ADDIS ABABA UNIVERSITY

SCHOOL OF GRADUATE STUDIES

ACCIDENT RELATED PSYCHOLOGICAL PROBLEMS OF CHILDREN AT THREE SELECTED HOSPITALS IN ADDIS ABABA

A THESIS SUBMITTED TO THE SCHOOL OF GRADUATE STUDIES ADDIS ABABA UNIVERSITY IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE DEGREE OF MASTER OF ARTS IN COUENSELING PSYCHOLOGY

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ABSTRACT

The main objective of this study was to examine accident related psychological problems of children at three selected hospitals in Addis Ababa. The study also aimed at finding if there are age, sex and accident type differences in exposure to the psychological problems(Anxiety, Emotional Distress and Posttraumatic Stress Disorder Symptom Score). Investigation of the psychological services in the three hospitals was also another objective. To meet these objectives, 100 victimed children, 100 parents of children participants and 20 health professionals were purposively selected and included in the sample. Three scales measuring the psychological problems (anxiety, emotional distress and posttraumatic stress disorder symptoms) and two structured interviews were used as instruments.

Quantitative and qualitative analyses were used to analyze the data obtained through the scales and interviews. Percentage results showed that 75% victimed children showed clinically significant level of anxiety while 98% had clinically significant level of emotional distress. Severe posttraumatic stress symptom was exhibited in 61 % of the cases. Results from the analysis of variance indicated that there were no statistically significant age, sex and accident type differences in experiencing anxiety, emotional distress and posttraumatic stress disorder symptom levels. The main and interaction effects of the three way ANOVA also came up with statistically non significant results. Interview results with health professionals and parents of participants showed the absence of counseling services in the three hospitals. Recommendations and implications of the study are indicated.

CHAPTER ONE

INTRODUCTION

1.1 Background

A growing body of researchers and psychologists support the problemfullness of childhood period. Some like Hurlock considered the whole childhood period as "troublesome age", others take the first four years as their basic concern. But most researchers in the area have one thing in common. They agree that this period is very much vulnerable to various accidents (Hurlock, 1953; Brain & Martin, 1989).

In the world as a whole, accidents rank fifth among the leading causes of death. According to WHO (2001) estimate, accidents were responsible in 1980 for 2,665,000 deaths, that is 5.2% of the total mortality. These accidents occur everywhere not only in the roads but also in the homes, at school, on playground and sport fields, in the factory, in the work shops, not only in industrialized countries but also in developing ones. The problem of accident is severe. On average in the industrialized countries, and also in many developing countries, one hospital bed in ten is occupied by an accident victim for which it is necessary to call upon the health services at some level (WHO, 2001).

Accidents are a frequent problem, although our knowledge of their frequency is poor and biased. They have potentially serious consequences in terms of mortality, morbidity and disabling results. In the developing countries, accidents are perhaps just as common, and their consequences are often more serious.

Research focusing on adult accidents has consistently shown high rates of psychological morbidity, particularly mood disorders, emotional distress, and anxiety (Mayou, Bryant & Duthie, 1993). Although there have been few systematic researches into the psychological effects of accidents on children, there is increasing recognition that they too will be affected (DiGallo & Parry, 1996).

Parental reports indicate that most children display emotional distress immediately after an accident, although this distress is short- lived and comparatively mild. Questionnaires completed by children indicate that they experience higher levels of emotional distress. This distress can persist for several months, although the emotional needs of these children are rarely recognized and seldom receiving any ongoing planned intervention (Child Accident Prevention Trust, 1996).

Reports from major accidents indicate that children display considerable psychological reactions and in many cases present with a range of symptoms characteristic of Posttraumatic Stress Disorder symptoms (Stallard & Law, 1993; Frommberger & et.al., 1998).

To the best of his knowledge, the present researcher could not find research works in Ethiopia concerning accident related psychological problems on children. This study basically aims at bridging this gap.

1.2. Objectives

1.2.1. General Objective

The general objective of this research is to study accident related psychological problems of children at three selected hospitals in Addis Ababa.

1.2.2 Specific Objectives

The research aims at:

- Finding out if childhood accidents are related with their level of anxiety.
- Investigating whether or not children with accidents show emotional distress.
- Exploring whether or not children with accidents show Posttraumatic stress disorder symptoms.
- Investigating the psychological services rendered for children with accidents.
- Investigating the psychological services rendered for parents of children.
- Examining if there are accident type differences in exposure to psychological problems (Anxiety, Emotional Distress and Posttraumatic Stress Disorder Symptoms).
- Examining if there are age differences in exposure to psychological problems (Anxiety, Emotional Distress and Posttraumatic Stress Disorder Symptoms).
- Exploring if there are sex differences in exposure to psychological problems (Anxiety, Emotional Distress and Posttraumatic Stress Disorder Symptoms).

- Forwarding recommendations for minimizing accident related psychological problems (Anxiety, Emotional Distress and Posttraumatic Stress Disorder Symptoms).

1.3. Statement of the Problem

This study aims at answering the following questions:

- Do children with accidents show anxiety?
- Do children with accidents show emotional distress?
- Do children with accidents show Posttraumatic Stress Disorder symptoms?
- Is there any psychological service rendered for children with accidents?
- Is there any psychological service rendered for parents of children participants?
- Are there accident type differences in exposure to the psychological problems (Anxiety, Emotional Distress and Posttraumatic Stress Disorder Symptoms)?
- Are there age differences in exposure to the psychological problems (Anxiety, Emotional Distress and Posttraumatic Stress Disorder Symptoms)?
- Are there sex differences in exposure to psychological problems (Anxiety, Emotional Distress and Posttraumatic Stress Disorder Symptoms)?

1.4. Significance of the Study

The present researcher hopes that the study is helpful in the following ways:

- It enables to explore the relationship that exists between childhood accident and psychological problems.
- It helps to assess the psychological services rendered and improvements to be made.
- Since little has been done concerning this problem in Ethiopia, this study can be a stepping – stone for further research.

1.5. Delimitation and Limitations

The study is delimited at three public hospitals in Addis Ababa. These three hospitals (Black Lion, Tor Hayloch and Yekatit 12), are selected because they have a relatively well organized Pediatrics Department working intensively on children with accidents.

The study also had some limitations. First, although drawn from the three hospitals the sample size was small. Besides, because parents were used as informants concerning the psychological problems of their children, there may be some gap in understanding and expressing t' e feelings of their children. Getting equal number of children participants for each accident types was also another problem encountered in the study.

1.6. Operational Definition of Terms

Accident–Potentially harmful, unexpected, unintended and abrupt occurrences affecting a child which may or may not produce physical injuries and which leads to medical consultation (Manciaux & Romer, 1991).

Accident Type-the classification of accidents used in this study are those outlined by Brain and Martin (1989). These classifications are: C1 = Burning C2 = Car C3 = Falling C4 =Hitting C5=Poisoning C6=Fracture and Cutting C7 = Others (Fighting, Firing, motor vehicle...)

Early Childhood – in this study refers to children of age 3 -6 years (Mussen, 1996).

Middle Childhood—refers to children of age 7-12 years (Mussen, 1996).

Psychological problems – in this study refers to:

- **Emotional distress**- refers to disorders characterized by extremes of mood and emotional problems as measured by Pediatrics Emotional Distress Scale .
- **Anxiety-** the autonomic response pattern that is characteristically part of the person's response to a certain noxious stimulation as measured by the Revised Children's Manifest Anxiety Scale.
- **Posttraumatic stress disorder symptom-** a disorder characterized by the recurrence of a particular traumatic event in the mind of the individual who experienced it, a numbness or lack of responsiveness to external stimuli, and two or more symptoms associated with depression and anxiety, such as, sleep disturbances, low threshold for startling, impairment of memory and guilty about being participated in the event as measured by the Child Posttraumatic Stress Disorder Symptom Scale.

CHAPTER TWO

2. REVIEW OF THE RELATED LITERATURE

This part of the study aims at shading light on previously done researches. Special focuses are given to relate the review with the research questions raised.

As it is indicated in the operational definition part, accident in this study refers to unintended, abrupt occurrences affecting a child and that may or may not produce physical injuries (Manciaux & Romer, 1991). Different accidents occur worldwide every single minute. And in most cases accidents and injuries are among the major causes for the death of children (http://www.Scotland.gov.uk/cru/kdol/blue/r-acc10htm, Dec 23, 2004). In the world as a whole accidents rank fifth among the leading causes of death (Manciaux & Romer, 1991). It is also indicated that on average in industrialized countries, and also in many developing countries, one hospital bed in ten is occupied by an accident victim.

A large number of researchers in the area of child development have agreed that accidents tend to cause different psychological problems in addition to the physical, moral, social and economical ones (Manciaux & Romer, 1991). These psychological problems are organized and presented below.

2.1. Review on Accident Related Psychological Problems

2.1.1. Childhood Accidents and Emotional Distress

DiGallo, Barton and Parry (1997) conducted a study to investigate the psychological consequence of accidents on children. To meet their objectives, a prospective study was made of young accident victimed children. 57 participants, aged 5 – 18 years, who had been injured in accidents, were interviewed 2-16 days post-accident and re-examined

after 12-15 weeks. The results indicated that post- accident stress symptoms occurred at both times. There was a decrease of symptom severity between the two interviews, but at the later time, 14% still suffered from moderate to severe Posttraumatic stress disorder symptoms, 17% from serious phobia and mood disturbances compared with the pre- accident period. High level of emotional distress was also observed after the accidents.

Waggoner and et. al. (2005) findings also tend to support the findings of the previous research. The researchers examined the behavioral and emotional problems among children (aged 2.5-18 years) with burn injuries using the Behavioral Assessment System for Children with reference to the pediatric patient's behavioral functioning before hospital admission for a burn injury. In total, data were collected on 94 children and results suggested that a substantial portion of the samples endorsed significantly elevated levels of behavioral difficulties across the broad range of problem behaviors. On the basis of parental report preschool children exhibited hyperactivity, anxiety, aggression and attention problems, where as school aged children were reported to have the above problems as well as depression and conduct problems.

The psychiatric consequences of accidents were also investigated by Mayou, Bryant and Duthie (1993]. Follow up study of road and other multiple accident victims for upto one year was done at the Emergency Department of the John Radcliffe Hospital, Oxford. 188 consecutive road accident victims aged 10 and above with multiple injures have been selected for the study. The result indicated the presence of acute disorder, moderately severe emotional distress on children following accidents.

Stuber and et. al.(2005) did a ten – years research review of physical injures and psychiatric injuries related to it. A literature search of databases for "wounds and injures, excluding head injuries" was done with Medline and PSCINFO, yielding 589 and 299 citations, respectively. Further searching identified additional studies. Results indicated that the emotional and behavioral effects of injuries contribute to morbidity and mortality. Emotional disturbances, different phobias, substance abuse, disruptive behaviors and stress were common problems following or shortly after the accidents.

2.1.2. Childhood Accidents and Anxiety

A prospective study was conducted by Frommberger and et. al. (1998) to find out if childhood accidents are related with psychological problems. 179 unselected, consecutively admitted road traffic accident victims were assessed a few days after the accident for psychiatric diagnoses, severity of injury and psychopathology. All were inpatients and had to be treated for bone fractures. At 6 – months follow up assessment 152(85%) of the patients were interviewed again. The results indicated that victimed children showed more symptoms of anxiety a few days after the accident.

Similarly Mayou, Bryant and Duthie (1993] reported the presence of anxiety following accidents. A follow up study of road and other multiple accident victims for up to one year was done on 188 consecutive road accident victims aged 10 and above with multiple injures. The instruments measure the present state examination "caseness" post-traumatic stress disorder and anxiety. Anxiety was common following the accident but improved over the 12 months.

Stoddard and et.al.(2006) did a three year study of burned children to assess acute traumatic stress outcomes. Their aims were to assess the prevalence of acute traumatic stress symptoms and develop a model of

risk factors for these symptoms in these children. Acute stress symptoms were measured using the Posttraumatic stress disorder symptoms semi-structured Interview and observational record for young children. Of the 64 participants meeting the inclusion criteria, 30% of these children had acute stress symptoms. A high percentage of acute stress symptoms were identified in young children with burns.

In a ten – years research review of physical injures and psychiatric injuries related to it Stuber and et. al.(2005) found that emotional and behavioral effects of injuries contribute to morbidity and mortality. Post – traumatic stress disorder, depression, emotional disturbances, anxiety, different phobias, substance abuse, disruptive behaviors and stress are the common problems following or shortly after the accidents.

2.1.3. Childhood Accidents and Posttraumatic Stress Disorder Symptoms

In a study by Sturms and et.al.(2005), childhood accidents cause series health problems and Posttraumatic Stress Disorder Symptoms. In this study the researchers examined childrens' reports of their Health Related Quality of Life (HRQoL] following pediatrics traffic injury and for this purpose 51 young traffic injury victims aged 8 – 15 years were selected and studied at the hospital. Children quality of Life questionnaire and the Impact of event scale were employed to measure the impact of accident. Assessments were done shortly after the injury, three months and six months post injury. The result indicated that short-term adverse changes in the child's HRQoL were observed for the child's motor functioning. Shortly after the accident 12% of the children reported serious post- traumatic stress disorder symptoms.

Similarly, Frommberger and et. al. (1998) also strengthens the findings of the previous researchers. In a prospective study 179 unselected, consecutively admitted road traffic accident victims were assessed a few days after the accident for psychiatric diagnoses, severity of injury and psychopathology. All were inpatients and had to be treated for bone fractures. At 6 – months follow up assessment 152(85%) of the patients were interviewed again. Of the victims, 18.4% fulfilled the criteria for Posttraumatic Stress Disorder (DSM – III-R) with in six months after the accident.

The psychiatric consequences of accidents were also investigated by Mayou, and Duthie (1993]. Follow up study of road and other multiple accident victims for up to one year was done at the Emergency Department of the John Radcliffe Hospital, Oxford on 188 consecutive road accident victims with multiple injures. The result indicated the presence of specific post- traumatic stress disorder symptoms.

Another study worth mentioning at this point is the findings of Stallard and et. al. (1998). In a prospective study of post – traumatic stress disorder in children involved in road traffic accidents, the researchers want to check the prevalence of psychological trauma- that is, post-traumatic stress disorder symptoms in children involved in every day road traffic accidents. They designed a 12 month prospective study at the Accident and Emergency Department Royal united Hospital, Bath. 119 children aged 5-18 years involved in road traffic accidents and 66 children who sustained sport injuries were participants of the study. Presences of appreciable psychological distress, fulfillment of diagnostic criteria for Posttraumatic stress disorder symptoms were used as measures. The results indicated that post- traumatic stress disorder was found in 41(34.5%) children involved in road traffic accidents but only 2 (3%) who sustained sport injuries. And finally they concluded that one in

in road traffic accident. The results disclosed that the presence of psychological trauma was significantly associated with sex. Similar comparison done by Devries and et. al. (1999) indicated that the sex of the child (girls reporting more symptom than boys) predicted Posttraumatic Stress Disorder Symptoms.

In a similar study aimed at identifying gender differences in developing psychological problems, it was found that girls were more likely to develop the psychological trauma than men (Winje & Ulvik , 1998). Mirza and et.al. (1998) collected information from 119 participants using interview and semi structured research instrument to see if there exists gender difference in experiencing psychological trauma. Potential cases and their parent(s) were interviewed about six weeks and six months after the accident. The results show that being female was associated with developing post- traumatic stress disorder and anxiety.

Still, Carol and et. al. (2000) had found that girls were more vulnerable to develop specific recxperiencing symptoms of intense feelings of emotional distress than boys. Further, Blanchard, Heckling and Taylor (1995) and Ursano and et. al.(1999) also indicated that women are at greatest risk of developing motor vehicle accident related Posttraumatic stress disorder symptoms than men.

Inconsistent and even more differing results were reported regarding gender differences in exposure to the psychological problems. Carol and et. al.(2000), conducted a survey on 122 participants who had been in a serious motor vehicle accidents. They assessed the presence of Posttraumatic stress disorder symptoms using structured clinical Interview for DSM-III-R and the Posttraumatic Dissociative- Rater version one month after the accident. In the study, they controlled the type of trauma by examining only motor vehicle accidents. They also used

standardized clinical assessments to strengthen the methodological quality of the study. The results indicated that women did not differ from men in meeting the overall reexperiencing criterion for a diagnosis of Posttraumatic stress disorder symptoms. But women were 4.7 times more likely than men to meet the overall avoidance criterion and 3.8 times more likely to meet the overall arousal criterion. Winston and et.al. (2003) assessed the trends in experiencing the psychological problems between the two sexes using a chi-square test. A prospective cohort study was conducted on traffic injured children, who were between 5 to 17 years of age and admitted to the hospital for treatment of injuries from traffic injuries. Chi- square analyses reveled no significant association between the child gender and the psychological problems experienced.

The last but not the least finding that is worthwhile to mention is the study by Landolt and et. al. (2005). In their study, the researchers tried to investigate the predictors of Posttraumatic Stress Disorder Symptoms (PTSS) after road traffic accidents. Sixty- eight children (6.5 -14.5 years old) were interviewed 4-6 weeks and 12 months after the accident with the child PTSD Reaction Index. Results indicated that the sex of the child did not significantly contribute to the child post- traumatic stress disorder at follow up.

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3.3.2. Independent Variables

Children Gender Two Levels a_1 = males

a_2 = Females

As a controversial issue some findings report sex to be the most important factor (Stallard & et al, 1998; Devries & et al, 1999) and others failing to replicate (Carol & et al, 2000; Winston FK & et al, 2002). As a result, sex has raised wide interest among behavioral scientists. Therefore, it was thought that its inclusion in the study as a variable could give clue to our problem.

Children Age Two levels b_1= Early Childhood (3-6)

b_2=Middle Childhood (7- 12)

Researchers came up with different findings concerning the age of the child and the level of psychological problems manifested. Stoddard and et. al. (2006), for instance found out that younger children showed more severe psychological problems. For others, the age of the child is not a significant factor Winje and Ulvik (1998). It is thus worthwhile to include the variable and see its effect.

Accident Types Seven levels

c_1= Burning c_2= Car c_3= Hitting

c_4= Falling c_5= Poisoning c_6= Cutting & Fracture

c_7= Others

Some researchers noted that accident type differences have brought a significance difference in experiencing psychological problems immediately and shortly following accidents (Mayou, Bryant & Duthie, 1993]. Others like Stallard and et. al.(2004), however, came up with different findings. Their results showed that the type of accident was not related to the development of psychological problems. Hence the importance of including accident type, in this study, as an independent variable would be unquestionable.

3.4. Instruments

To get the desired information regarding psychological problems of children with accidents the following instruments were used.

3.4.1. Scale

3.4.1.1. Scale of Anxiety

In order to measure anxiety level of children with accidents, the revised children's Manifest Anxiety Scale (RCMAS) was used. The RCMAS is a self report inventory used to measure anxiety in children, for clinical, educational setting and research purpose (Gerard & Reynolds, 1999).

The items of RCMAS is purported to embody a feeling of action that reflects an aspect of anxiety. RCMAS consists 9 lie (social desirability) items. It is relatively brief instrument, which has been subjected to extensive study to ensure that it is psychometrically sound (see Appendix 1).

Split – Half /Cronbach's Alpha

Reynolds and Richmond (1978) reported a KR20 reliability estimate of .83 for the RCMAS.

Test – Retest Reliability

Wisniewski, Molick, Genshaft and Coury (1987) examined the test – retest reliabilities of the RCMAS with 161 children. Analyses of retesting after method of principal factors, which identified a large general factor on which substantial loadings were found for all the Anxiety scale items but no loadings above .21 for the lie scale items. This would lend support to the RCMAS being a measure of one construct, anxiety.

Convergent or Concurrent Validity

Reynolds (1982) found large positive correlations between the RCMAS and the trait measure of anxiety, the State – Trait Anxiety Inventory for Children (STAIC). Reynolds (1985) found that the RCMAS levels correlated highly with a Traits Anxiety Scale ($r = .78$, $p < .001$). This would lend support for the convergent validity of the RCMAS.

3.4.1.2. The Child Posttraumatic Stress Disorder Symptoms Scale

A variety of circumstances call for assessment of pediatrics Posttraumatic Stress Disorder Symptoms (PTSD), including children who are at risk for developing PTSD after exposure to accidents. Several instruments for evaluating pediatric PTSD have been developed, including self- report measures, clinical interviews and structured diagnostics interviews (See Appendix 2). The most widely used measure of trauma – related symptoms is the child post- Traumatic Stress Disorder Index (CPTSD – RI) (Fredrick, 1985; Frederick, Pynoos, & Nader, 1992; Pynoos &et. al., 1987). The CPTSD_ RI has been used with a wide variety of traumatized children including victims of violence (Realmuto & et. al., 1992) natural disaster (Goenjian & et. al.; 1995; Greea, Silverman, vernberg & prinstein 1996, Neder & Pyroos, 1993), Sniper attack at school (Nader, Pynoos, fairbanks & Nader & Frederick, 1990).

Internal Consistency

The total symptom level of the CPSS demonstrated high internal consistency. The coefficient alpha was .89 for the total level. Item analyses did not reveal any item whose exclusion would increase the internal consistency (Foa & et al, 2001). The inter correlations among the items ranged from .70 to .89

Test – retest Reliability

The test- retest reliability coefficient of the total level was .84 (Foa & et al, 2001).

Convergent validity of the CPSS symptom severity Level

The convergent validity of the total scale level was assessed by comparing with the severity rating obtained from the CPTSD- RI. The person product – moment correlation coefficient was .80 (P< .001) (Foa & et al, 2001).

3.4.1.3. Pediatrics Emotional Distress Scale /PEDS/

Overview

The pediatric emotional distress scale /PEDS/ can be used to rapidly evaluate the behavior of a child who has experienced accident. It consists item on general behavior and specific events of the accident. (See Appendix 3).

Reliability

The overall alpha coefficient for PTSD symptoms was 0.85. The test-retest reliability at 6 weeks ranged form 0.55 to .61 (saylor, 1999).

3.4.2. Semi - structured Interviews

3.4.2.1. Semi- structured Interview for Parents

A semi – structured interview was developed for parents of children participants to find out the kind of services provided. Parents were asked to comment on the medical and psychological services given for the children after accidents. The questions were prepared by the researcher in the way to fit the objectives of the study and only informations needed for analysis were collected and used (See Appendix 4).

3.4.2.2. Semi-structured Interview for Health Assistants

Semi – structured interview was also developed for health professionals to comment on the medical and psychological services rendered at the hospitals. The information gathered through this questionnaire helped to further check the responses given by parents. And it also helped as a mean to crosscheck the responses given by both parties (See Appendix 5).

3.5. Pilot Testing

The three scales were pilot tested on 30 children from the three hospitals. The children who took part in the piloting were selected through purposive sampling method. Children who were victims of different accidents were selected and pilot tested.

The purpose of the pilot study was to collect data that would be used for screening items measuring the level of anxiety, emotional distress and Posttraumatic Stress Disorder symptoms (PTSD). It was also to find out if the wording, instruction and response categories of the instrument as a whole were clear and comprehensible to respondents. Face – to – face contacts with parents was done and respondents were asked to comment on any ambiguous word, phrase or sentence. The present researcher also noted respondents' levels of understanding the question while reading and questions who were frequently asked for further clarifications were improved. Finally, the responses of the pilot group were subjected to item analysis. Correlation of items with the overall total was computed and the results of the item analyses are presented below in a summary form.

Different people proposed different index value as a criterion values for judging whether the item is valid or not. For instance, Garret & wood worth (1967) have suggested that as a general rule, items with validity indices (DI) of 0.20 or more are regarded as satisfactory. Macintosh &

Morrison (1969) argue that to be considered satisfactory, the correlation of an item with the overall total should at least be 0.40. But Ebee (1986) takes a mid position that is, .30. In the present study therefore, the criterion value for the discrimination index was set as r = .20. And items with correlation coefficient of 0.20-0.29 were used by making modifications. The item- total correlation for each the scales are given (see Appendix 6).

Reliability of the instruments was assessed by Chronbach alpha using the data collected during the pilot survey. The computation yielded reliability coefficient of 0.865, 0.927, 0.930 and 0.748 for Anxiety Scale, Emotional Distress Scale, Posttraumatic Stress Disorder Symptom Scale Part A and Posttraumatic Stress Disorder Symptom Scale Part B respectively. The above coefficients of reliability clearly show that the instruments seem to be highly reliable. Furthermore, there were lie scales used to determine the internal consistency of the responses. In additional to the lie scale, the same question was asked twice but phrased differently in the questionnaire to determine the internal consistency of responses. The present researcher checked the consistency of the responses while interviewing parents.

3.6. Procedure of Date Collection

After the scales were improved and the necessary changes have been made, the final survey was carried out from March 17 to April 30 in the selected three hospitals.

Almost similar procedures were followed in the selected three hospitals while conducting the final survey. And the procedures used to select Parents of children participants were stated below.

- Getting a permission letter from the head, representative, unit leaders or available doctors, nurses.
- Finding volunteer nurses/health professionals to help the researcher in the process of obtaining the target samples
- Selecting samples using purposive sampling method
- Getting participants and introducing the researcher and the purpose of the research
- Obtaining verbal informed consent so as to assure that they are willing to participate in the study
- Selecting a comfortable place
- Conducting the interview with parents of children participants
- Restating questions that were not clear or difficult to understand
- The three scales took 25-30 minutes on average.
- Finally, making sure that all the questions are answered and give thanks.

3.7. Method of Data Analysis

- Analysis of Variance
- Correlations
- Percentages
- Qualitative descriptions were used to analyze the collected data.

CHAPTER FOUR

RESULTS

The major objective of the present study was to examine accident related psychological problems (anxiety level, emotional distress and Posttraumatic stress disorder symptoms) on children at three selected hospitals in Addis Ababa. This study also tried at investigating whether children level of psychological problems differ as a function of sex, age and accident types.

In order to properly meet the above objectives, the collected data on both the dependent and independent variables were presented based on the specific research questions raised in chapter one.

4.1. Participants' Characteristics

Table 2. Demographic Characteristics of participants

Children Participants				Parent of children participants		Health Professionals			
Age		Sex		Age		Age		Sex	
3-6	7-12	M	F	18-35	>35	18-35	>35	M	F
54	46	55	45	63	37	12	8	9	11

As can be read from table 2 above, out of the total children participants(N=100), 55 (55%)participants were males while 45(45%) were females. 54% of the children participants were in the early childhood period (3-6years) while 46% were in the middle childhood period (7-12 years).

Table 3. Mean and Standard Deviation of the Independent Variables with respect to Anxiety Level

Manifested Anxiety Level			
		Mean	SD
Age	a1	18.09	4.13
	a2	16.50	3.64
Sex	b1	17.96	3.97
	b2	15.67	3.83
Accident Types	C1	18.22	2.62
	C2	19.00	1.67
	C3	18.56	5.45
	C4	17.33	4.85
	C5	16.83	3.93
	C6	19.40	3.18
	C7	17.62	4.35

The result from the above table indicates the mean and standard deviation levels by taking anxiety level as dependent and sex, age and accident types as independent variables. The finding indicated that the mean level of boys was 17.96 while girls had a mean level of 15.67. Children participants who were from 3-6 years had 18.09 mean level of anxiety as compared with 16.50 mean value of children who were 7-12 years.

Table 4. Mean and Standard Deviation of the Independent Variables with respect to the Pediatrics Emotional Distress Level

Pediatrics Emotional Distress Level			
		Mean	SD
Age	a1	63.26	12.56
	a2	61.48	12.56
Sex	b1	60.95	13.44
	b2	65.29	10.94
Accident Types	C1	63.39	10.49
	C2	64.09	8.10
	C3	61.81	14.10
	C4	60.47	13.96
	C5	68.58	4.68
	C6	59.00	16.25
	C7	64.62	14.41

One can read the mean and standard deviation levels from table 4 above by taking the pediatrics emotional distress level as dependent and sex, age and accident types as independent variables. The result shows that the mean level of boys was 60.95 while girls had a mean level of 65.29. Participants who were in the early childhood period had a mean level of 63.26. Children who were from 7 – 12 years had a mean value of 61.48.

Table 5. Mean and Standard Deviation of the Independent Variables with Respect to the Posttraumatic Stress Disorder Symptom Level

Posttraumatic Stress Disorder Symptom Level			
		Mean	SD
Age	a1	35.15	6.88
	a2	37.14	9.13
Sex	b1	36.25	8.72
	b2	38.51	6.80
Accident Types	C1	37.83	6.19
	C2	36.18	4.92
	C3	38.38	10.12
	C4	35.47	9.78
	C5	38.38	5.53
	C6	35.73	8.35
	C7	36.77	9.36

Table 5 above shows that girls have higher mean value (38.51) than men (36.25) in the Posttraumatic Stress Disorder Symptom levels. One can also read from the same table that the mean value of children who were from 3-6 years (35.15) was greater than those who were from7-12 (37.14).

Whereby a = childrens' age

al = 3-6 ages a2 = 7-12 ages

b = Childrens' sex

b1 = Male b2 = Female

C= Accident Types

C1 = Burning C2 = Car C3 = Falling C4 =Hitting

C5= Poisoning C 6 = Fracture & cutting C7 = Others

4.2. Prevalence of Psychological Problems on Children

4.2.1. Anxiety

The first research question was "Do children with accidents show anxiety?" In order to answer this research question, frequency distribution was done.

Table 6. Anxiety Level of Children after Accidents

Anxiety level	Frequency	Percentage
Below 16	25	25
Above 16	75	75

As can be seen in table 6 above, 75% of the participants showed clinically significant level of anxiety (above 16) and 25% participants showed clinically non significant level of anxiety (below 16).

4.2.2. Pediatrics Emotional Distress

The second research question was to explore if children show emotional distress following accidents. Table 7 below gives a summary of the results.

Table 7. Pediatrics Emotional Distress Level of Children after Accidents

Emotional Distress Level	Frequency	Percentage
Less than 28	2	2
More than 28	98	98

As shown in table 7 , 98% of the participants showed clinically significant level of emotional distress (above 28) following accidents. Only 2% of the participants showed clinically non significant level of emotional distress (below 28) following accidents.

4.2.3. Posttraumatic Stress Disorder Symptoms

In order to check whether or not children following accidents show Posttraumatic Stress Disorder Symptoms, frequency table is presented below.

Table 8. Posttraumatic Stress Disorder Symptoms Level of Children after Accidents

Posttraumatic Stress Disorder Symptoms level	Frequency	Percentage
12-24 (mild)	5	5
25-39 (moderate)	32	32
>40 (severe)	61	61

Table 8 above indicates that 61% of the participants showed Posttraumatic stress disorder symptoms in its severe form. 5% of children participants showed mild form and 32 % of respondents experienced Posttraumatic stress disorder symptom in its moderate form.

4.3. Differences in the Manifestations of Psychological Problems

Differences in the manifestation of the psychological problems (Anxiety, emotional distress and Posttraumatic Stress Disorder Symptom) have been investigated to see if it is related with other variables. The next part of the result focuses on answering research questions raised in relation to differences.

4.3.1. Differences in the Anxiety Level

Are there sex differences in exposure to anxiety?

In order to answer the research question, analysis of variance was examined taking anxiety level as a dependent variable and sex as an independent variable.

Table 9. Summary Table of One –way ANOVA on Childrens' Anxiety Level and Sex

Sources	Df	SS	MS	F
Between	1	12.233	12.233	
Within	98	1493.927	15.244	.802
Total	99	1506.160		

P> .05

As can be seen from table 9 above, there was no statistically significant mean difference between the male and female children in terms of anxiety manifestation.

Are there age differences in experiencing anxiety following accidents? In an attempt to answer this research question, one way analysis of variance was computed. The results are shown in Table 10 below.

Table 10. Effects of Age on the Anxiety Level

Source of variation	Df	SS	MS	F
Between	1	4.123	4.123	
Within	98	1502.037	15.327	.269
Total	99	1506.160		

P> .05

The F- ratio in table 10 indicates that the anxiety level of children following accidents was the same in all the age groups.

Are there accident type differences in exposure to anxiety? In order to find answer to the above research question, the means were compared and results are presented in table 11 below.

Table 11. Summary Table of One-way ANOVA on Childrens' Anxiety Level and Accident Types

Source of Variance	Df	SS	MS	F
Between	6	47.434	7.906	
Within	93	1458.726	15.685	.504
Total	99	1506.160		

p>.05

As shown in table 11 above, the results indicated that there was no statistically significant mean difference among the different accident types victims in manifesting anxiety.

4.3.2. Differences in the Pediatrics Emotional Distress Level

In order to seek answer for the research question "Are there sex difference in exposure to Pediatrics emotional distress level?" analysis of variance was carried out taking emotional distress level as a dependent variable and sex as an independent variable.

Table 12. Summary Table of One – way ANOVA on Childrens' Emotional Distress Level and Sex

Source of variance	Df	SS	MS	F
Between	1	466.919	466.919	3.047
Within	98	15018.081	153.245	
Total	99	15485.00		

P> .05

As table 12 shows, the sex of children participants did not brought statistically significant mean difference on the amount of emotional distress level..

One of the research questions raised in the statement of the problem was, are there age differences in exposure to emotional distress levels of children following accidents? Thus, to see whether age differences bring variation in the emotional distress level, one way ANOVA was made and result are described in table 13 below.

Table 13. Summary Table of One – way ANOVA on Childrens' Emotional Distress Level and Age

Source of Variance	Df	SS	MS	F
Between	1	15.151	15.151	.096
Within	98	15469.849	157.856	
Total	99	15485.000		

P< .05

The above table indicates that the overall differences between the means are not statistically significant. It means that children who were from different age groups show similar levels of emotional distress.

Are there accident type differences in experiencing emotional distress on children following accidents? To answer the above research question analysis of variance was performed and presented below.

Table 14. Summary Table of One –Way ANOVA on Childrens' Emotional Distress Level and Accident Types

Source of Variance	Df	SS	MS	F
Between	6	781.649	130.275	
within	93	14703.351	158.101	.824
Total	99	15485.000		

P>.05

The above table shows that there was no statistically significant difference between childrens' emotional distress levels across the different accident types.

4.3.3. Differences in the Posttraumatic Stress Disorder Symptoms Level

One way ANOVA was computed to see if there are sex differences in experiencing Posttraumatic Stress Disorder Symptoms. The results are described in table 15 below.

Table 15. Summary Table of One – way ANOVA on Childrens' Posttraumatic Stress Disorder Symptoms Level and Sex

Source of Variance	Df	SS	MS	F
Between	1	126.029	126.029	.159
Within	98	6137.681	62.629	
Total	99	6263.710		

P>.05

As one can read from the above table, there exists no statistically significant mean difference in manifesting Posttraumatic stress disorder symptoms as a result of sex.

Are there age differences in exposure to Posttraumatic stress disorder symptoms following accidents? In an attempt to answer this research question, one way analysis of variance was computed. The results are shown below.

Table 16. Summary Table of One- way ANOVA on Children's Posttraumatic Stress Disorder Symptoms Level and Age

Source of Variance	Df	SS	MS	F
Between	1	1.743	1.743	.027
within	98	6261.967	63.898	
Total	99	6263.710		

P> 0.05

It can be seen from table 16 above that the overall differences between the means are not statistically significant. It means that children who were from different age groups show similar levels of posttraumatic stress disorder symptoms.

Are there accident type differences in exposure to the Posttraumatic stress disorder symptom levels of children? In order to find answer to the above research question, the means were compared and results are presented in table 17 below.

Table 17. Summary Table of One – way ANOVA on Childrens' Posttraumatic Stress Disorder Symptom Level and Accident Types

Source of Variance	Df	SS	MS	F
Between	6	132.183	22.030	
within	93	6131.527	65.930	.334
Total	99	6263.710		

P> 0.05

As shown in the above table, childrens' Posttraumatic Stress Disorder Symptom level did not have statistically significant mean differences when computed with accident types.

4.4. Psychological Service Given for Children and Parents after Accidents

In this part information gathered through interview concerning the psychological services given for children and parents are presented. The data obtained from the parents of participants and health professionals working at the three hospitals are explained separately.

4.4.1. Response of Parents of Children Participants

In order to answer the research question, is there any psychological service given for victimed children following accidents? Interviews were carried out with parents of participants and the results indicated that none of the parents of participants indicated the availability of counseling services in the three hospitals. The respondents also indicated that participants were showing different psychological problems (eg. sleep disturbances, lack of concentration, hostility, inferiority feeling...) and these problems needs to get attention and treated.

4.4.2. Response of Health Professionals

To explore the psychological services rendered in the three hospitals, semi- structured interviews were carried out with health professionals in the three hospitals. Consequently, none of the health professionals in the three hospitals indicated the availability of counseling services for victimed children and their parents. But all the health professionals indicated that, the service is of great importance and need to be established and well organized.

4.5. The Relations among Anxiety, Emotional Distress and Posttraumatic Stress Symptom Levels

In order to see the relationships among the three dependent variables (anxiety, emotional distress and Posttraumatic Stress disorder) Pearsons' product moment coefficient correlations were computed. Table 18 below gives summary of correlations among the levels of anxiety, emotional distress and posttraumatic symptoms following accidents on children.

Table 18. Correlations among the three Dependent Variables (Anxiety, Emotional Distress and Posttraumatic Stress Disorder symptoms)

psychological Problems	Anxiety	Emotional Distress
Anxiety	1	
Emotional distress	.489**	1
Posttraumatic Stress Disorder Symptom	.674**	. 691**

**** Correlation is significant at the 0.01 level (2 tailed)**

As the above table indicates there is a significance correlation at alpha =0.01 level (2 tailed) among the three dependent variables (anxiety, emotional distress and Posttraumatic stress disorder symptoms levels). One can also see that, there are positive and direct relationships among the variables (Anxiety, Emotional Distress and Posttraumatic Stress Disorder symptoms).

CHAPTER FIVE

DISCUSSION

The results mentioned in the previous chapter are discussed in relation to past researches.

5.1 Prevalence of Psychological Problems following Accidents on Children

5.1.1 Anxiety

One of the specific objectives of the present study was to examine if children show anxiety following accidents. And the result indicates that 75% children with accidents showed clinically significant level of anxiety. It means that children following accidents show higher levels of anxiety and this finding is consistent with many previous researches. For instance, Frommberger and et. al. (1998) reported that victims of road traffic accidents showed more symptoms of anxiety a few days after the accidents.

Waggoner and et. al. (2005) also found that children with burn- accident (injuries) exhibited higher level of anxiety. Still Mayou, Bryant and Duthie (1993) also investigated that children showed anxiety following accidents. In a ten – years research review conducted by stuber and et. al. (2005), children indicated anxiety shortly after the accident. It is thus advantageous to know that victimed children following accidents experience anxiety and this will help to design appropriate services needed to minimize the psychological problems under investigation. The anxiety children experienced after accidents may be the result of unexpected and horrible physical changes they might overcome after the accidents.

5.1.2. Pediatrics Emotional Distress

As shown in the result section, 98% of the targeted children showed higher emotional distress level. This indicates that victimed children following accidents show higher level of emotional distress. Most researches are inline with the above finding. A study by Barton and parry (1997) reported the presence of mood disturbances and higher level of emotional distress following accidents on children. The researchers compared the level of distress before and after the accidents and found out that there were series mood disturbances and higher level of emotional distress following accidents on children as compared with the pre- accident period.

Mayou, Bryant and Duthie (1993) also came up with similar findings. The change in the emotional distress level on children following accidents was manifested shortly after accidents. And these findings are indicative that the need for professional counseling services following accidents seems to be required to bring children to their normal emotional level.

5.1.3. Posttraumatic Stress Disorder Symptoms

The present study indicates that, 5% of children showed mild symptoms of Posttraumatic stress disorder, 32% moderate symptoms and 61% severe symptoms of PTSD. According to the present result, Posttraumatic Stress Disorder Symptoms were common following accidents on children. This finding is inline with some other past findings of Sturms and et. al. (2005), Formmberger and et. al. (1998), Digallo, Barton and Parry (1997), Mayou, Bryant and Duthie (1993), Stoddard and et. al. (2006), Stallard and et. al. (1998). Some children fulfilled the Posttraumatic stress Disorder (DMS –III-R) after a certain months, while others a few days after the accident. Some fulfilled the whole criteria while others partially. But it is possible to conclude from the above finding and previous researches and say most children are at risk of showing symptoms of PTSD following accidents.

5.2. Differences in the Manifestation of Psychological Problems

In the present study an attempt was made to explore if there exist differences in experiencing the psychological problems (anxiety, emotional distress and Posttraumatic Stress Disorder Symptoms) as a function of the three independent variables (age, sex and accident types). The results and discussions are presented below.

5.2.1. Differences in the Anxiety Level

5.2.1.1. Sex

The result of the present study indicates that there were no statistically significant sex differences in experiencing anxiety. The result shows that victimed children irrespective of their difference in sexes seem to experience similar level of anxiety. This result goes inline with some other past findings of Stoddard and Saye (2001) & Winston and et. al. (2002) who reported statistically non significant sex difference in exposure to anxiety. It is therefore encouraging that the psychological effects of accidents were equally manifested by all the children irrespective of sex differences. This finding is indicative that no discrimination seems to be required if there is a plan for future intervention among these groups.

The present finding is however, inconsistent with some other findings who advocates females show higher level of anxiety than do males (Winje & Ulvik, 1998; Mirza & et. al., 1998). The explanations given for the sex difference was associated with nature.

5.2.1.2. Age

It has been investigated that, there was no statistically significant age differences in experiencing anxiety following accidents in children. This shows that children following accidents show similar level of anxiety irrespective of difference in age. This goes with the result of Winje and

Ulvik (1998); Stoddard, Norman and Morphy (1989). It is therefore good to give similar emphasis for children of different age while devising treatment plans. Other finding however, found out that younger children experience higher level of anxiety than the older ones (Stoddard & et. al., 2006). The explanation given for the difference is that as the age of the child increases the ability to cope up with psychological problems also increases.

5.2.1.3. Accident Types

One of the objectives of the present study was to find out if there are accident type differences in experiencing anxiety. And the findings showed that there were no statistically significant anxiety level differences as a result of accident types. From the result, it is clear to understand that children who were victims of different accident types show non significant anxiety level differences. Findings by Winje and Ulivik, (1998); and Mayou and Bryant (2002) are parallel to the present finding. The above researchers indicate that, difference in the anxiety level may probably be the result of post- accidental variables (type and duration of treatment) than pre- accidental variables. A more comprehensive and wider study lacks in this area and it needs to be carried out by taking fair representative samples from each accident types.

5.2.2. Differences in the Pediatrics Emotional Distress Level

5.2.2.1. Sex

The finding of the present study indicates that there were no statistically significant sex differences in experiencing emotional distress. The result shows that victimed children irrespective of their difference in sexes seem to experience similar level of emotional distress. The result is consistent with some other past findings of Winston & et. al. (2002), Stoddard & Saye (2001).

Other findings pointed out that girls show higher level of emotional distress than boys (Carol & et. al., 2000). According to Carol and et. al. (2000), the difference in manifestation of emotional distress level is the result of natural than psychological factors. It is also indicated that girls are more vulnerable to develop intense emotional distress than boys. But the finding of the present study was against this result.

5.2.2.2. Age

Investigations were carried out to determine if age variation brought significant difference in exposure to emotional distress level. And the finding of the present study shows that age as an independent factor did not brought any significant difference in the emotional distress level of children. Children following accidents showed similar level of emotional distress irrespective of difference in age. This result is consistent with what other researchers found (Stallard & et. al., 1998; Winston & et. al., 2002). These researchers found out that the prevalence of emotional distress was not affected by the age children.

5.2.2.3. Accident Types

To explore whether different accident types brought variations in the emotional distress level, analysis of variance was made and the finding indicates no statistically significant differences among the seven accident types. This indicates that victimed children irrespective of the types of accidents show similar level of emotional distress. This is consistent with what Winjie and Ulvik (1998) indicated in that the type of accidents that children experienced do not provide sufficient information to identify children who are at risk of developing different psychological problems.

5.2.3. Differences in the Posttraumatic Stress Disorder Symptoms Level

5.2.3.1. Sex

Analysis of variance was made to see if there are sex differences in the manifestation of Posttraumatic stress disorder symptoms. And it was found that there were no statistically significant sex differences indicating that both sexes had similar level in the Posttraumatic stress disorder symptoms. This result is in accord with the findings of Carol and et. al. (2000), Stoddard and Saye (2001).

Other finding by Blanchard, Hecking & Taylor (1995) indicates that girls are at greatest risk of developing more Posttraumatic stress disorder symptoms than boys. These studies have specifically examined risk factors as possible explanations for the difference rates of PTSD in men and women. The difference in PTSD levels was related to the higher

frequency of major depression and anxiety disorder history among the women on these studies. The above researchers failed to keep other things constant for both sexes.

5.2.3.2. Age

Age difference in experiencing symptoms of Posttraumatic stress disorder was not found in children with accidents. This means both younger and middle children showed similar Posttraumatic stress disorder symptom levels. This is also a case in the findings of Stallard and et. al. 1998; Winston and et. al. 2002; Stoddard, Norman and Murphy (1989).

This finding however, is not supported by Stoddard and et. al. (2006) who found out that younger children show more symptoms. Deveries and et. al. (1999) found out older children showing more symptoms of PTSD. These studies have their own limitations. The participants of Deveries and et. al. (1999) for instance was screened to PTSD symptoms after one year of the accidents and the age difference might be attributed to post accidental variables.

5.2.3.3. Accident Types

According to the findings of the present study, Posttraumatic stress disorder symptoms development was not related with the types of accidents. The result from the data indicates that there was no statistically significant difference when taking Posttraumatic stress disorder symptoms levels as a dependent and accident types as independent variables. Victimed children of different accident types found to have similar symptoms of posttraumatic stress disorder. This is also supported by Stallard and et. al., 2004; Winje and Ulvik (1998) who stated that psychiatric outcomes following accidents were largely predicated by post – accident variables (treatment, length of hospitalization) than pre and accidental variables.

Researches comparing the different types of accidents with the psychological problems (anxiety, emotional distress and posttraumatic stress disorder symptoms) are lacking and needs to be encouraged.

5.3. Psychological Service given for Children and Parents after Accidents

The information obtained from the parents of children participants and health professionals working at the three hospitals regarding the psychological services rendered are discussed below.

5.3.1. Interview with Parents of Children Participants

According to the results from the interview, none of the parents of children participants indicated the availability of counseling services in the three hospitals. The respondents also showed that children participants were showing different psychological problems (eg. sleep disturbances, lack of concentration, hostility, inferiority feeling...) following accidents and these problems need to be treated and get attention.

Various psychological services are being used and proposed by different researchers. Mayou, Ehlers and Hubbs (2001) recommended cognitive restructuring and behavioral techniques for children involved in accidents. These treatments could be highly effective than simple, short lived psychological debriefing. Brett and et. al. (2002) also recommended Cognitive Behavioral Therapy approach for people who are at risk of developing Posttraumatic psychopathology.

5.3.2. Interview with Health Professionals

The results from the health professionals also confirmed that counseling services in the three hospitals were not available. In addition to this, the health professionals indicated that counseling section needs to be organized and well established.

In order to secure relevant data that help answer the set questions, the following instruments were used.

- Three scales measuring the anxiety, emotional distress and Posttraumatic stress disorder symptoms levels of children with accidents.
- Semi- structured interview with parents of victimed children participants
- Semi- structured interview with heath professionals from the three hospitals.

Data obtained from these sources were analyzed using both qualitative and quantitative methods of analysis. Data obtained from the three scales were intended to see the prevalence of the psychological problems (anxiety, emotional distress and posttraumatic stress disorder symptoms). Percentages were used to show the prevalence of the problem. Sex, age, accident type differences were analyzed using analysis of variance method. Data gathered from the two semi-structured interviews were analyzed using qualitative descriptions of the obtained responses.

The results regarding the prevalence of the psychological problems indicated that 75% victimed children showed clinically significant levels of anxiety while 98% of had clinically significant level of emotional distress level. Severe Posttraumatic stress symptom was exhibited in 61 % of children participants.

Results from the analysis of variance indicated that there were no statistically significant age, sex and accident type differences in experiencing anxiety, emotional distress and Posttraumatic stress symptom levels. This means that victimed children showed similar levels

of anxiety, emotional distress and posttraumatic stress disorder symptoms irrespective of sex, age and accident type differences. The main and interaction effects of the three way ANOVA also came up with statistically non significant results.

Interview results with the 20 selected health professionals and 100 parents of children participants showed the absence of counseling services in the three hospitals. The health professionals and parents indicated that counseling service has great importance.

6.2. Conclusions

The following are the major findings of the study:

1. Children following accidents showed anxiety, emotional distress and Posttraumatic stress disorder symptoms.
2. There was no statistically significant age difference in experiencing anxiety, emotional distress and Posttraumatic stress disorder symptoms.
3. There was no statistically significant sex difference in experiencing anxiety, emotional distress and Posttraumatic stress disorder symptoms s.
4. There were no statistically significant accident type differences in manifesting anxiety, emotional distress and Posttraumatic stress disorder symptoms.
5. There was no professional counseling service given for victimed children and their parents in the three hospitals to minimize the psychological problems.

6.3. Recommendations

Based on the findings of the study, the following recommendations are forwarded.

- Since the findings indicated that children following accidents showed anxiety, emotional distress and Posttraumatic stress disorder symptoms, so it is recommended that professional counselors need conduct early assessment and screen for anxiety, emotional distress and Posttraumatic stress disorder symptoms and refer for treatment when appropriate. Doing so will pave a way for early intervention and hence minimize the psychological problems (anxiety, emotional distress and Posttraumatic stress disorder symptoms) of children following accidents.
- The result of the present study indicated that the psychological needs of children after accidents is not given due attention. There is an urgent need for health care staff working with children involved in different accidents to be aware of the potential psychological consequences of accidents. And Psychological treatment needs to be given the same priority as screening for physical treatment. The need to raise awareness of the possible psychological consequences of accidents should be highlighted.

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APPENDICES

በአዲስ አበባ ዩኒቨርስቲ
በድህረ ምረቃ ትምህርት ቤት
የሳይኮሎጂ ትምህርት ክፍል

መመሪያ፡-

የዚህ ጥናት ዋና አላማ በልጆች ላይ በሚደርሰው አደጋ ምክንያት ሊከሰቱ የሚችሉ የስነልቦና ችግሮች ካሉ መፈተሽ ነው፡፡ ከዚህ ጥናት የሚገኘው መረጃ ችግሩን ለመቀነስ በሚደረገው ጥረት ላይ ከፍተኛ አስተዋፅኦ ይኖረዋል፡፡ መጠይቁ ሶስት ዋና ክፍሎች አሉት፡፡ የመጀመሪያው ክፍል የስሜት መረበሽን ሁለተኛው ክፍል የጭንቀት መጠንን ሶስተኛው ደግሞ የስሜትና የመንፈስ መረበሽን ይለካል፡፡ ለጥያቄዎቹ የሚሰጡት መልሶቹ በሚስጥር የሚያዙና ለጥናት አላማ ብቻ የሚውሉ ይሆናሉ፡፡ የእርሶ ግልፅ የሆነ መልስ የጥናቱን አላማ ከግብ ለማድረስ በጣም አስፈላጊ ነው፡፡

አጠቃላይ መረጃ

I ልጁን በተመለከተ

እድሜ ----------

ጾታ ----------

የትምህርት ደረጃ ----------

የአኗኗር ሁኔታ ----------

II የደረሰበትን አደጋ በተመለከተ

የአደጋው ዓይነት ----------

የአደጋው አሰቃቂነት ደረጃ ----------

አደጋው የተከሰተበት ስፍራ ----------

የተደረገለት "ዕርዳታ" ዓይነት ---------- ሕክምና / ካውንሲሊንግ

እርዳታው የቆየበት ጊዜ ----------

ተኝቶ የሚታከምበት ሆስፒታል ስም ----------

APPENDIX 1

I. የጭንቀትን መጠን መለኪያ ስኬል

ቀጥሎ የተዘረዘሩትን ጥያቄዎች ሳነብ በጥሞና በማዳመጥ አዎ ወይም አይደለም በማለት መልስ ይስጡ፡፡ የማነበው አረፍተ ነገር ለልጅዎ የሚሰራ ከሆነ አዎ የማይሰራ ከሆነ ደግሞ አይደለም በማለት ይመልሱ፡፡ ስለትብብርዎ በድጋሚ አመሰግናለሁ፡፡

1	ልጅዎ ያሰበውን/ያሰበችውን ሳይሳካለት/ላት ሲቀር ይረበሻል/ትረበሻለች	አዎ	አይደለም
2	ልጅዎ ከሰ/ሳ ይልቅ ሌሎች የሚፈልጉትን ሥራዎች በቀላሉ የሚሰሩ ይመስለዋል/ይመስላታል	አዎ	አይደለም
3	ልጅዎ ብዙ ጊዜ የአተነፋፈስ ችግር ያጋጥመዋል/ያጋጥማታል	አዎ	አይደለም
4	ልጅዎ ብዙ ጊዜ ይጨነቃል/ ትጨነቃለች	አዎ	አይደለም
5	ልጅዎ ሁል ጊዜ ሩህሩህ ነው/ ናት	አዎ	አይደለም
6	ልጅዎ በቀላሉ ይበሳጫል /ትበሳጫለች	አዎ	አይደለም
7	ልጅዎ የሚሰራውን /የምትሰራውን ሁሉ ሌሎች የሚቀበሉት አይመስለውም/ አይመስላትም	አዎ	አይደለም
8	ልጅዎ የምሽት እንቅልፍ በቀላሉ አይወስደውም/ አይወስዳትም	አዎ	አይደለም
9	ልጅዎ ከሰዎች ጋር ሆኖም/ ሆናም ቢሆን ብቸኝነት ይሰማዋል/ ይሰማታል	አዎ	አይደለም
10	ልጅዎ ብዙ ጊዜ የሆድ መታወክ ያጋጥመዋል/ ያጋጥማታል	አዎ	አይደለም
11	ልጅዎ ስሜቱ/ቷ በቀላሉ ይጎዳል	አዎ	አይደለም
12	ልጅዎ እጆቹን/ቿዋን ያልበዋል/ ያልባታል	አዎ	አይደለም
13	ልጅዎ በጣም ይደክመዋል/ ይደክማታል	አዎ	አይደለም
14	ልጅዎ ከሰ/ሷ ይልቅ ሌሎች ልጆች ደስተኞች ናቸው ብሎ /ብላ ያስባል/ታስባለች	አዎ	አይደለም
15	ልጅዎ የሚያልመው/ የምታልመው ሁሉ አስፈሪ ነው	አዎ	አይደለም
16	ልጅዎ ሲጨነቅ/ ስትጨነቅ ስሜቶቹ/ች በቀላሉ ይጎዳሉ	አዎ	አይደለም
17	ልጅዎ ስህተቱን/ተን ሰዎች ሁሉ የሚያርሙት/ የሚያርማት ይመስለዋል/ ይመስላታል	አዎ	አይደለም
18	ልጅዎ አንዳንዴ ደንግጦ/ጣ ይነሳል/ትነሳለች	አዎ	አይደለም
19	ልጅዎ ምሽት ለመተኛት ሲዘጋጅ/ ስትዘጋጅ ጭንቀት ይሰማዋል/ ይሰማታል	አዎ	አይደለም
20	ልጅዎ ሀሳቡን/ ቧን የማሰባሰብና በትምህርት ላይ ማተኮር ይቸገራል/ትቸገራለች	አዎ	አይደለም
21	ልጅዎ ሲቀመጥ/ ስትቀመጥ ይቁነጠነጣል/ትቁነጠነጣለች	አዎ	አይደለም
22	ልጅዎ በቀላሉ ይሸበራል/ ትሸበራለች	አዎ	አይደለም
23	ልጅዎ ተቃዋሚዎቹ በርካታ ናቸው ይላል/ ትላለች	አዎ	አይደለም
24	ልጅዎ መጥፎ ነገር ደርሶብኛል ብሎ/ብላ ይጨነቃል/ትጨነቃለች	አዎ	አይደለም

ከላይ የተዘረዘሩትን በልጁ/በልጅቷ ላይ የሚታዩ የጭንቀት ምልክቶችን ለመቀነስ በሆስፒታሉ ውስጥ ለልጆ የተደረገ መ.ያዊ ድጋፍ አለ? ----------

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Read each question carefully. Put a circle around the word YES if you think it is true about you. Put a circle around the word NO if you think it is not true about you. All the responses will be kept confidential. Thank you for your cooperation!

1.	I get nervous when things do not go the right way for me.	Yes / No
2.	Others seem to do things easier than I can.	Yes / No
3.	Often I have trouble getting my breath.	Yes / No
4.	I worry a lot of the time.	Yes / No
5.	I am always kind and good.	Yes / No
6.	I get mad easily.	Yes / No
7.	I feel that others do not like the way I do things.	Yes / No
8.	It is hard for me to get to sleep at night.	Yes / No
9.	I feel alone even when there are people with me.	Yes / No
10.	Often I feel sick in the stomach.	Yes / No
11.	My feelings get hurt easily.	Yes / No
12.	My hands feel sweaty.	Yes / No
13.	I am tired a lot.	Yes / No
14.	Other children are happier than I am.	Yes / No
15.	I have bad dreams.	Yes / No
16.	My feelings get hurt easily when I am fussed at.	Yes / No
17.	I feel someone will tell me I do things the wrong way.	Yes / No
18.	I wake up scared some of the time.	Yes / No
19.	I worry when I go to bed at night.	Yes / No
20.	It is hard for me to keep my mind on my schoolwork.	Yes / No
21.	I wriggle in my seat a lot.	Yes / No
22.	I am nervous.	Yes / No
23.	A lot of people are against me.	Yes / No
24.	I often worry about something bad happening to me.	Yes / No

APPENDIX 2

II. ክፍል 2

1. ቀጥሎ የተዘረዘሩት ህፃናት የደረሰባቸውን አሰቃቂ አደጋ ተከትለው የሚከሰቱ የስሜትና የመንፈስ መረበሾች ናቸው። ጥያቄዎቹን እኔ ሳነብ ችግሩ ላለፉት ሁለት ሳምንታት ልጅዎን ምን ያህል እንዳስጨነቀው/እንዳስቸጨነቃት ይንገሩኝ። ሀሳቤን ይበልጥ ሊገልጽ ይችላል የሚሉትን ከተሰጡት አራት ምርጫዎች ውስጥ ይምረጡ።

አራቱ አማራጭዎችም፣

0 = ምንም ጊዜ 1 = በሳምንት አንድ ጊዜ

2 = በሳምንት ከሁለት እስከ አራት ጊዜ 3 = በሳምንት አምስት ጊዜና ከዛ በላይ

1.	ልጅዎ የሚያስጨንቁ ሀሳቦችና ምስሎች ባልፈለጋቸው/ባልፈለገቻቸው ጊዜ ወደ ሀሳቡ/ሀሳባ ይመጣሉ	0	1	2	3
2	ልጅዎ አስፈሪ ህልሞችና ቅዠቶች ያያል/ታያለች	0	1	2	3
3.	ልጅዎ አሰቃቂው አደጋ በድጋሚ የሚከሰት ይመስልዋል/ይመስለላታል	0	1	2	3
4	ልጅዎ ስለአሰቃቂው አደጋ ባሰበ/ባሰበች ቁጥር ይረበሻል/ትረበሻለች	0	1	2	3
5	ልጅዎ ስለአሰቃቂው አደጋ ባሰበ/ባሰበች ጊዜ በሰውነቱ/ቷ ላይ የተለያዩ አካላዊ ለውጦች ይታይበታል/ይታይባታል	0	1	2	3
6	ልጅዎ ስለደረሰበት/ስለደረሰባት አስከፊ አደጋ መናገርና ማሰብ አይፈልግም/አትፈልግም	0	1	2	3
7	ልጅዎ አሰቃቂውን አደጋ ሊያስታውሱት/ሊያስታውሳት የሚችሉ ቦታዎች ሰዎችንና ድርጊቶችን ያሰወግዳል/ታሰወግዳለች	0	1	2	3
8	ልጅዎ የአሰቃቂውን አደጋ ዋነኛ ክፍል ማስታወስ አይፈልግም/አትፈልግም	0	1	2	3
9	ልጅዎ አሰቃቂው አደጋ ከመድረሱ በፊት የሚያከናውናቸውን/የምታከናውናቸውን ድርጊቶች አሁን ለማድረግ ያለው/ያላት ፍላጎት ዝቅተኛ ነው	0	1	2	3
10	ልጅዎ ስሜቱን/ስሜቷን በአግባቡ መግለፅ ይቸገራል/ትቸገራለች	0	1	2	3
11	ልጅዎ የወደፊት እቅዶቹ/ቿ ተግባራዊ ይሆናሉ የሚል ግምት የለውም/የላትም	0	1	2	3
12	ልጅዎ እንቅልፍ የማጣት ችግር አለበት/አለባት	0	1	2	3
13	ልጅዎ የመነጫነጭና በቀላሉ የመናዳድ ስሜቶች ይታይበታል/ይታይባታል	0	1	2	3
14.	የልጅዎ ሃሳብ በቀላሉ ይበታተናል	0	1	2	3
15.	ልጅዎ መጠራጠር ያበዛል/ታበዛለች	0	1	2	3

2.. በክፍል ሶስት ሀ ስር የተዘረዘሩትን ጥያቄዎች በሚከተሉት እንቅስቃሴዎች ላይ ላለፉት ሁለት ሳምንታት በልጅዎ ላይ ችግር አስከትለው ከሆነ አዎ ካልሆነ ደግሞ አይደለም በማለት መልስ ስጡ ።። በድጋሚ ስለ ትብብርዎ አመሰግናለሁ!

16	ኃይማኖታዊ ግዴታዎችን በበቂ ሁኔታ በመወጣት ረገድ	አዎ	አይደለም
17	በእለት ተእለት የቤት ውስጥ ስራዎችን በበቂ ሁኔታ በመወጣት ረገድ	አዎ	አይደለም
18	ከጓደኞቹ/ቿ ጋር ያለውን/ያላትን ግንኙነት በበቂ ሁኔታ በመወጣት ረገድ	አዎ	አይደለም
19	የሚያዝናኑና የሚያስደስቱ እንቅስቃሴዎችን በማከናወን ረገድ	አዎ	አይደለም
20	ትምህርቱን/ቷን በአግባቡ በማከናወን ረገድ	አዎ	አይደለም

ከላይ የተዘረዘሩትን በልጁ/በልጅቷ ላይ የሚታዩ የስሜት እና የመንፈስ መረበሾችን ለመቀነስ በሆስፒታሉ ውስጥ ለልጁ/ጀ የተደረገ ሙያዊ ድጋፍ አለ? ----------

Addis Ababa University
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The Child PTSD Symptom Scale (CPSS) – Part I

Below is a list of problems that kids sometimes have after experiencing an upsetting event. Read each one carefully and circle the number (0-3) that best describes how often that problem has bothered you IN THE LAST 2 WEEKS. All the responses will be kept confidential. Thank you for your cooperation!

Please write down your most distressing event:

0	1	2	3
Not at all	Once a week	2 to 4 times a week	5 or more times a week

1.	0	1	2	3	Having upsetting thoughts or images about the event that came into your head when you didn't want them to
2.	0	1	2	3	Having bad dreams or nightmares
3.	0	1	2	3	Acting or feeling as if the event was happening again (hearing something or seeing a picture about it and feeling as if I am there again)
4.	0	1	2	3	Feeling upset when you think about it or hear about the event (for example, feeling scared, angry, sad, guilty, etc)
5.	0	1	2	3	Having feelings in your body when you think about or hear about the event (for example, breaking out into a sweat, heart beating fast)
6.	0	1	2	3	Trying not to think about, talk about, or have feelings about the event
7.	0	1	2	3	Trying to avoid activities, people, or places that remind you of the traumatic event
8.	0	1	2	3	Not being able to remember an important part of the upsetting event
9.	0	1	2	3	Having much less interest or doing things you used to do
10.	0	1	2	3	Not being able to have strong feelings (for example, being unable to cry or unable to feel happy)
11.	0	1	2	3	Feeling as if your future plans or hopes will not come true (for example, you will not have a job or getting married or having kids)
12.	0	1	2	3	Having trouble falling or staying asleep
13.	0	1	2	3	Feeling irritable or having fits of anger
14.	0	1	2	3	Having trouble concentrating (for example, losing track of a story on the television, forgetting what you read, not paying attention in class)
15.	0	1	2	3	Being overly careful (for example, checking to see who is around you and what is around you)

The Child PTSD Symptom Scale (CPSS) – Part 2

Indicate below if the problems you rated in Part 1 have gotten in the way with any of the following areas of your life DURING THE PAST 2 WEEKS.

		Yes	No
16.	Doing your prayers	Y	N
17.	Chores and duties at home	Y	N
18.	Relationships with friends	Y	N
19.	Fun and hobby activities	Y	N
20.	Schoolwork	Y	N

APPENDIX 3

III. የስሜት መረበሽን መለኪያ ስኬል

ቀጥሎ ለተዘረዘሩት ጥያቄዎች ከአራት ነጥብ ስኬሎች ውስጥ ልጆትን ይበልጥ ሊገልፅ የሚችለውን ምረጡ:: አራት ነጥብ ስኬሎችም

1. ምንም ጊዜ
2. አንዳንድ ጊዜ
3. ብዙ ጊዜ
4. ሁል ጊዜ

ስለትብብርዎ አመስግናለሁ!

1	ልጅዎ በተደጋጋሚ በጭንቀት ያለቅሳል/ታለቅሳለች	1	2	3	4
2	ልጅዎ የፈለገወን/ችውን ወዲያው እንዲፈፅምለት/ላት ይፈልጋል/ትፈልጋለች	1	2	3	4
3	ልጅዎ ብቻውን/ዋን መተኛት አይፈልግም/አትፈልግም	1	2	3	4
4	ልጆዎ እንቅልፍ የማጣት ችግር አለበት/ባት	1	2	3	4
5	ልጅዎ አስፈሪ ህልሞች ያያል/ታያለች	1	2	3	4
6	ልጅዎ ያለበቂ ምክንያት ፍርሃት ይታይበታል/ባታል	1	2	3	4
7	ልጅዎ ጭንቀት ይታይበታል/ባታል	1	2	3	4
8	ልጅዎ ያለበቂ ምክንያት ያለቅሳል/ታለቅሳለች	1	2	3	4
9	ልጅዎ ማዘንና መገለል ይታይበታል/ባታል	1	2	3	4
10	ልጅዎ ብቸኛ መሆን አይፈልግም/አትፈልግም	1	2	3	4
11	ልጅዎ ይቅበጠበጣል/ትቅበጠበጣለች	1	2	3	4
12	ልጅዎ በቀላሉ ይበሳጫል/ትበሳጫለች	1	2	3	4
13	ልጅዎ በተደጋጋሚ ራስ ምታትና የውጋት ስሜት ይታይበታል/ባታል	1	2	3	4
14	ልጅዎ ከእድሜው/ዋ በታች የሆኑ ባህሪዎች ይታይበታል/ባታል (ለምሳሌ አልጋ ላይ መሽናት እጅ መጥባት . . .)	1	2	3	4
15	ልጅዎ በቀላሉ ይደነግጣል/ትደነግጣለች	1	2	3	4
16	ልጅዎ ኃይለኝነት ይሰማዋል/ይሰማል	1	2	3	4
17	ልጅዎ የደረሰበትን/ባትን አሰቃቂ አደጋ በተደጋጋሚ ያስውሳል/ ታስታውሳለች	1	2	3	4
18	ልጅዎ በጨዋታ መሀል ስለደረሰበት/ባት አሰቃቂ አደጋ ይናገራል/ ትናገራለች	1	2	3	4
19	ልጅዎ ስለደረሰበት/ባት አሰቃቂ አደጋ ቢጠየቅም/ ብትጠየቅም እንኳን መናገር አይፈልግም/አትፈልግም	1	2	3	4
20	ልጅዎ አሰቃቂውን አደጋ ሊያስታውሱት/ሷት የሚችሉትን ነገሮች ይፈራል/ ትፈራለች	1	2	3	4

ከላይ የተዘረዘሩትን በልጁ/በልጅቷ ላይ የሚታዩ የስሜት መረበሾችን ለመቀነስ በሆስፒታሉ ውስጥ ለልጁ/ጆ የተደረገ ሙያዊ ድጋፍ አለ? ----------

APPENDIX 5

በአዲስ አበባ ዩኒቨርሲቲ
በድህረ ምረቃ ትምህርት ቤት
የሳይኮሎጂ ትምህርት ክፍል

መመሪያ ፣

የዚህ ጥናት ዋና አላማ በልጆች ላይ በሚደርሰው አደጋ ምክንያት ሊከሰቱ የሚችሉ የስነልቦና ችግሮች ካሉ መፈተሽ ነው። ከዚህ ጥናት የሚገኘው መረጃ ችግሩን ለመቀነስ በሚደረገው ጥረት ላይ ከፍተኛ አስተዋፅኦ ይኖረዋል። ለጥያቄዎቹ የሚሰጡት መልሶቹ በሚስጥር የሚያዙና ለጥናት አላማ ብቻ የሚውሉ ይሆናሉ። የእርሶ ግልፅ የሆነ መልስ የጥናቱን አላማ ከግብ ለማድረስ በጣም አስፈላጊ ነው።

የቃለ መጠይቁ መነሻ ጥያቄዎች

I አጠቃላይ መረጃ

እድሜ ---------- ጾታ ----------
የትምህርት ደረጃ ---------- የሚሰሩበት ሞያ ----------

1. አሁን ባሉበት ሞያ ለምን ያህል ጊዜ አገልግለዋል?
2. በሆስፒታሉ ውስጥ በተደጋጋሚ በልጆች ላይ የሚደርሱ አደጋዎችን ቢዘረዝሩልኝ
3. በአደጋውን ይበልጥ የሚጠቃው ዕድ የትኛው ነው?
4. በአደጋው ይበልጥ የሚጠቁት በየትኛው እድሜ ክልል ውስጥ የሚገኙ ልጆች ናቸው?
5. በአደጋ የተጠቁ ልጆች ወደ ሆስፒታሉ ሲመጡ የሚደረግላቸውን የእርዳታ አይነቶችን ቢገልፀልኝ።
6. በሆስፒታሉ ውስጥ በተለያዩ አደጋዎች ለተጠቁ ልጆች የሚደረግላቸው የህክምና እርዳታ በቂ ነው ብለው ያስባሉ?
   6.1 በቂ ነው ካሉ የሚደረግላቸው ዋና ዋና እንክብካቤዎች ቢገልፀልኝ?
   6.2 በቂ አይደለም ካሉ መሟላት ያለባቸውን ነገሮች ቢገልፀልኝ?
7. በተለያዩ አደጋዎች የተጠቁ ልጆች የስነልቦና ችግር ያገጥማቸዋል ብለው ያስባሉ?
   7.1 አዎ ካሉ በተደጋጋሚ የሚስተዋሉ የስነልቦና ችግሮችን ቢገልፀልኝ?
   7.2 ከላይ የተዘረዘሩትን የስነልቦና ችግሮች በመቅረፍ ረገድ በሆስፒታሉ ውስጥ የሚሰጥ መደዊ የካውንሲሊንግ አገልግሎት አለ?
   7.3 አለ ካሉ አገልግሎቱን የሚሰጠው ሰው በምን መደያ የተመረቀ ነው? ከ መደያው ጋር የተያያዘ ምን ያህል የ ስነልቦና ኪቸስ ወስደዋል?
   7.4 የአገልግሎቱን ጠንካራና ደካማ ጎን ምንድን ናቸው?
8. በመጨረሻ ስለ ካውንሲሊንግ አገልግሎት ጥቅም ማለት የሚፈልጉት ነገር ካለ እድሉን ልስጦት።

Addis Ababa University
College of Graduate Studies

Department of Psychology

The purpose of this research is to study accident related psychological problems of children at three selected hospitals in Addis Ababa. The information gathered through this questionnaire is helpful to reduce the psychological problems of children and their parents after accidents . All the responses will be kept confidential. Thank you for your cooperation!

Semi- Structured Interview for Health Professionals

II. Background Information

Age_____

Sex_____

Educational Level_____

Occupation_____

Experience_____

1. What are the services rendered for children with Accidents and their parents?

2. Are the medical services given in the hospital satisfactory?

   1.1.If yes, mention the service?

   1.2.If No, what needs to be done?

3. Are there any psychological problems children usually show after the accident?

   3.1. If Yes, mention them.

APPENDIX 8

Reliability for Emotional Distress Scale

Reliability Statistics

Cronbach's Alpha	N of Items
.927	20

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Item-Total Correlation	Cronbach's Alpha if Item Deleted
ITEM 1	59.3333	119.402	.379	.927
ITEM 2	59.1333	118.051	.541	.925
ITEM 3	60.8333	120.282	.226	.932
ITEM 4	59.3667	113.895	.649	.922
ITEM 5	59.7333	110.064	.703	.921
ITEM 6	59.5000	111.707	.716	.921
ITEM 7	59.3000	114.700	.701	.922
ITEM 8	59.4000	113.421	.726	.921
ITEM 9	59.6000	110.800	.686	.921
ITEM 10	59.5667	108.392	.740	.920
ITEM 11	59.2667	118.133	.554	.924
ITEM 12	59.0000	119.034	.524	.925
ITEM 13	59.6000	111.559	.674	.922
ITEM 14	59.4333	111.495	.675	.922
ITEM 15	59.3667	111.895	.808	.919
ITEM 16	59.3333	120.575	.394	.927
ITEM 17	59.4000	116.731	.560	.924
ITEM 18	59.4333	111.978	.745	.920
ITEM 19	59.5667	116.668	.410	.928
ITEM 20	59.2333	113.771	.701	.921