that children who have bad parenting practices (poor supervision) can experience parental corporal punishment in the form of hitting, punching, kicking, or beating. This can cause children to be preoccupied with anxiety or fear in response to their parents' poor parenting practices; as a result, the children may have nightmares reliving terrifying trauma, which causes them to wake up suddenly and urinate or defecate in their bed or underwear. Furthermore, this make the children reluctant to report their elimination problem to the parents and putting them at high risk of developing an elimination disorder (54,86).

This study observed a significant association between elimination disorder and low toilet training skill; children had low toilet training skill were 5.9 times more likely to have an elimination disorder than those had high toilet training skill (AOR=5.9, 95% CI 2.61, 13.33). This finding was the same as that of a study conducted in Nigeria (38). Possible explanation for this association might be starting toilet training skill without regard for the child's emotional readiness or cooperation makes the child reluctant to learn toilet training method and resulting in low toilet training skill, which puts the child at high risk for elimination disorder (89,90). Also, may be there was an incorrect toilet training method or childs behavioral problems that can cause the child to attain low toilet training skill, which leads to significant physical and psychological consequences and persistent elimination symptoms, such as enuresis and encopresis (91,92). A child will develop a sense of autonomy that will eventually lead them to the virtue of wellbeing if they are successfully skilled in toilet training within the appropriate years. Yet, if the childern is unable to do so, it may result in a psychological crisis of shame and doubt. These crises frequently cause embarrassment from peers and have been linked to psychological and elimination disorders in kids (93,94).

5.3 Limitation of the study

- Recall bias may exist for parent and child responses, social desirabilty bais may exist.
- Self-reported history and medical record review was used to screen comorbid medical condition.

7. Conclusion and Recommendation

7.1 Conclusion

The magnitude of elimination disorder in children aged 5-14 at Wolaita Sodo University's comprehensive specialized hospital is slightly higher than similar studies with in its confidence interval. Its prevalence is also higher among boys than girls. Furthermore child age, large family size, family history of elimination disorder, child emotional problems, child hyperactive problems, bad parenting practices and child low toilet training skill were identified as significant associated risk factors for elimination disorder. This study revealed that 1 in 5 children have an elimination disorder at Wolaita Sodo University Comprehensive Specialized Hospital. Therefore, holstic approach, taking preventive and therapeutic measures in training parents to dealing with children are essential to control elimination disorder.

7.2. Recommendation

To Wolaita Sodo University comprehensive specialized hospital

- Childhood elimination disorder needs for identify the problem, make a provisional diagnosis and provide information to caregivers, provide ongoing psychosocial support and link to psychiatry clinic for further diagnosis and management.
- Since elimination disorder has a variable etiologic spectrum from a simple to a serious bladder and bowel obstruction, it is better to strength consultation program for the medical and psychiatric clinic to deliver a comprehensive management.
- Elimination disorder in children from large family justify to strength family planning program
- Finding of this study justify designing the toilet training skill program especialy in the pediatric department services for parents of children to train their kids.

To Wolaita zone health office

- The Wolaita zone administration, with the support of the zone health office, better to sensitize health professionals to the early detection of elimination disorder in school-age children and link to nearby health facilities for further screening and treatment.
- It will be better, if the zone health bureau prepare an awareness creation day for health extension workers, authorized Keble leaders, and parents of children on elimination disorders to help large community.

To ministry of health

- To design strateiges for early intervention on community-based parenting programs particularly during early childhood for the better control of elimination disorder.
- To design streatgy and educational program for emotional and behavioural problems in children with elimination disorder to strength initial care and psychosocial support in health-care settings.

To future researchers

- There is a need to conduct a longitudinal study to investigate the cause-effect relationship of risk factors for elimination disorder. As a result, future research to assess elimination disorder, including academic performance of school-age children and the burden of elimination disorder on academic performance.
- Magnitude of elimination disorder in this study underlines the importance of greater epidemiological research in this area for treatment and policy implications.

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ANNEXES

Annex-1: English version

English version consent form and assent form

Parent Consent Letter

Dear Parent or Caregiver:

This letter provides information about a research study that will be conducted in Wolaita Sodo University's comprehensive specialized hospital by an investigator from Jimma University. The study will examine children age 5–14 years old in WSUCSH in order to determine the magnitude of the elimination disorder and its associated factors.

I'm Tamene Berhanu, currently studying for a master's degree in Integrated Clinical and Community Mental Health at Jimma University. I study in cooperation with Wolaita Sodo University College of health science and medicine to ensure the study provides information that will be helpful to the hospital. This study is being conducted in partial fulfillment of the requirements for a Master's of Science in integrated clinical and community mental health and is titled ***Elimination disorder and its associated factors among children aged 5–14 years in Wolaita Sodo University comprehensive specialized hospital pediatric out patient***.

Why Your Child Needed to Participate:

There is a critical need for clinical professionals, educators, and researchers to understand elimination disorder and its associated factors in children aged 5–14 years. The information that will be collected from your child may help to create overall knowledge about elimination disorder and its associated factors among children aged 5 to 14 years.

Please Note: Your decision to permit your child to participate in this research study must be completely voluntary. You are free to allow your child to participate in this study, to withdraw him or her at any time. You or your child's decision to participate, not participate, or to withdraw participation at any point during the study will in no way affect your child.

Confidentiality: Your child's privacy and research records will be kept confidential and completed surveys will be assigned a code number to protect the confidentiality. Please note that although your child's specific responses to the surveys will not be shared with other.

The advantage of Child's Response: The information from this study is used to inform educators, clinical professionals, psychologists and mental health professional about the

magnitude of elimination disorder and its associated factors among children aged 5–14 years. The results of this study will be published. However, the data obtained from your child may be combined with data from other people in the publication and the published results can not include your child's name or any other information that would in any way personally identify your child.

If you have any questions, doubts, comments or ideas about this research study please contact me Mr.TAMENE BERHANU at +251916719647(tamenebirhanu2013@gmail.com) or my advisors Mr.Yonas Tesfaye +251910107507(yonastesfaye71@yahoo.com), Dr.Mubarek Abera +251918968803(amubarek@gmail.com) and Mr.Shimelis Girma +251911721438 (shimelisgirma@gmail.com)

Continued

Consent for Child to Take Part in this Research Study

I freely give my permission to let my child take part in this study. I understand that this is research. I have received a copy of this letter and consent form for my records.

_____

Age of child

_____ _____ _____

Signature of parent of child name of parent Date

Statement of Person Obtaining Informed Consent

I certify that participants will be provided with an informed consent form that will be approved by the Jimma University Institutional Review Board and that explains the nature, demands, risks, and benefits involved in participating in this study. I further certify that a phone number will be provided in the event of additional questions.

_____ _____ _____

Signature of person name of person Date

Obtaining consent obtaining consent

Informed assent /Consent agreement

Dear participant:

Today you will be asked to participate in a research study titled ***Magnitude of Elimination Disorder and Its Associated Factors among Children Age 5–14 In Wolaita Sodo University Comprehensive Specialized Hospital Pediatric Outpatient.*** You will be asked to fill out questionnaires that contain inquire about different things like demographic information, questions to assess maternal and child's clinical factors, psychosocial factors, parenting practices, elimination disorder components and completing these questions will take you approximately 15–30 minutes. You are being asked to participate in this study because you are a child aged 5–14 years and your parent, caregiver or guardian has already given you permission to take part in this study. Your answers kept confidential to the extent of the law and you are free to withdraw from participating at any time, and you will not be punished.

If you have any questions about the study, please feel free to contact me (Mr. TAMENE BERHANU: 0916719647).

Assent to participate

I understand what participating in this study requires and I agree to take part in this study.

_____ _____

Signature date

_____ _____ _____

Signature of person obtaining assent printed name of person obtaining assent date

Annex-1: English version questionnaires

Part I: Socio-demographic factors related to parents and child

S/N	Questions	Response	Remark
101	Child Age	----------	
102	Child Sex	1. Male 2. Female	
103	Residency	1. Urban 2. Rural	
104	Religion	1. Orthodox 3. Protestant 2. Muslim 4. Catholic 5. Other specify_____	
105	Ethnicity	1. Wolaita 3, Oromo 4, Gurage 2. Amhara 5, Others specify _____	
106	Education level of child	1. Kindergarten (KG) 2. Primary school and above	
107	Currently living?	1. With my parents 2. Steep parents 3. Residential institution 4. Gordian	
108	Family size	In number ----------	
109	Employment status of parents	1. Government employ 2. Private 3. Merchant 4. Farmer 5. Housewife 6. Unemployed 7. Daily labore	
110	Educational status of parents	1. Illiterate 2. Primary school 3. High school and above	

11	Parents marital status	1. Married 2. Divorced 3. Separated 4. Widowed 5. Single	
112	Average family monthly income in Et. Birr	In number ----------	

PART II: Clinical/biological factors of children and their mothers

SN	Question	Response	Remark
201	The period of gestation was?	1. Full term 2. Pre-term 3. Post-term	
202	Duration of labour	1. < 10 hrs 2. ≥ 10 hrs	
203	Your delivery was?	1. Normal vaginal delivery 2. Vacuum delivery 3. Cesarean section	
204	Child exclusive breastfeeding method first six month	1. Only bottle feeding 2. Bottle and breast feeding	
205	Mothernal use substance?	1. Yes 2. No	If yes go to Q206
206	Mothernal Alcohol	1. Yes 2. No	
207	Mothernal Cigarette	1. Yes 2. No	
208	Mothernal Khat	1. Yes 2. No	
209	Mothernal other substance	1. Yes, if specify---------- 2. No	
210	Is there family history of elimination disorder?	1. Yes 2. No	

211	Does your child have snoring?	1. Yes 2. No	

Part IV Questions related to trauma (CTSQ)

Please indicate whether any of these things happened to you since the accident, if you have no accident or stress full life events skip to the next part

s.no	**Items**	Yes =1, No= 0	
401	Do you have any accident or stress full life events?	1. Yes 2. No	If no go to Q 501
402	Do you have a lot of thoughts or memories about the accident that you don't want to have?	0. No 1. Yes	
403	Do you have bad dreams about the accident?	0. No 1. Yes	
404	Do you feel or act as if the accident is about to happen again?	0. No 1. Yes	
405	Do you have bodily reactions such as a fast-beating heart, stomach churning and feeling dizzy when reminded of the accident?	0. No 1. Yes	
406	Do you have trouble falling or staying asleep?	0. No 1. Yes	
407	Do you feels grumpy or loses your temper?	0. No 1. Yes	
408	Do you feels upset by reminders of the accident?	0. No 1. Yes	

409	Do you have a hard time paying attention?	0. No 1. Yes	
410	Are you on the "look-out" for possible dangerous might happen to yourself and other?	0. No 1. Yes	
411	When things happen by surprise or all of a sudden, does it make you "jump"?	0. No 1. Yes	

Part V Questions related to child's difficult behavioral problems (SDQ-PR)

For each item, please circle numbers in the box which describes your child correctly. 'Somewhat true' is always scored as 1, but the scoring of 'Not True' and 'Certainly True' varies with the item, as shown below scale by scale. Please give your answers on the basis of your child's behavior over the last six months.

s.no	**Items**	Not True	Somewhat True	Certainly True	
	Emotional problems scale				
501	Often complains of headaches… (I get a lot of headaches…)	0	1	2	
502	Many worries… (I worry a lot)	0	1	2	
503	Often unhappy, downhearted… (I am often unhappy….)	0	1	2	
504	Nervous or clingy in new situations… (I am nervous in new situations…)	0	1	2	
505	Many fears, easily scared (I have many fears…)	0	1	2	
	Conduct problems Scale				
506	Often has temper tantrums or hot tempers (I get very angry)	0	1	2	

507	Generally obedient… (I usually do as I am told)	2	1	0	
508	Often fights with other children… (I fight a lot)	0	1	2	
509	Often lies or cheats (I am often accused of lying or cheating)	0	1	2	
510	Steals from home, school or elsewhere (I take things that are not mine)	0	1	2	
	Hyperactivity scale				
511	Restless, overactive… (I am restless…)	0	1	2	
512	Constantly fidgeting or squirming (I am constantly fidgeting….)	0	1	2	
513	Easily distracted, concentration wanders (I am easily distracted)	0	1	2	
514	Thinks things out before acting (I think before I do things)	2	1	0	
515	Sees tasks through to the end… (I finish the work I am doing)	2	1	0	
	Peer problems scale				
516	Rather solitary, tends to play alone (I am usually on my own)	0	1	2	
517	Has at least one good friend (I have one goof friend or more)	2	1	0	
518	Generally liked by other children (Other people my age generally like me)	2	1	0	
519	Picked on or bullied… (Other children or young people pick on me)	0	1	2	
520	Gets on better with adults than with other children (I get on better with adults than with people my age)	0	1	2	

Part VI Questions related to parenting practices APQ-9

Instructions: The following are a number of statements about your family. Please rate each item as to how often it typically occurs in your home. Possible answers are: Never (1), Almost Never (2), Sometimes (3), Often (4), Always (5). Please answer all items

S. no	Items	Never	Almost Never	Sometimes	Often	Always	
601	You let your child know when he/she is doing a good job with something. ?	1	2	3	4	5	
602	You threaten to punish your child and then do not actually punish him/her?	1	2	3	4	5	
603	Your child fails to leave a note or to let you where he/she is going?	1	2	3	4	5	
604	Your child talks you out of being punished after he/she has done something wrong?	1	2	3	4	5	
605	Your child stays out in the evening after the time he/she is supposed to be home?	1	2	3	4	5	
606	You compliment your child after he/she has done something well?	1	2	3	4	5	
607	You praise your child if he/she behaves well?	1	2	3	4	5	
608	Your child is out with friends you don't know?	1	2	3	4	5	
609	You let your child out of a punishment early like lift restrictions earlier than you originally said?	1	2	3	4	5	

PART VII Question to screen elimination problems

Circle the number that best describes you in last at least 3months and above

	Childs elimination problem over the past 3months.	**5-point Likert scale (0-4)**	**Remark**
701	I pee in my underwear during the day:	0. Never 1. 1day a week 2. 2-3days a week 3. 4-5days a week 4. Everyday	
702	When I pee in my underwear ,they are:	0. I don't pee underwear 1. Almost dry 2. Damp 3. Wet 4. Soaked	
703	In normal day I go to washroom to pee:	0. 1-2 times 1. 3-4 times 2. 5-6 times 3. 7-8 times 4. More than 8 times	
704	I feel that I have to rush to the washroom to pee:	0. Never 1. Less than half of the time 2. Half of the time 3. More than half of the time 4. Everyday	
705	I holds my pee by crossing legs or sitting down:	0. Never 1. Less than half of the time 2. Half of the time 3. More than half of the time 4. Everyday	
706	It hurts when I pees:	0. Never 1. Less than half of the time 2. Half of the time 3. More than half of the time 4. Everyday	
707	I wet my bed at night:	0. Never	

		1. 3-4 nights per month 2. 1-2 nights per week 3. 4-5 per week 4. Every night	
708	I wakes up to pee at night:	0. Never 1. 3-4 nights per month 2. 1-2 nights per week 3. 4-5 per week 4. Every night	
709	When I pees, it stops and starts:	0. Never 1. Less than half of the time 2. Half of the time 3. More than half of the time 4. Everyday	
710	I have to push or wait to start to pee:	0. Never 1. Less than half of the time 2. Half of the time 3. More than half of the time 4. Everyday	
711	I have bowel movement (poop):	0. More than once per day 1. Every days 2. Every other days 3. Every 3 days 4. More than every 3 day	
712	My stool (poop) is hard:	0. Never 1. Less than half of the time 2. Half of the time 3. More than half of the time 4. Everyday	
713	I have bowel(poop) accident in underwear:	0. Never 1. 1-2 times per week 2. 3 times per week 3. 4-5 times per week 4. Every days	

Part-VIII	What methods have you tried, to assist your child elimination disorder so far?		
801	Do you think your child has elimination disorder and are you tried to assist?	1 Yes 2. No	If no go to Q901
802	Clap and belt child as Punishment	1. Yes 2. No	
803	Restrict food and fluid to assist	1. Yes 2. No	
804	Wash own cloth as punishement	1.Yes	

		2. No	
805	Giving sugary beverages to asist	1. Yes 2. No	

PART- VX: Toilet training assessment questionaries'

Please circle the score for each question response score which describe appropriately you

Sno	Items	Response	Score	Remark
901	bladder function bladder emptied	More than once per hour	**3**	
		Between 1-2 hourly	**2**	
		More than 2 hourly	**0**	
902	Bowel function	Opens bowels more than three times a day	**3**	
		Does not always have normally formed bowel movements i.e. is subjected to constipation or diarrhea	**2**	
		Has regular normally formed bowel movements	**0**	
903	If night-time wetting occurs	Usually i.e. most or every night	**3**	
		Frequently i.e. has occasional dry nights	**2**	
		Rarely/never i.e. is usually dry at night	**0**	
904	If night-time bowel movements (during sleep)	Occurs more than once per week	**3**	
		Never occurs	**0**	
905	Sitting on the toilet	Afraid or refuses to sit	**4**	
		Sits with help	**2**	
		Sits without help for long enough to complete voiding	**0**	
906	Going to the toilet	Gives no indication of need to go to the toilet	**4**	

		Gives some indication of need to go to the toilet	**2**	
		Sometimes goes to toilet of own accord	**0**	
907	Handling clothes at toilet	Cannot handle clothes at all	**3**	
		Attempts or helps to pull pants up/down	**2**	
		Pulls clothes up and down without help	**0**	
908	Bladder control	Never or rarely passes urine on toilet/potty	**3**	
		Passes urine on toilet sometimes	**2**	
		Can initiate a void on request	**0**	
909	Bowel control	Never or rarely opens bowels on toilet/potty	**3**	
		Opens bowels on toilet sometimes	**2**	
		Opens bowels on toilet every time	**0**	
910	Behaviour problem, that interferes with toileting process e.g. screams when toileted	Occurs frequently, i.e. once a day or more	**4**	
		Occurs occasionally, i.e. less than once a day	**2**	
		Never occurs	**0**	
911	Response to basic commands, e.g. “come here”	Never/ Occasionally responds to commands	**4**	
		Usually responds	**0**	

Annex-2: Amharic version

የአማረኛ እትም እና የፍቃድ ቅጽ

የወላጅ ስምምነት ደብዳቤ

ውድ ወላጅ ወይም ተንከባካቢ:

ይህ ደብዳቤ በወላይታ ሶዶ ዩኒቨርሲቲ አጠቃላይ ስፔሻላይዝድ ሆስፒታል የጅማ ዩኒቨርሲቲ ተመርማሪ የሚይካሄደዉ የምርምር ጥናት መረጃ ይሰጣል። ጥናቱ "**Magnitude of the Elimination Disorders and Its Associated Factors**" ለማወቅ ከ5-14 አመት እድሜ ያላቸውን ልጆች ላይ በወላይታ ሶዶ ዩኒቨርሲቲ አጠቃላይ ስፔሻላይዝድ ሆስፒታል ይካሄዳል።

እኔ ታመነ ብርሃኑ ነኝ በጅማ ዩኒቨርሲቲ በተቀናጀ ክሊኒካል እና የማህበረሰብ የአእምሮ ጤና ሁለተኛ ዲግሪ እየተማርኩ ነው። ጥናቱ ለሆስፒታሉ የሚጠቅሙ መረጃዎችን ለመስጠት ከወላይታ ሶዶ ዩኒቨርሲቲ ጤና ሳይንስና ህክምና ኮሌጅ ጋር በመተባበር ይካሄዳል። ይህ ጥናት እየተካሄደ ያለው በተቀናጀ ክሊኒካል እና የማህበረሰብ የአእምሮ ጤና የማስተርስ ዲግሪ መስፈርቶችን በከፊል ለማሟላት ነው። and is titled **Elimination disorder and its associated factors among children aged 5–14 years in Wolaita Sodo University comprehensive specialized hospital pediatric out patient**.

<u>ልጅዎ ለምን መሳተፍ አስፈለገ፡-</u>

እድሜ ከ5-14 አመት የሆኑ ህጻናት ላይ **"Elimination disorder and its Associated factors** ለክሊኒካዊ ባለሙያዎች፣ አስተማሪዎች እና ተመራማሪዎች ለመረዳት በጣም አስፈላጊነት ስላለ ነው። ከልጅዎ የሚሰበሰበው መረጃ ከ 5 እስከ 14 ዓመት ዕድሜ ላይ ባሉ ህጻናት ላይ ስለ **"Elimination disorder and its Associated factors in children aged 5–14 years"** አጠቃላይ እውቀት ለመፍጠር ሊረዳ ይችላል።

እባክዎን ያስተውሉ፡ ልጅዎ በዚህ ጥናት ላይ እንዲሳተፍ የመፍቀድ ውሳኔዎ ሙሉ በሙሉ በእርስዎ ፈቃደኝነት የተመሰርተ ነው ። በማንኛውም ጊዜ ልጅዎን በዚህ ጥናት ውስጥ እንዲሳተፍ ለመፍቀድ ነፃ ነዎት። እርስዎ ወይም ልጅዎ በጥናቱ ወቅት ለመሳተፍ፣ ላለመሳተፍ ወይም ተሳትፎን ለማንሳት መወሰናቸው በምንም መልኩ ልጅዎን አይጎዳም።

ምስጢራዊነት፡ የልጅዎ ግላዊነት እና የጥናት መዝገቦች በሚስጥር ይያዛሉ እና የተጠናቀቁ የዳሰሳ ጥናቶች ምስጢራዊነቱን ለመጠበቅ ኮድ ቁጥር ይመደባሉ. እባክዎ ልብ ይበሉ ምንም እንኳን ልጅዎ ለዳሰሳ ጥናቶች የሰጡት ልዩ ምላሾች ለሌሎች አይጋሩም።

የሕፃናት ምላሽ ጥቅም፤ ከዚህ ጥናት የተገኘው መረጃ ለአስተማሪዎች፣ ለክሊኒካዊ ባለሙያዎች፣ የሥነ ልቦና ባለሙያዎች እና የአእምሮ ጤና ባለሙያዎች ከ5-14 ዓመት ዕድሜ ላይ ባሉ ሕፃናት መካከል ስላለው **“Elimination disorder and its associated factors”** ለማሳወቅ ይጠቅማል። የዚህ ጥናት ውጤቶች ይታተማሉ ነገር ግን፣ ከልጅዎ የተገኘው መረጃ በህትመቱ ውስጥ ካሉ ሌሎች ሰዎች ጋር ሊጣመር ይችላል፣ እና የታተሙት ውጤቶቹ የልጅዎን ስም ወይም ሌላ በማንኛውም መንገድ ልጅዎን በግል የሚለይ መረጃን ማካተት አይችሉም።

በዚህ ጥናት ላይ ጥያቄዎች፣ ጥርጣሬዎች ወይም አስተያየቶች ካሉዎት እባክዎን አቶ ታመነ ብርሃኑን በ +251916719647 በኢሜል.tamenebirhanu2013@gmail.com ወይም አማካሪዎቼ አቶ ዮናስ ተስፋዬ +251910107507፣ yonastesfaye71@yahoo.com; ዶ/ር ሙባረክ አበራ፣ +251918968803፣ amubarek@gmail.com፣ እና አቶ ሸሚለስ ግርማ፣ +251911721438፣ shimelisgirma@gmail.com ያግኙኝ።.

ይቀጠላል

በዚህ ጥናት ላይ ልጅ እንዲሳተፍ ማፈቃድ

ልጄ በዚህ ጥናት እንዲሳተፍ በነፃ ፍቃድ እሰጣለሁ። ይህ ጥናት እንደሆነ ተረድቻለሁ። የዚህ ደብዳቤ እና የስምምነት ቅጽ ቅጂ ደርሶኛል።

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የልጅ ዕድሜ

_____ _____ _____

የልጅ ወላጅ ፊርማ የወላጅ ስም ቀን

በመረጃ የተደገፈ ስምምነት የሚያገኝ ሰው መግለጫ

በጅማ ዩኒቨርሲቲ ተቋማዊ ግምገማ ቦርድ የሚፀድቅ ቅጽ በዚህ ጥናት ውስጥ የመሳተፍን አደጋዎች እና ጥቅሞች የሚያብራራ በመረጃ የተደገፈ የስምምነት ለተሳታፊዎች እንደሚሰጥ አረጋግጣለሁ። ተጨማሪ ጥያቄዎች ሲኖሩ ስልክ ቁጥር እንደሚሰጥ በተጨማሪ አረጋግጣለሁ።

_____ _____ _____

ስምምነትን ይሚወሰዲ ሰው ስም ፊርማ ላይ ቀን

በመረጃ የተደገፈ የፍቃድ/የፍቃድ ስምምነት

ውድ ተሳታፊዎች፡-

ዛሬ በወላይታ ሶዶ ዩኒቨርስቲ አጠቃላይ ስፔሻላይዝድ ሆስፒታል የህፃናት ተመላላሽ ህክምና ክፍል ውስጥ ከ5-14 አመት እድሜ ያላቸው ህፃናት መካከል ያለው "**Magnitude of Elimination disorder and Its Associated Factors**" የሚል ርዕስ በምደረገው የምርምር ጥናት ላይ እንድትሳተፉ ተጠየቃችውል። እንደ የስነ ሕዝብ አወቃቀር መረጃ፣ የእናቶች እና የሕፃናት ክሊኒካዊ ሁኔታዎችን የመገምገም ጥያቄዎች፣ ሥነ ልቦናዊ ጉዳዮች፣ የወላጅነት ተግባራት፣ ሽንት እና ሰገራ የማስወገድ ችግር ጥያቅዎች አሉ፤ እነዚህን ጥያቄዎችን መሙላት ከ15-30 ደቂቃ የሚጠይቅ ስለሆነ በአክብሮት እንዲሞሉ እንጠቃለዉ። በዚህ ጥናት እንዲሳተፉ የተጠየቁት እርስዎ ከ5-14 አመት እድሜ ያለዎት ልጅ ስለሆኑ እና ወላጅዎ፣ ተንከባካቢዎ ወይም አሳዳጊዎ በዚህ ጥናት ላይ እንዲሳተፉ አስቀድሞ ፍቃድ ስለሰጡዎት ነው። መልሶችዎ እስከ ህጉ ድረስ በሚስጥር ይጠበቃሉ እና በማንኛውም ጊዜ ከመሳተፍ ነፃ ነዎት እና እርስዎ አይቀጡም። ስለ ጥናቱ ምንም አይነት ጥያቄ ካሎት እባክዎን በነፃ ያግኙኝ (አቶ ታመነ ብርሃኑ፡ 0916719647) ።

ለመሳተፍ ፍቃድ ይስጡ

በዚህ ጥናት ውስጥ መሳተፍ ምን እንደሚያስፈልግ ተረድቻለሁ እናም በዚህ ጥናት ለመሳተፍ ተስማምቻለሁ።

_____ _____ _____

ስም ፊርማ ቀን

አባሪ 2፤ የአማረኛ እትም መጠይቆች

ክፍል አንድ፤ ከወላጆች እና ከልጆች ጋር የተያያዙ ስነ-ሕዝብ ሁኔታዎች

ተ.ቁ	ጥያቄዎች	ምላሽ	አስተያየት
101	የልጅዎት እዲሜ	----------	
102	የልጅዎት ጾታ	1. ወንድ 2. ሴት	
103	የመኖሪያ ቦታ	1. ከተማ 2.ገጠር	
104	ሃይማኖት	1.ኦርቶዶክስ 2. ሙስሊም 3. ፕሮቴስታንት 4. ካቶሊክ 5. ሌሎች ይግለጹ _____	
105	ብሄር	1.ወላይታ 2. ኦሮሞ 3. ጉራጌ 4. አማራ 5. ሌሎች ይጠቅሳሉ _____	
106	የልጁ የትምህርት ደረጃ	1. ከጅ 2. የመጀመሪያ ደረጃ ትምህርት እና ከዚያ በላይ	
107	ከማን ጋር ነው የምትኖሩ?	1.ከወላጆቼ ጋር 2. የእንጀራ ወላጆች 3. የመኖሪያ ተቋም 4. ጠባቅ	
108	የቤተሰብ መጠን	በቁጥረ ----------	

109	የወላጆች ስራ ሁነታ	1.የመንግስት ሰራተኛ 2. የግል 3. ነጋዴ 4. ገበሬ 5. የቤት እመቤት 6. ሥራ አጥ 7. የቀን ሰራተኛ	
110	የወላጆች የትምህርት ደረጃ	1.ማንበብ እና መጻፍ የማይቻል 2. የመጀመሪያ ደረጃ ትምህርት ቤት 3. ሁለተኛ ደረጃ ትምህርት ቤት እና ከዚያ በላይ	
111	ወላጆች የጋብቻ ሁኔታ	1.ያገባ 2. የተፋታ 3. የተሌያየ 4. ባል/ሚስት የሞተባት/ተ 5. ያላገባ	
112	የቤተሰብ ወርሃዊ ገቢ በኢትዬ. ብር	በቁጥረ ----------	

ክፍል II፤ የህጻናት እና እናቶቻቸው ክሊኒካዊ/ባዮሎጂካል ምክንያቶች የተያየዘ ጥያቄ

ተ.ቁ	ጥያቄ	መለስ	አስተያየት
201	እርግዝናዉ የቆይበት ጊዜ ?	1. ሙሉ ዜጠኝ ወር 2. ከዜጠኝ ወር በታች 3. ከዜጠኝ ወር በላይ	
202	የምጥ ቆይታ ግዜ	1. ከ10 ሰአታት በታች 2. ከ10 ሰአታት እና በላይ	
203	ልጆዎት ስወለድ	1. መደበኛ የሴት ብልት 2. ቫኩም/በመሳሪያ የታገዘ	

		3. በቀዶጥገና	
204	ልጆዎት ከተወለዱ የመጀመሪያ 6ወር ጡት ሰያጠቡ	1. በጡጦ ብቻ ይመገባል 2. በጡጦ እና ጡት ይመገባል	
205	የጆዎት እናት ሱስ ይጠቀማሉ	1. አዎ 2. አይደለም	2ከሆኔ ወዴ 210 ይለፉ
206	የተጠቀሙት አልኮል	1. አዎ 2. አይደለም	
207	የተጠቀሙት ሲጋራ	1. አዎ 2. አይደለም	
208	የተጠቀሙት ጫት	1. አዎ 2. አይደለም	
209	የተጠቀሙት ሌሎች	1. አዎ ;ይግለጹ------ 2. አይደለም	
210	ቤተሰብ ታሪክ ዉስጥ ሽንት ወይም ሰገራ የማሰወገድ ችግር አለ	1. አዎ 2. አይደለም	
211	ልጅዎ ያንኮራፉሉ	1. አዎ 2. አይደለም	

ክፍል IV፤ ከአሰቃቂ ሁኔታ (CTSQ) ጋር የተያያዙ ጥያቄዎች

እባኮት ከአደጋው በኋላ ከነዚህ ጥያቅዎች መካከል እረሶን የደርሶብዎትን ያመልክቱ፣ ምንም አይነት አደጋ ከሌለዎት ወይም የህይወት ክስተቶች ከሌለዎት ሙሉ ወደ ቀጣዩ ክፍል ይሂዱ።

ተ.ቁ	**ጥያቄ**	አዎ =1፣ አይደለም=0	
401	ማንኛውም አይነት አደጋ ወይም አስጨናቂ የህይወት ክስተቶች አጋጥሞታል	1 አዎ 2 አይደለም	If 2 go to Q 501
402	ለማሰተዉስ የማትፈልገው ስለአደጋው ብዙ ሀሳብ ወይም ትዝታ አለህ?	0. አይደለም 1. አዎ	

403	አደጋው በሕልም እየመጣ ያስፈራራል?	0. አይደለም 1. አዎ	
404	አደጋው እንደገና ሊፈጠር እንደምችል አይነት ስሞት ይሰማዎታል?	0. አይደለም 1. አዎ	
405	አደጋውን ሲታወሱ እንደ ፈጣን የልብ ምት፣ የሆድ ቁርጠት እና የማዞር ስሜት ያሉ የሰውነት ምላሾች አሉዎት?	0. አይደለም 1. አዎ	
406	የእንቅልፍ ችግር አለብዎት?	0. አይደለም 1. አዎ	
407	ብስጭት ይሰማዎታል ወይም ይናዴዳሉ?	0. አይደለም 1. አዎ	
408	አደጋውን የምስታዉሱ ነገሮች ስገጥሙ ይበሳጫል?	0. አይደለም 1. አዎ	
409	ትኩረት መስጠት ይከብዳዎታል?	0. አይደለም 1. አዎ	
410	በእራስዎ እና በሌሎች ላይ ሊደርስ የሚችል አደገኛ ሁኔታ ይፈጠራል ብሎ ይጠብቃሉ ?	0. አይደለም 1. አዎ	
411	ነገሮች በድንገት ሲከሰቱ "እንድዝለል" ያደርግዎታል ወይም ያስደንግጦዎታል?	0. አይደለም 1. አዎ	

ክፍል V፤ ከልጁዎች አስቸጋሪ የባህሪ ችግሮች ጋር የተያያዙ ጥያቄዎች (SDQ)

ለእያንዳንዱ ጥያቄ፣ እባክዎን ልጅዎን በትክክል የሚገልፅ ቁጥሮችን በሳጥኑ ውስጥ ክብ ያድርጉ። 'በተወሰነ እውነት' ሁሌም 1 ሆኖ ይመዘገባል፣ ነገር ግን 'እውነት አይደለም' እና 'በእርግጠኝነት እውነት' ያለው ነጥብ ከጥያቄዉው ጋር ይለያያል፣ በታች ሰንጠረዥ እንደሚታየው ነዉ። እባክዎ ባለፉት ስድስት ወራት ውስጥ በልጅዎ ባህሪ ላይ ተመስርተው መልስዎን ይስጡ።

ተ.ቁ	**ጥያቄ**	እውነት አይደለም	በመጠኑ እውነት	በእርግጠኝነት እውነት	
	ስሜታዊ ችግሮች ልኬት				
501	ብዙ ጊዜ ራስ ምታት ችግር አለ... (ብዙጊዜ ራስ ምታት ይሰማኛል...)	0	1	2	
502	ብዙ ጭንቀቶች አሉ... (በጣም እጨነቃለሁ)	0	1	2	
503	ብዙ ጊዜ ደስተኛ አይደሉም፣ ብስጭት አለ... (ብዙ ጊዜ ደሰተኛ አይደለሁም.....)	0	1	2	
504	በአዳዲስ ሁኔታዎች ውስጥ ይጨነቃሉ ወይም ... (በአዳዲስ ሁኔታዎች ለይ ፈርቻ አለዉ...)	0	1	2	
505	ብዙ ፍርሃቶች አሉ፣ ወይም በቀላሉ ይፈራለሁ (ብዙ ፍርሃቶች አሉ...)	0	1	2	
	የስነ-ምግባር ችግሮች ልኬት				
506	ብዙ ጊዜ ቁጣ አለው (በጣም እናድዳለዉ)	0	1	2	
507	በአጠቃላይ ታዛዥ ነዉ... (ብዙውን ጊዜ እንደተነገረኝ አደርጋለሁ)	2	1	0	
508	ብዙ ጊዜ ከሌሎች ልጆች ጋር ይጣላል... (በጣም እታገላለሁ)	0	1	2	
509	ብዙ ጊዜ ይዋሻሉ ወይም ያጭበርበርሉ (ብዙ ጊዜ በመዋሸት ወይም በማጭበርበር ይከሰሳለሁ)	0	1	2	
510	ከቤት፣ ከትምህርት ቤት ወይም ከሌላ ቦታ ይስርቃሉ (የራሱ ያልሆኑ ነገሮችን ይወስዳለሁ)	0	1	2	
	የከፍተኛ እንቅስቃሴ ችግሪ ልኬት				
511	እረፍት የለሌ፣ ከመጠን ያለፈ እንቅስቃሴ አለ... (እረፍት ያጣለሁ...)	0	1	2	
512	ያለማቋረጥ እጅ ወይም እግር ይወዛወዝል... (በማያቋርጥ ይወዛወዝለሁ...)	0	1	2	
513	በቀላሉ ትኩረቴ ይከፋፈላል ወይም ትኩረቱኑ ያጣሉ (በቀላሉ ይረብሻለሁ)	0	1	2	
514	ከመተግበሩ በፊት ነገሮችን ያስባል (ነገሮችን ከማድረገ በፊት ያስባለሁ)	2	1	0	
515	ተግባራትን እስከ መጨረሻው ያያል... (የምሰራውን ስራ ይጨርሻለሁ)	2	1	0	
	የአቻ/እኩያ ግንኙነት ችግሮች ልኬት				
516	ይልቁንም ብቸኝነት፣ ወይም ብቻውን የመጫወት ዝንባሌ አለው (ብዙውን ጊዜ ብቻዉን ይቆያል)	0	1	2	

517	ቢያንስ አንድ ጥሩ ጓደኛ አለ (አንድ ጥሩ ጓደኛ አለዎት ወይም ከዚያ በላይ)	2	1	0	
518	በአጠቃላይ በሌሎች ልጆች ይወደዳል (እኩያዎች በአጠቃላይ ይወዳሉ)	2	1	0	
519	ልጆዎ ጉልበተኛ ነዉ	0	1	2	
520	ከእኩያዎች ይልቅ ከአዋቂዎች ጋር ስሆን ይሻላል	0	1	2	

ክፍል VI፤ ከወላጅነት ልምዶች (APQ-9) ጋር የተያያዙ ጥያቄዎች

መመሪያዎች፡ የሚከተሉት ስለ ቤተሰብዎ የሚነገሩ በርካታ መግለጫዎች ናቸው። እባኮትን እያንዳንዱን ጥያቄ በቤትዎ ውስጥ ምን ያህል ጊዜ እንደሚከሰት ደረጃ ይስጡ። ሊሆኑ የሚችሉ መልሶች፡ በጭራሽ (1)፣ በጭራሽ ማለት ይቻላል (2)፣ አንዳንዴ (3)፣ ብዙ ጊዜ (4)፣ ሁልጊዜ (5) ናቸው። እባክዎ ሁሉንም ጥያቄዉችን ይመልሱ

ተ.ቁ	ጥያቄ	በጭራሽ	በጭራሽ ማለት ይቻላል	አንዳንዴ	ብዙ ጊዜ	ሁሌም	
601	ልጅዎ አንድ ነገር በትክክል ሲሰራ ጥሩ መሆኑን ያሳውቁታል።	1	2	3	4	5	
602	ልጅዎን ለመቅጣት ያስፈራሩና ከዚያም አይቀጡትም	1	2	3	4	5	
603	ልጅዎ የምሄዱበትን ያሰፈቅዳሉ	1	2	3	4	5	
604	ልጅዎ ስህተት ከሠሩ በኋላ እንዳይቀጡ ይነግሮታል	1	2	3	4	5	
605	ልጅዎ ቤት መሆን ባለበት ጊዜ በዉጭ ይቆያሉ?	1	2	3	4	5	
606	ልጆዎ ጥሩ ነገር ከሰራ ያመሰግኖታል?	1	2	3	4	5	
607	ልጅዎ ጥሩ ባህሪ ካደረገ ያወድሳሉ	1	2	3	4	5	
608	ልጅዎ እረሰዎ ከማያውቋቸው ጓደኞች ጋር ይዎጣል/ይሄዳል	1	2	3	4	5	

609	እርስዎ ቀደም ብለው ልጅዎን ካጠፉ እንደምቀጡ ይነገሮታል	1	2	3	4	5	

ክፍል VII፤ ሽንት እና ሰገራ የማስወገድ ችግር ጋር የተያዘ ጥያቄዎች

ቢያንስ 3 ወር እና ከዚያ በላይ በሆነው ጊዜ እርስዎን በተሻለ የሚገልፅዎትን ቁጥር ያክብቡ

ተ.ቁ	ጥያቅዎች	**ባለ5-ነጥብ የላይርት ልኬት (0-4)**	አስተያየት
701	በቀን ውስጥ በውስጥ ሱሪ ወይም ልብስ ላይ ሽንት ያመለጦታል/ይሸናሉ።	0. በጭራሽ 1. በሳምንት 1 ቀን 2. በሳምንት 2-3 ቀናት 3. በሳምንት 4-5 ቀናት 4. በየቀኑ	
702	በውስጥ ሱሪ ወይም ልብስ ላይ ሽሸኑ ልብሱ።	0. በውስጥ ሱሪ ወይም ልብስ ላይ አልሸኑም 1. ደረቅ ማለት ይቻላል 2. እርጥብት የዘለ ነዉ 3. እርጥብ ነዉ 4. በሽንት የተዘፈዘፈ ነዉ	
703	በተለመደው ቀናት ዉስጥ መጸዳጃ ቤት ለመሸናት ይሄዳለሉ	0. 1-2 ጊዜ 1. 3-4 ጊዜ 2. 5-6 ጊዜ 3. 7-8 ጊዜ 4. ከ 8 ጊዜ በላይ	
704	ለመሸናት ወደ መጸዳጃ ክፍል ይቾክላሉ	0. በጭራሽ 1. ከግማሽ ያነሰ ጊዜ 2. የግማሽ ጊዜ 3. ከግማሽ በላይ ጊዜ 4. በየቀኑ	

705	እግሮቹን በማጠላለፈ ወይም በመቀመጥ ሽንት እዳያመለጦት ይቆጣጠራሉ	0. በጭራሽ 1. ከግማሽ ያነሰ ጊዜ 2. የግማሽ ጊዜ 3. ከግማሽ በላይ ጊዜ 4. በየቀኑ	
706	ሽንት ሽሸኑ ያሳመሞታል	0. በጭራሽ 1. ከግማሽ ያነሰ ጊዜ 2. የግማሽ ጊዜ 3. ከግማሽ በላይ ጊዜ 4. በየቀኑ	
707	ሌሊት መኝታ ላይ ሽንት ያመለጦታል/ይሸናሉ	0. በጭራሽ 1. በወር 3-4 ምሽቶች 2. በሳምንት 1-2 ምሽቶች 3. 4-5 በሳምንት 4. ሁልጊዜ ማታ	
708	ሌልት ለመሽናት ይነሳሉ	0. በጭራሽ 1. በወር 3-4 ምሽቶች 2. በሳምንት 1-2 ምሽቶች 3. 4-5 በሳምንት 4. ሁልጊዜ ማታ	
709	ሽንት ሽሸና ይጀምርና ይቆማል ወይም ይቆራረጣል	0. በጭራሽ 1. ከግማሽ ያነሰ ጊዜ 2. የግማሽ ጊዜ 3. ከግማሽ በላይ ጊዜ 4. በየቀኑ	
710	ሽንት ለመጀመር መግፋት ወይም መጠበቅ አለቦዎት	0. በጭራሽ 1. ከግማሽ ያነሰ ጊዜ 2. የግማሽ ጊዜ 3. ከግማሽ በላይ ጊዜ 4. በየቀኑ	
711	የሆድ እንቅስቃሴ አለ /ሰገራዉን ይቀመጣሉ	0. በቀን ከአንድ ጊዜ በላይ 1. በየቀኑ 2. በየሌሎቹ ቀናት 3. በየ 3 ቀኑ 4. ከ 3 ቀናት በላይ	
712	ሰገራዉ ደረቅ ያለ ነው	0. በጭራሽ 1. ከግማሽ ያነሰ ጊዜ 2. የግማሽ ጊዜ 3. ከግማሽ በላይ ጊዜ 4. በየቀኑ	
713		0. በጭራሽ	

	በውስጥ ሱሪ ወይም ልብስ ላይ በዲንገት ሰገራዉ ያመለጦታል	1. በሳምንት 1-2 ጊዜ 2. በሳምንት 3 ጊዜ 3. በሳምንት 4-5 ጊዜ 4. በየቀኑ	

Part-VIII	የልጅዎት ችግር ለማቅረፍ ምን አደረጉ; ልጅዎ ሽንትና ሰገራ የማስወገድ ችግር እንደሌለበት ካሰቡ የሚከተሉትን ጥያቄዎች ይዝለሉ።		
801	የልጅዎትን ሽንትና ሰገራ የማስወገድ ችግር ለመቃረፍ ሞክሩዋል	1. አዎ 2. አይደለም	If no go to Q901
802	በቀበቶ መገረፈና ማሰፈራራት እንደ ማሰተማሪያ	1.አዎ 2.አይደለም	
803	ምግብ እና ፈሳሽ መገደብ	1. አዎ 2. አይደለም	
804	የሸናበት ጨርቅ ማሳጠብ	1.አዎ 2.አይደለም	
805	ጣፋጭ መጠጦችን መሰጠት	1. አዎ 2. አይደለም	

ክፍል- VX፡ የመጸዳጃ ቤት አጠቃቀም ስልጠና ክህሎት መግምገምያ መጠይቆች

እባኮትን ለእያንዳንዱ የጥያቄ ምላሽ ውጤት ተገቢዉን ውጤት ክብቡ።

ተ.ቁ	ጥያቄ	ምላሽ	ነጥብ	አስተያየት
901	ሽንት የምሸኑበት ግዜ	በሰዓት ከአንድ ጊዜ በላይ	**3**	
		ከ1-2 ሰአታት መካከል	**2**	
		ከ 2 ሰዓት በላይ	**0**	
902	ሰገራ የምቀመጡበት ጌዜ	በቀን ከሶስት ጊዜ በላይ	**3**	

		ሁልጊዜ በመደበኛነት የተመሰራቴ ጌዜ የለውም ማለትም. ለሆድ ድርቀት ወይም ለተቅማጥ የተጋለጡ ናቸው	**2**	
		መደበኛ ጌዘዉን ጠብቆ ይቀምጣል	**0**	
903	ሌልት ሽንት አመለጡዎት ከሆኔ	አብዛኛውን ጊዜ ማለትም ብዙ ወይም ሁልጊዜ ማታ	**3**	
		በተደጋጋሚ ማለትም አልፎ አልፎ የማይሸነበት ምሽቶች አሉ	**2**	
		በጭራሽ ማለትም. ብዙውን ጊዜ ምሽት ላይ አይሸኑሙ	**0**	
904	ሌልት ሰገራዉ አመለጡዎት ከሆኔ	በሳምንት ከአንድ ጊዜ በላይ ይከሰታል	**3**	
		በጭራሽ አይከሰትም	**0**	
905	መጸዳጃ ቤት ላይ ይቀመጣል	ፈርቶ ወይም ለመቀመጥ ፈቃደኛ አለመሆነ አለ	**4**	
		በዲጋፍ ይቀምጣል	**2**	
		ብቻዉን ለረጅም ጊዜ ያለ ድጋፍ ይቀመጣል	**0**	
906	ወደ መጸዳጃ ቤት ይሄዳሉ	መጸዳጃ ቤት ለመሄድ ምንም ምልክት አይሰጡም	**4**	
		ወደ መጸዳጃ ቤት ለመሄድ አንዳንድ ምልክቶችን ይሰጣሉ	**2**	
		አንዳንድ ጊዜ በራሱ ፈቃድ ወደ መጸዳጃ ቤት ይሄዳል	**0**	
907	መጸዳጃ ቤት ከተጸዳዱ ቦኃላ ልብስ አያያዝ	ልብሶችን በሙሉ መያዝ አይችልም	**3**	
		ሱሪዎችን ወደ ላይ/ወደታች ለመሳብ ይሞክራል	**2**	

		ያለ እርዳታ ልብሶችን በአገባቡ መያዝ ይችላል	**0**	
908	ሽንትን መቆጣጠሪ	ሽንት በሽንት ቤት/ፖፖ ላይ በጭራሽ ወይም አልፎ አልፎ አይቀመጥም	**3**	
		አንዳንድ ጊዜ ሽንት ቤት ላይ ሽንት ይሸናሉ	**2**	
		በተጠየቀ ጊዜ ሽንት መጀመር ይችላሉ	**0**	
909	ሰገራዉን መቆጣጠሪ	በመጸዳጃ ቤት /ፖፖ ላይ ሰገራዉን በጭራሽ አይቀምጥም/አልፎ አልፎ	**3**	
		አንዳንድ ጊዜ በመጸዳጃ ቤት ውስጥ ይቀመጣል	**2**	
		በመጸዳጃ ቤት ውስጥ ጊዜዎን ጠብቆ ይቀመጣል	**0**	
910	የባህሪ ችግር፣ በመጸዳጃ ቤት ሂደት ውስጥ ጣልቃ የሚገባ ለምሳሌ. ሽንት ቤት ሲገባ መጮኽ	በተደጋጋሚ ይከሰታል, ማለትም. በቀን አንድ ጊዜ ወይም ከዚያ በላይ	**4**	
		አልፎ አልፎ ይከሰታል, ማለትም. በቀን ከአንድ ጊዜ ያነሰ	**2**	
		በጭራሽ አይከሰትም	**0**	
911	ለመሠረታዊ ትዕዛዞች ምላሽ, ይሰጣሉ፤ለምሳሌ. "እዚህ ይምጡ"	በጭራሽ/አልፎ አልፎ ለትእዛዞች ምላሽ አይሰጥም	**4**	
		አብዛኛውን ጊዜ ምላሽ ይሰጣል	**0**	

Annexe-3: Wolaita language version

Soo asaa enootetta qonccisiyaa kittaa

Bonnichchettiddaa soo asaattoo woyikko hagazaa immiyagetto:

Haggee naqqashshayii attiyoo oddoyoo woyikko kittayaa, jimma univurishiyappe filligetta filligiyagge wolayittaa sodo unvurishiyaa woggaa xoqqaa kummetta haggazza immiyaa akkammo kettanni, layittayyi ichchashappe biddi tammanne oyidda gakanawu de"iyaa qerri nattu bolli yeyaa kattaanne hattaa sheshsha, banttaa sheniniyanni ayisenaadani ottiyaa mettuwanne a gasotta filligiyaa filgeta giddiyogaa erisessii

Tanni Berhanu Tamene na"antto digirriyaa woyiko mastirettiyaa, jimma uivurishiyanni huphphe akkommuwaa luxxettaa luxxayiddaa dayissii, tani ha luxxettaa woliyattaa sodo univurshiyarra issipettetanni luxxayidda ha filligetta kushayaa akkomoo kettanni lammiyaa ehiyogaa qonccisayisi Ha filligittaa huphphe yehooyyi "Elimination disorder and its associated factors among children aged 5–14 years in Wolaita Sodo University comprehensive specialized hospital pediatric outpatient"

Ayisi ne na"ii ha filiggetasi koyettidde

Nee na"ii ha filigetayoo koyettido gasoyoo akkommo hagaza immiyagettine luxxisiyagetti kattanne hattaa sheshshaa payettettaya mettuwaa qibbaa nattu bollinne a kallettiyaa gasuwaa eranawunne sure hagaza immanawu koshiyoo gishasaa

Erranawuu koshiyabaa: Neni nee Na"aa ha fillegetayoo attadaa immanaggee ne shene, qassikka nenika ne na"ikka ha fillegattappe ayi wodoiyannikka ishshi woyiko akkayaa ganagge intte shene giddishin enoo woyika akkayittaa giyogee ayii ogiyaninni ne na"aa qohhenaa.

Xurraa nagettaa: ne Na"appe ekkiyoo yehootti woyikko xurayya ayyi ogiyanikka oyokka attiddi immettenaa Ha filligettanikka ne Na"a xurayaa payidduwanni payiddettiddi onikka nee na'a erenaddanni osettessi

Intteyoo gellibenabayaa de"ikko hagappe garsara de"iyaa yafarattunni oyichanawuu dandayettaa.Manta BERHANU TAMENE +251916719647 tamenebirhanu2013@gmail.com woyikoo,tanaa,zorriyagetta,Manta.Tesfaye:Yonasa,+251910107507,yonastesfaye71@yahoo com,Doctoriyaa.Abera:Mubareka,+251918968803,amubarek@gmail.com,Manta.Girma:

Shemilesa +251911721438 shimelisgirma@gmail.com

Ha filligettayoo Nattuu enottetta

Tani ta Na”ii ha filgettanini gellana mala mayetassi qassikka tanaa enottetta qonccisiyaa kittaa ekkassi hegaa bollani qassi hagee maddiyii filligetta giddiyogaa erayissi

Na”aa/ee layittaa----------

_____ _____ _____

Na”aa dichchiya uraa boxoxxaa dichchiyagaa sunttaa gallasaa

Enottetta ekkiyaa uraa qoffaa

Tani erisiyogge ha felligettayoo shobettida urasi enottetta qoncissayii naqashshayii jimma univurshiyappe immettidogaa qonccisayadda ha fillegettani gakkiya moduwaa qohuwakka qoncisidoga erisayisi, qassikkaa ta yafarra payidduwaa mettiyabbi de”ikko oyichchcanawu immidoga qoncisayisi

_____ _____ _____

Enotetta Ekiyaga Boxoxxaa Enotetta Ekiyaga Sunttaa Gallasaa

Bonichettida ha filifetawu shobettidagetto:

Hachchi neni shobettiddo filegetayoo huphphe yehoyyii “Magnitude of Elimination Disorder and Its Associated Factors among Children Age 5–14 In Wolaita Sodo University Comprehensive Specialized Hospital Pediatric Outpatient” gidishshinni ha filigetayyo dumma dummaa hezzu qommo oyishshatti de”osanna ha oyishshatta zaranawu baggaa wodiyaa koshessi, Entte hachi ha filigetawu koyittido gassayoo layittayyi 5-14 gidiyo gishawunne enotettaa marakatettayyi gakkido gishasa, intte immiyo zaruwaa xurayii oyyonne attidi immettenaa, intteyoo oyishanni gellibenabayaa de”ikko tan Berhanu tamenaa ha yafaraa payiduwanaa oyichchitte

Enottettaa

Tani akkekayisi ha filligetayii ayi koyiakko hegaa bollanni tane enno gassi ha filligetta giddo gellanawu Galasaa _____

Enota keyag suntta _____ boxoxxa _____

Annex 2 Wolaita version questionnaires

Shahuwaa issuwaa: Dussaa marraraa gayittiyaa so asarra woyikko nattu yehottaa/mettottaa

S/N	Oyishshaa	Zaruwaa	Qoffaa
101	Na”a/ee layittayaa	----------	
102	Na”a/ee mattumatettaa	1. Attumaa 2. Maccaa	
103	De”iyosayaa	1. Ambbaa 2. Gaxxariyaa	
104	Ammanoyoo	1. Orthodoxiyaa 3. Protestantiyaa 2. Muslimiyaa 4. Catholiciyaa 5. Haraa _____	
105	Kochchayii	1. Wolaita 3, Oromo 4, Gurage 2. Amhara 5, Haraa _____	
106	Luxxettaa xekkayii	1. Mella woyikko Koyiro xekappe garassa 2. Koyiro xekkanne bollaa	
107	Na”a/ee onaraa de”iyonaa	1. So asaraa 2. Dichchiyagetu 3. Issippe shiqqettidi de”iyosanni 4. Naggiyagaraa	
108	So asaa qoddayyii	Payiduwan ----------	
109	So asaa osoyoo	1. Kawoo osannachchaa 2. Bagaa 3. Zadhdhanichchaa 4. Goshshanachchaa 5. So giddo osanachcha 6. Osoyoo bawaa 7. Gallasa osanachchaa	
110	So asaa luxxettaa xekkayii	1. Tammarribokkonnaa 2. Koyiro xekkanne bollaa 3. Na”antto xekkanne bollaa	

111	Ekkuwaanne gelletta hanottaa	1. Gellettidosonaa 2. Shahettidosonnaa 3. Hahuwanni de”osanna 4. Hayiqqisi/uu 5. Gelletabeyikke	
112	So assay aginanni demiyo marracoyoo	Payiduwan ----------	

Na”antto Shahuwaa: Nattunne ayyee payattettaraa gayittiyaa mettottaa

SN	Oyishshaa	Zaruwaa	Qoffaa
201	Shaharra wodde?	1. Kummetta agginnaa 2. Kummettaappe agginappe garissaa 3. Kummetta agginappe bollaa	
202	Marrettaa wodde	1. < 10 sattee 2. ≥ 10 sattee	
203	Na”aa/eeiyoo yelliddo oggee?	1. Maccattettaraa 2. Qaphphiyaa hillanni 3. Dakki sikkuwaanni	
204	Na”aa/eeiyoo xantta xamisiyoo oggee Koyiro usuppuni aginani	1. Xuxxuwaanaa 2. Xuxxuwaane xanttaa	
205	Ayyetti kahhaa lammiyaa xalletta go”ettaa erayyissi?	3. Ee 4. Akkayi	IF 2 go to Q207
26	Ayiyaa go’etoge Alikkolliyaa	1. Ee 2. Akayi	
207	Ayiyaa goe’etoge Tannibuwwaa	1.Ee 2. Akayi	
208	Ayiyaa goetoge jiimaa	1.Ee 2.Akayi	
209	Ayiyaa goetoge harra	1.Ee qoncisa---- 2.Akayi	

210	Zariyyanni kattenne hatttaa sheshshaa mettoyyii de”ii	1. Ee 2. Akkayyi	
211	Na”aa/ee hatturrii/yaa?	1. Ee 2. Akkayyi	

Hezzantto Shahuwaa: Nattu bolli gakkiya huphphe woyikko bollaa qohhuwarra gayittiyaa oyishshatta

Hadaraa nee na”a/ee bolli gakkidaa huphphe qohoyoo woyikko azanoyoonne bolla bolli qohoyoo de”ikko garasani de”iya oyishaa Zara, qohoyoo xayikko kalliyaa kifiliyawu kanttaa

s.no	**Qommottaa**	Ee =1, Akkayyi =0	
401	Nne bolli gakkidda dagantiyaa qohoyye de’’ii?	1. Ee 2. Akkayi	1 duge 402 kantta
402	Neni hassayannawuu koyenabenna tirraanni kiyiwodhdhiddaa mettotti qoffanni yiddi wayisiyonaa?	0. Akkayyi 1. Ee	
403	Neyoo yashshiyaa ayimmoyyoo de”ii?	0. Akkayyi 1. Ee	
404	Neni tirraanni kiyiwodhdhaa mettoyyii na”anttuwwaa gayeties woyikko yessi gada qoffayi?	0. Akkayyi 1. Ee	
405	Neyoo tirraanni kiyiwodhdhidaa mettuwaa hasayiodde wozzannayi shochchayi, ulloyyi puriyoge, yiccoyoge deii?	0. Akkayyi 1. Ee	
406	Neiyoo xissikuwaa mettoyyi de”ii?	0. Akkayyi 1. Ee	
407	Neiyoo ganccaraayyiogge woyikko yiolottiyogee de”ii?	0. Akkayyi 1. Ee	

408	Neni tirraanni kiyiwodhdhidaa mettuwaa hasayisiyodde yiloyi?	0. Akkayyi 1. Ee	
409	Nena qoffaa Issi bottanni wottiddi qoffanawu metti?	0. Akkayyi 1. Ee	
410	Neni qoffibennaa mettoyyi nee bolli woyikko haraa asaa bollii gakessi giddi qoffiya?	0. Akkayyi 1. Ee	
411	Qoffenanni dagganttiyabatti gayittiyodde neena guppiissi?	0. Akkayyi 1. Ee	

Ichchashantto Shahuwaa: Na”attuu hanottaraa metottuwaraa gayittiyaa oyishshattaa

.Hagappe garsara de”iyaa oyishsaattuyoo ne Na”aa/eeiyoo adhdhiddaa ussuppuni aginattu giddonni tummu qonccisiyaa zaruwaa xaxxaa

s.no	**Qommottaa**	Tummaa giddenaa	Guttaa tummaa	Mulleraa tummaa	
	Kahhaa/qoffaa qonccissiyoo mettuwarra gayittiyaa yiggettaa				
501	Huphphe qoxxessi…….. (Tassii huphphe qoxxoyyii dessii)	0	1	2	
502	Darro yashshayi desi…. (Tani yayisi)?	0	1	2	
503	Uppayisena woyyikko (tani isstto isstto oupayyittikkee)	0	1	2	
504	Orrottaa hannottatti gayittiyoo wodde gannicarrisesi woyyikko yilottiyesi (tani yillottayissii)?	0	1	2	
505	Darroo yashshayaa de”iisi (tayoo darroo yashshayaa de”essi)?	0	1	2	
	Nattu wayisuwaa mettuwarra gayittiyaa				

	yiggettaa				
506	Qoffanni woyikko yilluwann cuulettiyisi (tani kehippe yillottayissii)	0	1	2	
507	Qexxee genanni kittaa polliyisi	2	1	0	
508	Haraa natturaa warrettiyisi (tani laggetturaa warretayissi)	0	1	2	
509	Worroddottiyisi (tani worroddottayissi)?	0	1	2	
510	Sogiddoppe, luxxettaa kettappe woyikko harrasappe wuqqiyisi (tani issi issibaa tabbaa giddenabbaa ekkayissi)?	0	1	2	
	Nattu tunttateraa gayittiyaa mettuwaa yiggettaa				
511	Woppattettaa xayassi woyikko……. (Tani essottayissi)	0	1	2	
512	Ubbaa wodde kushshiyaa/tohhuwaa shempenanni qattiyisi	0	1	2	
513	Qoffayyi lalettiddi shishanawuu wayisi (tasi qoffayyii esuwaraa lalettichessi)?	0	1	2	
514	Issi issibaa ottannappe Koyiroo qoffiyisi (tani issi issibaa ottannappe Koyiroo qoffayissi)	2	1	0	
515	Domiddo osuwaa wurisiyisi (tani domiddo osuwaa wurisayissi)?	2	1	0	
	Laggetturaa de”iyaa issippettetta mettuwaa yiggettaa				
516	Haratturaa ka”iyoogaappe tarrakkaa takkiyoggaa dorayisi (tani darroottoo tarrakkaa takkayissi)	0	1	2	
517	Guxxishshinn issi lo”oo laggee desii (tasi issoyoo/issuwappe darriyyi lagetti deisi)?	2	1	0	
518	Haraa natti tana dososonnaa (taa lagetti tanaa dososonaa)	2	1	0	

519	Haraa asaa bollanni yillottayisi (taa lagetti tanaa qohosoanaa)	0	1	2	
520	Woggaa asaraa lo”oo gayitottettayyi desi (tasi taa laggettuppe woggaa asara lo”oo)?	0	1	2	

Ussupuntto Shahuwaa: Natta dichchiyoo marraraa gayittiyaa oyishshattaa, inttesone haniyabata qounicisiya payiduwani xaxxaa

S. no	Qommottaa	Akkayyi	Darriyaa baggaa Akkayyi	Isstto isstto	Darroottoo	Ubbatto	
601	Neni ne na”aa/eeyoo lo”obaa ottiyowodde A/I erannawuu gadda coggadda yedagayyi?	1	2	3	4	5	
602	Neni ne na”aa/eeyoo bochchenanni serannawuu yashishisayaa?	1	2	3	4	5	
603	Ne na”aa/eeiyaa awukkoo banawuune enottettaa oyichii/yaa?	1	2	3	4	5	
604	Ne na”aa/eeiyaa i/a morridobanni neni serraa simminni nena serape guyyinni nenara hasayonnaa?	1	2	3	4	5	
605	Ne na”aa/eeiyaa sooni takkanawu besiyaa sattiyanni karrenni gam”iyonnaa?	1	2	3	4	5	
606	Ne na”aa/eeiyaa lo”obaa ottiyowodde woyettayaa?	1	2	3	4	5	
607	Ne na”aa/eeiyaa lo”obaa ottiyowodde A/I uppayisayaa woyikko nashshayii?	1	2	3	4	5	
608	Neni errenanni ne	1	2	3	4	5	

	na”aa/eeiyaa laggetturaa pe”ee/aayaa?						
609	Neni nee na”aa/eeiyaa morrikko serretanagaa koyirotadda i/ayoo oddayyaa?	1	2	3	4	5	

Laappuntto Shahuwaa: Kattanne hattaa sheshshaa mettuwaa dummayyi Oyishshaa

Nena adhdhida hezzu aginane bolla galasatunni surre qonccisiyagaa xaxxaa

	Nattu kattanne hattaa sheshsha mettuwaa adhdhiddaa 3aginattunn	**5-cachchaa yiggettaa (0-4)**	**Qoffaa**
701	Tani gallassi mayyuwaa bolli she”ayisi:	0. Akkayyi 1. Samminttappe Isstto 2. Samminttappe 2-3 gallassaa 3. Samminttappe 4-5 gallasaa 4. Ubbaa gallassi	
702	Tani ta mayyuwaa bolli she”eyodde:	0. Akkayyi mayyuwaa bolli sheikke 1. Mellako baqessi 2. Irxxakko baqessi 3. Irrixessi 4. Hattatessi	
703	Kasegappe lametibena ogiyanni shesha ketta she”eaanawu bayyisi:	0. 1-2 uttoo 1. 3-4 uttoo 2. 5-6 uttoo 3. 7-8 uttoo 4. 8 uttoppe bollaa	
704	Tani sheshshaa kettaa she”eaanawu woxxayisi:	0. Akkayyi 1. Baggaa gallassappe guxxissi 2. Gallassappe bagaa 3. Bagaa gallassappe bollaa 4. Ubbatto	

705	Tani sheshshaa teqqaanawu tohuwaa xaxxiballiyisi woyikko duggee tohobolli uttiyisi:	0. Akkayyi 1. Baggaa gallassappe guxxissi 2. Gallassappe bagaa 3. Bagaa gallassappe bollaa 4. Ubbatto	
706	Tani she”eyodde sellessii:	0. Akkayyi 1. Baggaa gallassappe guxxissi 2. Gallassappe bagaa 3. Bagaa gallassappe bollaa 4. Ubbatto	
707	Tani qammi heittanni she’ayisi:	0. Akkayyi 1. 3-4 qamma aginappe 2. 1-2 qamma Samminttappe 3. 4-5 Samminttappe 4. Ubbaa qammii	
708	She”eaanawu xiskkuwappe dendiyisi:	0. Akkayyi 1. 3-4qamma aginappe 2. 1-2qamma Samminttappe 3. 4-5saminttappe 4. Ubbaa qammii	
709	Tani she”eyodde sergexxisesi:	0. Akkayyi 1. Baggaa gallassappe guxxissi 2. Gallassappe bagaa 3. Bagaa gallassappe bollaa 4. Ubbatto	
710	Tani she”eaanawu bannakkayisi woyikko yanashinni nagayisi:	0. Akkayyi 1. Baggaa gallassappe guxxissi 2. Gallassappe bagaa 3. Bagaa gallassappe bollaa 4. Ubbatto	
711	Kattaa sheshshaa ottausi:	0. Gallasanii isottope bollaa 1. Ubbaa gallassi 2. Issi gallasaa penni peni 3. Hezzantto Hezzantto gallassi 4. Hezzantto Hezzantto gallassappe daressii	
712	Kattaa sheshshayaa minnesi:	0. Akkayyi 1. Baggaa gallassappe guxxissi 2. Gallassappe bagaa 3. Bagaa gallassappe bollaa 4. Ubbaa gallassi	
713	kattaa sheshshayaa mayuwanni kessii ekkesi:	0. Akkayyi 1. 1-2 uttoo Samminttappe 2. 3 uttoo Samminttappe 3. 4-5 uttoo Samminttappe 4. Ubbaa gallassi	

Na”aa/ee mettuwaa paggallanawuu go”ettiddo ogiyyaaa, neni qofiyodee na”a/eyoo hattaa/katta shesha mettoyoo xayikko garasani de”iya oyishaa xallaa			
801	Ne na’’ayoo woyyiko na’’eyoo sheshshaa mettoyoo dessi gadda qoffayyi?	1 Ee 2 Akkayi	If 2 go to Q901
802	Baqqiyogaanne saqqiyani qachchiyogaa	1.Ee 2.Akayi	
803	Qummanne hattaa guttiyoogaa	1.Ee 2.Akayi	
804	Mayyuwaa meccisiyogsa	1.Ee 2.Akayi	
805	Laqqilaqqiyaa ushshatta immayyi?	1 Ee 2 Akkayyi	

Shahuwaa uddupunaa: sheshsha uttettaa go”eetiyoo erraa yigiyaa Oyishshaatta

Nena suree qonccisiyaa/yigiyaa Payiduwani xaxxaa

Sno	Qommottaa	Zaruwaa	Cachaa	Qoffaa
901	pugge osuwaa domissi woyiko sheshshaa she”essi	Sattiyanni isottope bollaa	**3**	
		Sattiyanni 1-2 gakanashinaa	**2**	
		Sattiyanni 2 bollaa	**0**	
902	Marraccee woyiko katta sheshsha ogge ossuwa domissi	Gallasanii 3ppe bolla sheshsha uttessi	**3**	
		suree shisha uttenaa woyiko katta sheshshayi melessi woyiko karayessi	**2**	
		Wodiyaa naggiddi sure katta sheshaa uttese/uwussu	**0**	
903	Qammi she”ee/uwussu gikkoo	Ubbaa qammi woyikko darotto	**3**	
		Darotto woyiko isstto isstto bawaa	**2**	
		Akkayii woyikko darotto bawa	**0**	
904	Qammi katta sheshayii yessi	Saminttani isttope bolla	**3**	

		Akkayyi	**0**	
905	Sheshshaa kettanni uttessi/wusu	Yayes/yayawusu woyiko koyenaa/uku	**4**	
		Maduwani uttesi	**2**	
		Madoyi bayinanni sure uttessi	**0**	
906	Sheshshaa kettaa banawuu	Sheshaa ketta banawuu malatta bessena/suku	**4**	
		Sheshsha ketta banawuu gutta malatta besesi/wusu	**2**	
		Bagadde ba sheniyani shesha ketta besesi/awusu	**0**	
907	Mayyuwaa sheshsha kettanni gigisiyogaa	Mulekka mayyuwaa gigisenaa	**3**	
		Giddo mayyuwaa puddene duggee dafesi/wusu	**2**	
		Mayuwa pudenne duggee dafessi/wusu	**0**	
908	Sheshsha basheniyani ayishiyoga	Akkiyaa woyiko takkidi isstto isstto shesha buqqurani she”esi	**3**	
		Isstto isstto shesha kettanni she”essi/wusu	**2**	
		Oyicho wodiyanni she”esi/u	**0**	
909	Katta shesha basheniyani ayishiyoga	Sheshaa ketani uttenaa	**3**	
		Shesha kettanni uttesi	**2**	
		Ubagallasi shesha kettanni uttesi	**0**	
910	Shesha ketta go”eetiyoo ogiya xubiyaa nattu mettoyoo lemisuwu shesha kettani wasiyoggee	Darotto woyiko gallasanii isottope bollaa	**4**	
		Isstto isstto woyiko gallasanii isttope garissaa	**2**	
		Akkayii	**0**	
911	Azazetiyogaa lemisuwu “hayaa”	Akkayi woyiko isstto isstto	**4**	
		Ubbatto	**0**	