A STUDY OF EXPRESSED PARENTAL LEARNING RELATED
TO ACCIDENTAL POISONING IN YOUNG CHILDREN

by Department of

Mary Elizabeth Bellar

B.S., University of Minnesota, 1947

A Thesis submitted to the Faculty of the Graduate School of the University of Colorado in partial fulfillment of the requirements for the Degree

Master of Science

Department of Nursing

Bellar, Mary Elizabeth (M.S., Nursing)

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Bellar, Mary Elizabeth (M.S., Nursing)

A Study of Expressed Parental Learning Related to

Accidental Poisoning in Young Children

Thesis directed by Associate Professor Loretta C. Ford.

This study was conducted to investigate the effectiveness of parental learning which took place in the emergency room following accidental poisonings of young children. The specific aims of the study were to ascertain: (1) the impact, in terms of self-description of emotions felt, made upon the parent in the situation, and (2) the effectiveness of learning, through the experience in the emergency room, as expressed by parents.

The descriptive survey method was chosen for the study and data were secured by an interview. A question-naire, used as a guide during the interview, consisted of structured and open-end questions which followed the sequence of events in an accidental poisoning.

Analysis of the data collected revealed that:

(1) each parent experienced a strong emotional impact in each phase of the incident, and (2) learning, as expressed by parents, was in the form of a renewed awareness of the physical abilities of their children, a recognition of the need to alter the home environment, and the

realization that more knowledge about the toxicity of common household products and first aid measures in care of an accident victim was needed.

Recommendations were made and suggestions for further research were given as a result of the findings of this study.

This abstract of about 200 words is approved as to form and content. I recommend its publication.

Signed Asetta C. Jord Instructor in charge of dissertation

Colorade, for their support and direction in the

writing of this thesis.

My gratitude is extended to Colonel James A.

Wier, Chief of Professional Services, Lt. Colonel

Edna E. Ross, Chief of Nursing Services, and Lt.

Colonel Harry J. Unlauf, Chief of Pediatric Services

for their permission to complete this study at

Fitzslmuns General Hospital.

To the military families, the personnel in the

Pediatric and Outpatient Departments who participated

in this study I am sincerely grateful.

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Additional Information Obtained During

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a young childle to said reductive ties, the election
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II. SIGNIFICANCE OF THIS RESEARCH

Poisoning is the most common medical emergency among young children. Arena reported that: "Some form of poison accounts for more than 600,000 illnesses and approximately 5,000 deaths each year. About one-half

CHAPTER I

STATEMENT OF THE PROBLEM AND DEFINITIONS OF TERMS USED

professions. Likewise, both professions have intensified

the search for more productive ways to prevent poleonings

The responsibility for treatment of accidental .

I. THE GENERAL PURPOSE AND SPECIFIC AIMS

It was the general purpose of this research to investigate the effectiveness of learning by parents under specific circumstances. The situation was the treatment in a military hospital emergency room and under the circumstances of an accidental poisoning of a young child.

The specific aims of the research were to ascertain:

(1) the impact, in terms of a self-description of emotions

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Halsey (New York: McGraw-Hill Book Company, Inc., 1961),

3Ibid., p. 301.

of the deaths are accidental and one-third occur in children."

The responsibility for treatment of accidental poisonings has been accepted by the medical and nursing professions. Likewise, both professions have intensified the search for more productive ways to prevent poisonings as well as prevent accidents of all kinds.

Pottholf stated that efforts toward prevention of accidents may be on three levels: (1) prevention of episodes that cause harm, (2) prevention of harmful effects after the accident has occurred, and (3) minimizing harmful effects through rehabilitation. One of the principal roles of the physician at each of these levels is that of a teacher. The educating of parents may take place in the office or in the emergency room. "One method of educating parents," he added, "is to use the child's own accident for teaching purposes and to show the effects of unsafe behavior."

However, Schottstaedt advised caution in utilizing the accident as a learning experience. He stated,

William W. Schottstsedt, Psychophysiologic Approach

Jay M. Arena, <u>Poisoning</u>. (Springfield, Illinois: Charles C. Thomas Publishers, 1963), p. 3.

²Carl Pottholf, <u>Accident Prevention</u>, ed. Maxwell H. Halsey (New York: McGraw-Hill Book Company, Inc., 1961), p. 293.

³ Ibid., p. 301.

"Emotions may have various effects; attention span and ability to concentrate are adversely affected by anger and anxiety. Perceptions are altered and the ability to recall what has been experienced is decreased." Prescott has added, "The level of emotionality reached during learning may be of great importance and that all learning is not alike; therefore, we may expect variations in the influence of affect upon different types of learning." He concluded, "Experimental data concerning the influence of affective factors in learning are still very inadequate and much experimentation is needed."

III. DEFINITION OF TERMS USED

Military dependent is defined as any person who is eligible for medical care because of her relationship with a member of the Armed Forces.

Anxiety, as defined by Prescott, is "A complex unpleasant emotional response, within all of us, to anything that threatens our security."

Canal Zone, and two military bases abroad

William W. Schottstaedt, Psychophysiologic Approach
to Medical Practice (Chicago: The Year Book Publishers,
1960), p. 82.

Process (Washington, D. C.: American Council on Education, 1938), p. 179.

⁶ Ibid. satasdt, op. cit., p. 21.

⁷ Ibid., p. 159. spreface, p. vii.

Stress, as used in this research in conjunction with anxiety, is defined as "an evaluation of the relation between a stimulus and a person in which the stimulus is perceived as a threat."

IV. BACKGROUND OF LITERATURE

There were 1.03% accidental balacaines treated

In 1951, the findings of a survey of the Committee on Accident Prevention, presented to the Academy of Pediatrics, supported the view held by many physicians and nurses that poisonings accounted for the majority of accidents encountered in pediatric practice. As a result of this study, stated Arena, "Physicians made a step toward handling the problem through up-to-date information on the toxic ingredients in common household products and improved therapeutic measures."

This survey led to the development of Poison Control
Centers in various large cities; Chicago established
the first Center in 1953. At the present time there are
270 Centers in thirty-nine states including the District
of Columbia, Canal Zone, and two military bases abroad.
Furthermore, a National Clearinghouse in Washington, D. C.
collects data on accidental poisonings from the State
Health Departments. The Clearinghouse, under the direction

10 R: B. Mellins, and others, "The Natural History

⁸ Schottstaedt, op. cit., p. 21.

⁹ Arena, op. cit., "Preface," p. vii.

of the United States Public Health Service, publishes data in the interest of accident prevention.

Mellins and his group of investigators reported on the following from a study made in Chicago from December,

There were 1,033 accidental poisonings treated in nineteen hospitals in Illinois: 50.6 per cent of the substances ingested were medicines, 6.7 per cent sedatives, 3.4 per cent liniments, 2.7 per cent laxatives, 19.0 per cent household cleansing agents and 10.4 per cent were pesticides.

There were six fatalities of this group.
Ingested agents were most commonly found, in order of frequency, in the kitchen, bedroom, bathroom, living room, and dining room.

Public health nurses and epidemiologists from the Chicago Board of Health made follow-up visits to the homes of each case reported. They sought information regarding the predisposing causes of the poisoning, and made recommendations for improving home safety and health of the families. 11

The Chicago Board of Health, using this information, developed a classification of the cases and the observations of the factors in the incidence of the cases. They searched for any relationships between the factors observed. From their findings the Board developed the

enneth D. Rogers, "Preventable Accidents in

¹⁰ R. B. Mellins, and others, "The Natural History of Poisoning in Childhood," Pediatrics, 17:315-26, May, 1956.

¹¹ Ibid.

Poison Control Center in Chicago and outlined various measures which may be instituted in an effort to prevent poisonings.

Educators, physicians, epidemiologists, and others became interested in the problem of accidental poisonings. Dr. Kenneth Rogers used the problem-solving point of view. He remarked,

While medical science was occupied with the cures of many childhood diseases and more medications appeared on the market, childhood accidents sneaked into first place as a cause of death among children from one to five years of age.

In order to produce a solution, one must (1) collect facts, observe the causative factors and effects on man, (2) interpret the facts in light of other knowledge, (3) discover ways to eliminate or control the factors, and (4) develop programs to carry prevention or therapy to the general population. 12

Many articles have appeared in professional nursing journals regarding the use of nursing skills in the prevention of accidental poisonings. Miss F. Jean Williams, in 1958, agreed with the Mellins study in that non-fatal accidental poisonings most frequently occurred in the preschool age groups and similar types of poisonous agents were ingested. Miss Williams asserted,

tion of the Population Sample and Interviewing Techniques," American Journal of Public Health, 50:1705-09, Nevember,

"Reward N. Cann and others, "Epidemiological Aspects

¹²Kenneth D. Rogers, "Preventable Accidents in
Preschool Children," Nursing Outlook, 4:522-55, October,
1956.

The role of the nurse in the control of accidental poisonings is that of teacher especially through home visits. The public health nurse is in an excellent position, through her home visits, to assist in the epidemiological studies of the poisonings.

She may also teach parents the fundamental elements of child growth and development and suggest ways to alter the environment in order to make it a safer environment for the child.

finding was the preponderance of pelsoning repasters

Dr. Cann and his associates, in a study of 15,094 cases of accidental poisonings in 1960, reported that parents must be taught about the toxicity of agents in the home. Parents should also be taught the elements of child growth and development, that carelessness and unawareness may account for many of the accidents, and that poisons transferred from original containers may predispose toward accidental poisonings. 14

In a study of accidental poisonings in Syracuse,

New York, Dr. C. V. Willie and his group of medical

students studied 1,069 families. This number represented

two per cent of the population of the city. The findings

of this group substantiated those of Cann and Mellins. 15

based of various toxic materials nor their

^{13&}lt;sub>F</sub>. Jean Williams, "Nurses Have Much to Do About Poison Control," <u>Nursing Outlook</u>, 6:93-95, February, 1958.

¹⁴ Howard M. Cann and others, "Epidemiological Aspects of Poisoning Accidents," American Journal of Public Health, 50:1914-24, December, 1960.

¹⁵C. V. Willie and others, "The Epidemiology of Accidental Poisoning in an Urban Population. I. Selection of the Population Sample and Interviewing Techniques," American Journal of Public Health, 50:1705-09, November, 1960.

Werhle and a group of students completed the study of poisonings in Syracuse and reported findings on the prevalence and distribution of poisoning. A notable finding was the preponderance of poisoning repeaters among the population investigated. 16

A somewhat different approach was used in a study by the San Jose, California City Health Department.

Although the study was not primarily concerned with prevention of accidental poisonings per se, the findings of the researchers demonstrated an acute awareness of the perplexities of accidental poisonings. Accidental poisonings, treated in an emergency facility, were tested as indicators of a family with a high incidence of accidents.

This group of researchers have commented that they gathered no systematic evidence regarding the effect of the poisoning in making the family more aware of safety and more receptive to information on safety. They did not gather information regarding the level of the potential hazard of various toxic materials nor their storage. The study revealed, however, that accidental poisoning cases treated at an emergency facility do not

se M. Wheatley, "Progress in Preventing

^{16.} F. Werhle and others, "The Epidemiology of Accidental Poisoning In an Urban Population. II.

Prevalence and Distribution of Poisoning," American

Journal of Public Health, 50:1925-33, December, 1960.

seem to be a means for casefinding for families with a high incidence of accidents of all types. 17

Practicing pediatricians have commented on helping to prevent accidental poisonings through education. Dr. Wheatley suggested that pediatricians study individual accidents which are brought to their offices and should point out to parents the misuse of household agents which are frequently the cause for poisoning young children. He added, "Doctors should strive to reeducate the parents of children they treat from a fatalistic attitude that 'accidents just happen.'"

Harper maintained: "The chief tools for accident prevention are educational and the purpose is to inform parents. . . . about the accident hazards to growing children. Parents should be encouraged to practice individual preventive action."

Harvie has advised physicians: lectively? and ho

Question the parent carefully as to the exact substances swallowed, the probable amount and time of taking it. After attending to the patient use

20 Fred H. Harvis (ed.), Pediatric Methods and

(Washington, D. C.: American Council on Education, 1938),

¹⁷D. M. Bissell and R. S. McInnes, "Epidemiology of Accidental Poisoning," California Medicine, 92:416-17, June, 1960.

¹⁸ George M. Wheatley, "Progress in Preventing Accidental Poisoning," <u>Nursing Outlook</u>, 9:410, July, 1961.

¹⁹ Paul A. Harper, Preventive Pediatrics (New York: Appleton-Century-Crofts, 1962), p. 749.

the occasion to find out how the accident happened and how further poisoning in the home can be prevented.

Birch asserted, "Another aspect of emergencies which it behooves us to remember is the anxiety of the patient and his relatives; our attitude should be one of alertness in diagnosis, safety in treatment and care in what we say." De Sanctis and Varga agreed: "Through experience we have found that these parents, once the immediate danger to their child is over, are in a receptive mood for a few well-chosen words on accident prevention." 22

Teaching, on the part of the physician, would necessarily be directed toward learning on the part of the person being taught. Prescott defined learning as "the alteration of behavior by experience." 23

Ausubel, Schiff and Goldman sought answers to the questions: "Does anxiety impair the efficiency of the learning process in all areas or selectively?", and "Do anxiety-ridden individuals approach learning situations

Fred H. Harvie (ed.), <u>Pediatric Methods and Standards</u> (Philadelphia: Lea and Febinger, 1962), p. 298.

²¹C. Allan Birch, Emergencies in Medical Practice
(Edinburgh: E. and S. Livingstone, Ltd., 1960), "Preface"
p. vii.

Pediatric Medical Emergencies (St. Louis: The C. V. Mosby Company, 1956), p. 331.

²³Daniel A. Prescott, <u>Emotion and the Educative Process</u>
(Washington, D. C.: American Council on Education, 1938),
p. 179.

differently?" The trend, they maintained, "is to study the effects of situationally induced anxiety or that occurring in uncontrived life situations; however, the difficulty of this method is that identical situations usually mean very different things to different people."24

Coleman agreed with this viewpoint,

New problems which we have not anticipated, for which we have no ready-made approach and in which the requirements of the situation may not be clearly understood can put us under severe strain.

. . Any problem we do not know how to attack may pose a serious threat.

Studies show that in mild stress there is an increased alertness and sensitization to outer conditions that may actually improve the efficiency of behavior. In moderately severe stress the individual tends to become less task-centered and more defensive. . . less skillful in his acts. Under very severe stress his skills may break down altogether. . . and control of behavior is disrupted.

However, the testing of this theory, as indicated in the present literature, has been limited. The use of human beings as subjects, especially where a theory of learning under stress is concerned, is also limited.

Mowrer took a dim view of testing anxiety in learning

Self-Attitude and Anxiety, " Journal of General Psychology

David P. Ausubel and others, "Qualitative Characteristics in the Learning Process Associated With Anxiety,"

Journal of Abnormal and Social Psychology, 48:537-47,

1953.

²⁵ James C. Coleman, Personality Dynamics and Effective Behavior (Chicago: Scott, Foresman and Company, 1960), p. 158.

using human beings and stated that it is too damaging. 26
Silverman and Blitz studied the effects of experimentally
induced anxiety and the relationship to anxiety as defined
in terms of responses to the Taylor Anxiety Scale. One
finding was that persons with high scores on the Scale
showed little evidence of incidental learning. 27

Albert, however, has found that in the studies of the relationship between anxiety and cognitive process consistent results have not been produced. He felt that self-attitude toward the imposed threat and anxiety may be theoretically related. 28

In addition, he remarked,

While it may be safe to assume that the more uncertain about one's self a person is the greater the likelihood there is for anxiety to occur; at present we do not have an exact enough unit of measurement of tension or exact enough means of measuring tension to allow us such a formulation as stated above which implies an interval scale.

In summary, many studies have been made in order to ascertain all available factors surrounding accidental poisonings. The investigations have shown similar

Dynamics (New York: The Ronald Press Company, 1960), p. 21.

²⁷Robert E. Silverman and Bernard Blitz, "Learning and Two Kinds of Anxiety," Journal of Abnormal and Social Psychology, 52:301-303, 1956.

²⁸ Robert S. Albert, "Comment Upon Three Dimensions of Self-Attitude and Anxiety," <u>Journal of General Psychology</u> 56:13-20, 1957.

²⁹ Ibid.

findings; such findings have shown directions which may be taken toward prevention of further poisonings.

One approach to prevention of poisoning accidents is parental education. It is agreed that a certain amount of stress accompanies the treatment period; stress, in this study was on the part of the parent and in terms of anxiety. During the stressful period it is questioned whether or not stress accelerates learning.

recalled and existing conditions. It was the aim of the

investigator to use questionnaire and interviewing

enotions and conditions and certain apparent consequences.

As stated by Selltiz, Jahoda, and others,

Research questions presuppose much prior knowledge of the problem to be investigated. . . The investigator must be able to define clearly what it is he wants to measure and must find adequate methods for measuring it.

In collecting evidence for a study of this aort, what is needed is not so much floribility as a plear formulation of what and who is to be measured and techniques for valid and reliable

Data for a questionnaire were secured by an interview.

It was felt that in order to obtain reliable data from

the population selected, the technique should yield

results which, through repeated measurements, should fall

Claire Solitis and others, Research Methods in Social Relations (Revised One-Volume Edition; New York:

within narrow and pradictable limits of variability.

METHOD OF PROCEDURE

I. SELECTION OF METHOD OF PROCEDURE

established criteria and an instrument was developed.

tosted, revised, and used.

The descriptive method of investigation was used because the opinions and facts sought dealt with facts recalled and existing conditions. It was the aim of the investigator to use questionnaire and interviewing procedures in order to note the coincidence of certain emotions and conditions and certain apparent consequences.

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Howard M. Cann and others, "Epidemiologic Aspects

Claire Selltiz and others, Research Methods in Social Relations (Revised One-Volume Edition; New York: Henry Holt and Company, Inc., 1960), p. 66.

within narrow and predictable limits of variability.

Also, the technique should demonstrate a measurement which is meaningful and related to the aims of the research.

With these points in mind subjects were selected by an established criteria and an instrument was developed, tested, revised, and used.

II. SELECTION OF SUBJECTS

The subjects selected were parents of children who had experienced an accidental poisoning. The criteria used in the selection of parents were as follows:

- of age. Studies have indicated that the highest percentage of accidental poisonings occur in the lower age groups and physicians consider the child under six less educable in accident prevention than older children.
- (2) Those parents whose child had actually received treatment such as gastric lavage or induction of vomiting in the emergency room.
- (3) Those parents whose child had not become a poisoning fatality since the interview would be traumatic for the parent whose child had expired.

dual interviewed. Also, before parents were interviewed

Howard M. Cann and others, "Epidemiologic Aspects of Poisoning Accidents," American Journal of Public Health, 50:1914-24, December, 1960.

- (4) Parents whose child had an accidental poisoning between 1 July, 1962 and 1 July, 1963. This period permitted the investigator to use subjects who were still in the area. It was considered preferable to use the subject whose child had ingested an agent in the latter part of the period since this gave the subject the advantage of more accurate recall and opportunity to make alterations in the home environment.
- (5) Parents of children treated at Fitzsimons

 General Hospital. The investigator was familiar with

 treatment procedures used in the military hospital and
 had access to the military clinical records. The Chief
 of Professional Services granted permission verbally to
 conduct the study. (See Appendix A for letter requesting
 permission.)
- (6) Only the parent who remained with the child in the treatment room.

ecorded is order to obtain information required?

The importance of certain characteristics pertaining to the subjects selected for the study was recognized.

However, no effort was made to learn the individual differences in intelligence, the socio-economic factors, the cultural factors, and the self-concept of the individual interviewed. Also, before parents were interviewed in the home, it was not known, by the investigator, whether or not they had wished to remain with the child during the treatment given.

A selected group of twenty-five parents was considered by the investigator as a small but adequate sample for the study.

III. CONSTRUCTION OF THE INSTRUMENT

At each stage of the preparation of the questionnaire the following factors were considered: the aims of the research, the basic assumptions which were formulated in light of past experience of the investigator, and the development of a solid frame of reference common to both the respondent and the investigator.

Over-all criteria for the instrument were observed; they were suggested by Festinger in the following questions:

- (1) What behavior is to be selected and recorded in order to obtain information required?
- (2) Under what conditions are observations to be made; how is the observational situation structured?

duran. Reverse, it was common practice in the present

- (3) Is there evidence that some process with functional unity is being observed?
- (4) What is the nature and meaning of the process to be observed or inferred?
- (5) How stable are the observations? Can the same results be obtained under what appears to be the same conditions?

agent, and the possible subsequences of the ingestions.

luarning apportunity for the percets.

³Leon Festinger and Daniel Katz (ed.) Research
Methods in the Behavioral Sciences (New York: The
Dryden Press, 1953), p. 328.

The questionnaire was constructed to obtain the statements of action performed and emotions felt during the successive phases in an accidental poisoning. It was deemed necessary to obtain information about the period prior to the treatment phase in order to note relationships between the build-up of anxiety and the learning experiences of the parent. Information relating to action taken after the treatment period was considered to be an indication of learning and evidence of learning would be in terms of alteration of home environment, a change of attitude toward poisoning accidents and the prevention of them.

In the review of literature nothing was found to support the view held by some physicians that parents should stay in the treatment room during treatment procedures. However, it was common practice in the present military assignment of the investigator to ask the parents to remain with the child during treatment. The purpose for having parents remain in the treatment room was two-fold: (1) to assist in holding the child when the lavage tube was inserted or when medications and water were given to induce vomiting, and (2) to provide a learning opportunity for the parents.

During treatment procedures parents often asked questions about the agent ingested, the toxicity of the agent, and the possible consequences of the ingestions.

Doctors answered such questions and advised parents about home safety--this being an opportunity for learning.

The questionnaire was constructed in three stages.

First Stage: Three classmates of the investigator, who are parents of a child who had an accidental poisoning, were asked to write a short narrative report of the incident. The narrative included the emotional and physical responses to the incident. The purpose of the report was to obtain statements which would be applicable to the study and could be used in the questionnaire.

elicit additional statements, three military families
were visited by the investigator. Each family had a child
who was accidentally poisoned. Prior to the visit an
appointment was made by telephone and the purpose of the
visit was explained in terms of a survey of children who
had accidental poisonings recently. None of these
families, nor the data from the interviews, were used
in the final analysis.

visits to the military families were recorded on a portable tape recorder in the home. The recordings were made with the explicit consent of the person being interviewed. Interviewees were assured of the confidential nature of the information; each interview was prefaced by a code designation. After the information had been transcribed from the recording, the tapes were destroyed.

Stage Two (Pretest): Information obtained from the initial interviews was used to formulate a questionnaire.

There were no difficulties encountered in the interviews during the pretest and all respondents were eager to assist in the study. However, it was evident that the questionnaire must be narrowed in scope but increased in depth in order to become a sound instrument.

One obvious change in the wording of the questionnaire concerned the degree of anxiety expressed by the parent.

As pointed out in the survey of literature there is no adequate way to measure the degrees of anxiety; therefore, it was necessary to simply include the verbatim expressions of anxiety given most often by the original six respondents and the three respondents in the pretest.

Stage Three: After the questionnaire had been revised to include the above changes, the instrument seemed to meet the criteria as stated by Festinger. 4

Questions were reworded for accuracy and clarity of purpose and offered the respondent opportunity to select a response which best described her actions and emotions. Words were suitable to the respondent's level of information, they were socially acceptable, and they were limited to a single idea.

ster chose to conduct the interview in the home for

⁴ Ibid.

The questionnaire consisted of three sections:

(1) a section for identifying information, (2) a structured section, and (3) an open-end section. The main part of the instrument presented the closed-type questions with a single frame of reference and a known range of possible responses. The respondents were given opportunity to express their feelings further in the discussion or open-end portion of the questionnaire. This form of question resembles the open-type in which the topic is structured, but the respondent answers in her own words.

IV. INTERVIEW SCHEDULE

Principles of interviewing, as stated by Festinger, were used as a guide and are as follows:

- (1) Explain purposes and objectives of the research.
 - (2) Describe the method by which respondent was selected.
 - (3) Identify sponsor or agency conducting research.
 - (4) State the anonymous or confidential nature of the interview.

Prior to the home visit an appointment was made by telephone for the visit. This assured the investigator that she would be accepted in the home and that the respondent would be home for the interview. The investigator chose to conduct the interview in the home for

⁵ Ibid.

several reasons: (1) it provided for privacy, (2) the respondent was more at ease in her own home, and (3) it gave the investigator an opportunity to observe the home, the storage facilities and the cabinet space in the home since these were often factors in the poisoning accidents.

For purposes of identification, the investigator was in military uniform while making the home visit and conducting the interview.

In conducting the interview questions were stated to the respondent verbatim from the questionnaire.

Respondents were requested to sit near the investigator and to read the questions from the paper. Responses were marked by the investigator during the interview. Additional responses were written as given by the respondent. A non-directive technique was used during the discussion.

oscertain: (1) the impact, in terms of self-description of emotions felt, made upon the parent in the situation, and (2) the effectiveness of learning, through experience in the emergency room, expressed by parents.

The first part of the chapter is an analysis of the identifying information that appeared at the beginning of the questionnaire. The second part is an analysis of the responses given in the structured and open-end sections of the questionnaire.

ANALYSIS OF DATA

After the last interview was completed the data from the structured portion of the questionnaire were recorded. The analysis of the open-end portion was done by entering the data on three-by-five cards. The statements were then sorted and classified into major categories.

Since the general purpose of this research was to investigate the effectiveness of parental learning which took place in the emergency room, the data were analyzed and presented in terms of the general purpose and specific aims as stated in Chapter I. The specific aims were to ascertain: (1) the impact, in terms of self-description of emotions felt, made upon the parent in the situation, and (2) the effectiveness of learning, through experience in the emergency room, expressed by parents.

The first part of the chapter is an analysis of the identifying information that appeared at the beginning of the questionnaire. The second part is an analysis of the responses given in the structured and open-end sections of the questionnaire.

medications, one had ingested a household cleaner, and

of a prior poisoning which happened only to the child

I. IDENTIFYING INFORMATION

Age of child. The ages of children in this study ranged from ten months to five years. Ages of children were recorded in terms of months rather than years. The arithmetic mean for ages of the children was twenty-seven months.

Age distribution and per cent of children falling in that group were as follows:

	AGE						TOTA	L NU	MBER			Tr with
tha s	rith	10	-	18	ph.	bein	g 2.1	4		n in	16.0	mily.
		19	Ŧ,	24		chil	dren	12		llows	48.0	
		25	-	36				5			20.0	
RUMBE		37	-	42				ER 20			8.0	
		43	-	60			-	2	2	4	8.0	8.0

Total number 25

Previous experience with accidental poisoning.

Parents were asked, "Have you been involved in the care of a prior poisoning which happened only to the child in the study?" Of the twenty-five responses, nineteen or 64.0 per cent replied, "No." Six or twenty-four per cent replied that the child had ingested an agent prior to this incident.

Among the six repeaters, three had ingested prescribed medications, one had ingested a household cleanser, and

one had ingested rat poison. The sixth child had ingested household cleaning agents on four occasions prior to the present incident.

Of the twenty-five respondents, two families added the information that one sibling, in each of the two families, had also had a poisoning accident at another time.

Number of children in the family. In answer to the question, "How many children do you have?" it was found that the number of children ranged from one to four with the arithmetic mean being 2.8 children in each family. The distribution of children is as follows:

NUMBER OF	A77 W W 10 P F W V I				
	FAMILY				
the lages 1 (page 27)	tabut agents 1		2		8.0
2			4		16.0
29.3			15		60.0
of askish	perents for th	is infor	4	tion was t	16.0
date the	Total number	red and	25	record th	

Parent who stayed in treatment room. The question,
"Who stayed with the child in the treatment room?" was
used in order to verify that the interviewee was the
parent who remained in the treatment room with the child.

Of the twenty-five respondents sixteen mothers, or 64.0

per cent of the respondents, stayed with their children.

Four fathers, or sixteen per cent of the respondents, and five couples of mother and father (twenty per cent) stayed with their children in the treatment room.

PARENT WHO STAYED WITH CHILD	NUMBER	PER CENT
Mother	16	64.0
Father	OF TYPES OF	16.0
Mother and father	5	20.0
Total number	25	

Name of respondent. The parent who stayed with the child in the treatment room was the respondent in the study.

Ingestant. In answer to the question, "What was the ingestant?" agents were recorded as shown in Table I (page 27).

Date of ingestion and Date of Interview. The purpose of asking parents for this information was to learn the date the ingestion occurred and to record the date in conjunction with the date of the interview. The time lapse between the date of ingestion and date of interview was considered a factor in the ability of the parent to recall information and upon the time in which the parent would alter the environment.

15 August, 1962 and the latest date of ingestion was

The parliest date of investion in the study was

1 July, 1963. The time lapse between date of ingestion

and date of interview ranged from ten days to ten months.

The arithmetic mean of the time lapse was recorded using

TABLE I NUMBERS AND PERCENTAGES OF TYPES OF INGESTANTS ACCIDENTALLY TAKEN BY YOUNG CHILDREN

Ingestant	Number	Per Cent
Aspirin (grains 1-1/4)	6	24.0
Vitamins with Iron	1	4.0
Prescribed medications	tion who rec	24.0
Paint Solvents	quenes 4 ; the	16.0
Cleaning, bleaching agents	lociden 3 to so	12.0
Other household products and chemicals:		
Plastic cement	as contained i	4.0
Plant fertilizer	ise V. The fi	4.0
Charcoal lighter fluid	facts 2	8.0
Moth balls	and quention :	4.0
Total number	25	

In order to record the responses of emotion felt in each phase it was necessary to place them along a continuum from "not very worried" to "panic-stricken" as shown below:

The earliest date of ingestion in the study was 15 August, 1962 and the latest date of ingestion was 1 July, 1963. The time lapse between date of ingestion and date of interview ranged from ten days to ten months. The arithmetic mean of the time lapse was recorded using a month consisting of thirty days; the mean was found to be seventy-three days or approximately two and one-half months between date of ingestion and date of the interview.

ASSEMBLE STRUCTURED PORTION OF THE QUESTIONNAIRE

Recording Process

Data from the structured portion were recorded according to each phase in the sequence of the poisoning accident--from discovery of the accident to action taken, and toward accident prevention.

Each of the first four phases contained two questions; only one question was used in Phase V. The first question required the respondent to recall facts about what was done during that phase. The second question requested the respondent to recall her feelings about that phase of the incident. A second question was not included in Phase V, because it focused on actions and not feelings.

In order to record the responses of emotion felt in each phase it was necessary to place them along a continuum from "not very worried" to "panic-stricken" as shown below:

NUMBER PER CENT

poisoning. RESPONSES to this question, the humber of

responses, Not very worried of respondents abiting each

response Distressed

Really afraid

Very upset

Panic-stricken

Question Analysis

Phase I. Discovery of the poisoning. Responses to the question, "How did you discover the poisoning?" gave information about the way in which the parent found that her child had ingested a poisonous agent. The twenty-five respondents made thirty-eight responses. Eight of the respondents gave only one answer to the question and seventeen gave more than one answer. The responses given were:

only coresponse heaptest, and one read	NUMBER PER	CENT
Noted child with material around his mouth		20.7
Observed pills were gone	5 PER CENT	3.3
Observed that container was gone	1 12.5	
Observed child with container in his hand		
Noted that child looked sick	6 89 5	15.9
Tried to identity pill Total number	38 5.0	

The parent was asked to check the response which best described how she felt during the discovery of the

poisoning. Responses to this question, the number of responses, and the per cent of respondents making each response are below:

RESPONSE	NUMBER	PER CENT
Not very worried	3 2	12.0
Distressed	3 6	12.0
Really afraid	3 2	12.0
Very upset	9 14	36.0
Panic-stricken	7 1	28.0
Total number	25	

Phase II. Deciding on some action. Parents were asked, "How did you decide on some action?" or how they decided on the action to be taken after discovering the poisoning accident. Of the twenty-five respondents, nineteen checked more than one item. Six respondents only called the hospital, and one read the label on the can. Responses to this question were:

RESPONSE And to the hospital N	UMBER	PER CENT)
Called husband Total humber	5 25	12.5	
Consulted another adult (family member or neighbor)	4	10.0	
Called the hospital	21	52.5	action
Tried to identify pills	2	5.0	
Read label on can, jar or bottle	7	17.5	
Consulted poison chart	1	2.5	
Total number	40		

How did you feel during this phase. Parents were asked to check the response indicating how they felt while deciding on the action. Responses showed:

		2020
RESPONSE	NUMBER	PER CENT
Not very worried	2	8.0
Distressed	6	24.0
Really afraid	2	8.0
Very upset	14 14	56.0
Panic-stricken Asked, What	did youlds wh	ile thu.oct
treated your of Total Number	tment 25 m7"	Thirty-thre

Phase III. Action after a decision was made. As a follow-up to Phase II, respondents were asked, "What did you do after a decision was made?" Of the twenty-five responses, the following actions were taken:

responses were given; sixteen respondents gave only one

RESPONSE	NUMBER	PER CENT
Tried to get child to vomit	2	8.0
Allowed neighbor to give child n	nilk 1	4.0
Took the child to the hospital	22	88.0
Stayed in room, Total number	25	33.0

How did you feel during this phase. Parents, when asked to check the emotional response while taking action in this phase, answered as follows:

RESPONSE	NUMBER	PER CENT
Not very worried salba haw they	felt 3hile t	heirl2.0ldre
Distressed regiment Responses	vere a5 follo	20.0
Really afraid	8	32.0
Very upset	NUMBER 8	32.0
Panic-stricken	1	4.0
Total number	25	36.0
Really afraid	3	22,0

Phase IV. Action while child was being treated.

Respondents were asked, "What did you do while the doctor treated your child in the treatment room?" Thirty-three responses were given; sixteen respondents gave only one answer and nine gave more than one answer. Answers to this question were:

RESPONSE	NUMBER	PER CENT
Stayed in room and watched	hangel of pe	rsonal3.0bits
Stayed in room and talked with child		и.
Stayed in room, held child, assisted by giving water to produce vomiting	14 II (page 34	42.4
Stayed in room, held child while lavage tube was inserted, comforted child	11	33.0
Comforted child while blood tests were done	7	21.6
Total number	33	

In order to analyze data from the open-end portion

of the questionneirs, each statement was entered on

How did you feel during this phase. Respondents were asked to describe how they felt while their children received treatment. Responses were as follows:

RESPONSE		NUMBER	PER CENT
Not very worried		4	16.0
PIDOLODOG		TION 9 TAKE	N BY 36.0 TS
Really afraid	VENTION OF PU	TURE ACCI	12.0
Very upset		7 _{Numbe}	28.0
Panic-stricken			8.0
Total	umber	25	

Phase V. Action taken after incident toward prevention of future accidents. Parents were asked, "What did you do after the incident toward prevention of more poisonings?" Answers were recorded in major categories: alteration of the environment, change of personal habits, checked the home and surroundings for potential poisons, and became aware of child's physical abilities. Answers were recorded as shown in Table II (page 34).

Table III (page 35) shows the action taken by parents following the accidental poisoning in relation to the type of ingestant.

III. OPEN-END PORTION OF THE QUESTIONNAIRE

In order to analyze data from the open-end portion of the questionnaire, each statement was entered on

TABLE II

NUMBERS AND PERCENTAGES OF ACTIONS TAKEN BY PARENTS
TOWARD PREVENTION OF FUTURE ACCIDENTS

Action Taken	Number	Per Cent
Alteration of environment only	6	24.0
Change of personal habits only	4	16.0
Checked home and surroundings only	1 n	4.0
Became aware of child's abilities on 1	у 0	0.0
Altered environment and changed personal habits	2	8.0
Altered environment and checked home	7	28.0
Altered environment, checked home, and changed personal habits	2	8.0
Altered environment, changed personal habits, checked home and became aware of child's abilities	1	4.0
Did nothing	2	8.0
Total number	25	0

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PARENT TAKEN I TYPE OF INGESTANT AND ACTION TAKEN FOLLOWING AN ACCIDENTAL POISONING strong emo ANALYSIS OF Was.

		Alter C Envir	Alteration of Environment	Change Person Habit	Change of Personal Habits	Che	Checked	became of Ch	Became Aware of Child's Ability	Nov	Nothing
Ingestant No.	Per Cent	4	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent	4	Per Cent
Medications 13	3 52.0	0 11	61.1	72	25.0	2	45.4	H 400 100 100	50.0	0	0.0
Paint Solvents	5 20.0	3	16.6	m	37.5	n	27.3	hey i	50.0	H	50.0
Cleaning, bleaching agents	2 8.0	0 0	0.0	gomman	12.5	o there	0.0	al 6 du	0.0	н	50.0
Other house- hold products and chemicals	5 20.0	4	22.3	70	25.0	м м	27.3	o dh	0.0	0	0.0
Total Number 25	2 100.0	0 18	100.0	00	100.0	#	100.0	1 2	100.0	2	100.0

separate three-by-five inch cards. Statements were then

separate three-by-five inch cards. Statements were then sorted and classified into major categories. Each question was analyzed separately for this study.

Question Analysis

I. How did you react to this experience? Respondents were given the opportunity to state in their own words the general emotional impact they felt due to the poisoning accident.

The largest number of responses centered on the

strong emotional impact was felt. Five or twenty per cent said they were not very worried. Other emotions expressed by the parents were: anger directed toward the child and anger directed toward themselves.

The following are some of the comments of the parents:

a cold de I was very excited. (10)

I was excited and almost panicky. (2)

I was afraid and nervous. (3)

I was "mad" at my child. (2)

I was angry with him because he knows better. (1)

I was angry because of my own carelessness. (1)

II. Do you feel this experience helped you to learn something? Please describe the learning that took place. The respondent was given the opportunity to consider if learning took place as a result of the incident itself or

nessures in care of an accident victim was needed.

from their experiences in the treatment room. Responses were examined for evidence of learning and this would be reflected in the responses given.

The largest number of responses centered on the awareness by the parent of the physical growth and development of the child. Parents were awakened to the child's curiosity about his environment and his ability to explore it.

The next most frequent responses centered on the need to make changes in the home such as to put a lock on the medicine cabinet and storage cabinets or to place items on a very high shelf. The third most frequent response indicated a need for the parents to change their personal habits. They stated that parents should: (1) store solvents in the original container rather than in a cold drink bottle, (2) avoid leaving medications on the top of the dresser or within easy reach of the child, and (3) avoid storing frequently used cleaning products under the kitchen sink.

When asked to describe the learning that took place respondents gave these comments:

- (1) The renewed awareness of the physical abilities of child to reach supposedly inaccessible objects. (20)
 - (2) The recognition of the need to alter the home environment. (7)
- (3) The realization that more knowledge about toxicity of common household products and first aid measures in care of an accident victim was needed.

stayed in the treatment room with your child? If yes, why? If no, why? All respondents said they would have chosen to stay with their child during treatment. The reasons most frequently given indicated that to stay in the treatment room would have satisfied the personal needs of the mother. Fifteen or sixty per cent responded in terms of personal satisfaction of their desires or needs. Five or twenty per cent felt they were obligated to stay and one or four per cent felt she wanted to stay but gave no reason. Four or sixteen per cent responded in terms of satisfying the needs of the child.

Statements from respondents to this question included:

I wanted to be there. (13)

My child needs me. (4)

Mothers should be there. (3)

So I would know what was being done. (2)

They say I have to. (2)

IV. Did you experience a "delayed reaction" after this incident? If so, when did it occur and what happened?

Twelve or 48.0 per cent said they experienced no delayed reaction after the incident. Thirteen or 52.0 per cent remarked they had a delayed reaction. All respondents seemed to understand the meaning of "delayed reaction" and all had no difficulty in answering the question.

Responses to the question about when the reaction

Upon arriving home from the hospital. (9)

During the night, after the accident. (3)

Next day, after the accident. (1)

Responses to the question about what occurred during the delayed reaction were:

I was shaky in the knees and nervous. (7)

(2) make I couldn't sleep. (3) as planting locks on

I was nervous and cried a lot. (3)

contain looks for bothroom and storage alosots Cande of

Since you have experienced an accidental poisoning, have you any advice to offer that might be useful to other parents and others toward the prevention of poisonings? Parents were given the opportunity to aventine of pol reiterate the previous information about what they had classes in first and for mothers. (2) courses learned from this experience and to add any other infordevelopment to parents; and (9) the distrimation about prevention about which they felt strongly. tion of literature on potson provention to prenata There were fifty-two responses which were placed in six categories: (1) general awareness of child's growth and development, (2) change of environment, (3) change of parent's personal habits, (4) education for prevention, (5) possible factors in poisonings (not previously mentioned), and (6) others.

Sixteen or 30.7 per cent of the responses urged parents to develop an acute awareness of: (1) the physical

abilities and curiosity of their children, (2) the toxicity of common household products, and (3) the dangerous properties of common household medications, when taken in large quantities, such as aspirin and vitamins with iron.

Nineteen or 36.3 per cent of the responses indicated that parents should: (1) make an examination of their homes periodically in search of potential hazards and practices which may lead to accidental poisonings, (2) make changes in the home such as placing locks on medicine and storage cabinets or building cabinets which contain locks for bathroom and storage closets, and (3) dispose of outdated medicines periodically by flushing them down the toilet.

six or 11.5 per cent of the answers urged educational measures for prevention of poisonings through: (1) classes in first aid for mothers, (2) courses in child growth and development to parents, and (3) the distribution of literature on poison prevention to prenatals.

Two or 3.9 per cent made responses based on their observations of their families and suggested two possible factors be considered in accident prevention.

The following are some of the comments of the respondents:

Develop awareness: with use of medications (3), with use of cleaning supplies and their toxicity (7), and with the physical abilities of preschool children (6).

Check environment for dangers. (2)

Flush outdated medicines down the toilet. (2)

Store cleaning products in the highest cabinets. (5)

Keep medicines in high cabinets. (5)

Don't use dangerous cleaning liquids in the home. (2)

Don't tell your child that aspirin are candy. (2)

Buy small bottles of aspirin. (2)

Mothers should take first aid courses. (2)

Two respondents considered family tensions as a factor Professional Status: Five or 31.3 per sent of the in causing poisoning accidents. One mother said two of her children have had poisoning accidents and on both occasions, prior to the accident, there had been a family quarrel which the children had witnessed. Four parents felt that the sibling position of the child involved in ventoon or the pay cent of the families the poisoning accident was a factor. Three of the parents private Redon. Five or iwenty yes cont lived in observed that the youngest of three children was given less discipline and was not supervised as closely as his siblings. The fourth parent observed that the middle or second of three children had two prior poisoning accidents and this was due to the child's need for affection and personal interest by the mother and which During the interviews all respondents offered to the parents were unable to satisfy.

show the storage space for medications, household cleaning

supplies, and solvents in their homes. All perents

complained about inadequate storage space. In only one

IV. ADDITIONAL INFORMATION OBTAINED DURING THE INTERVIEW

Many parents volunteered information which was not sought during the interview. This information was included in this report because it may have indications for further study. These data were categorized and presented as follows:

Pregnancy: Of the sixteen mothers who responded, six or 37.5 per cent were pregnant at the time of the poisoning accident.

Professional status: Five or 31.3 per cent of the mothers were graduate professional nurses. One mother was a professional graduate nurse and also pregnant.

One father-respondent was a medical corpsman in a military hospital.

Housing: Seventeen or 58.0 per cent of the families lived in private homes. Five or twenty per cent lived in base housing. To live in base housing is to occupy an apartment in the family-type multi-apartment building which is located on a military base. Three or twelve per cent of the families in the study lived in mobile homes.

During the interviews all respondents offered to show the storage space for medications, household cleaning supplies, and solvents in their homes. All parents complained about inadequate storage space. In only one

dwelling, a private home, a medicine cabinet equipped with a lock was found. Eight of the dwellings had accessory buildings used for storage of household products and chemicals; there were no locks on the doors nor locked cabinets within the buildings. No cabinets with locks were found in the five apartments in base housing which were visited.

V. SUMMARY

respondents were asked to recall facts about what they

Statements in the three parts of the questionnaire were analyzed and presented in terms of the general purpose and specific aims of the study.

The ages of children in the study ranged from ten
to sixty months and the arithmetic mean was twenty-seven
months. Nineteen or 64.0 per cent of the children had
no previous accidental poisonings while six or 24.0
per cent were repeaters. Fifteen or sixty per cent of
the children in the study were from families which had
three children in them.

The mother most often stayed with her child during treatment and the same number of mothers, sixteen or 64.0 per cent, were respondents during the interview.

Information about the ingestants was sought.

Findings showed that thirteen or 52.0 per cent of the ingested agents were medications, four or 16.0 per cent were paint solvents, and three or twelve per cent were

cleaning and bleaching agents. Five or twenty per cent of the ingestants were other household products and chemicals.

In analyzing the date of ingestion and date of interview, it was found that the time lapse ranged between ten days to ten months and the arithmetic mean was seventy-three days or two and one-half months between date of ingestion and date of interview.

In the structured portion of the questionnaire respondents were asked to recall facts about what they had done in each phase of the accidental poisoning. They were also asked to recall the emotion felt during each phase.

that parents most often discovered the poisoning by observing the child with the container in his hand; eight or 20.7 per cent noted that the child had material from the container around his mouth. Nine or 36.0 per cent of the respondents said they were very upset at this time while seven or 28.0 per cent said they were panic-stricken upon discovering the accident.

In order to decide on some action to take twenty-one of the respondents called the hospital for information about what to do. While making the decision to take the action, fourteen of the respondents or 56.0 per cent said they were very upset and six or 24.0 per cent were distressed.

or 88.0 per cent of the parents took the child to the hospital while two or eight per cent tried to get the child to vomit and one or four per cent allowed a neighbor to give the child a glass of milk. During the time that action was taken, eight or 32.0 per cent of the families said they were really afraid and eight or 32.0 per cent said they were very upset.

While the doctor treated the child in the treatment room fourteen or 42.4 per cent of the respondents stayed in the treatment room and assisted by giving water to produce vomiting. Eleven or 33.0 per cent of the respondents stayed in the room and held the child while the lavage tube was inserted. During this phase nine respondents said they were distressed and seven or 28.0 per cent said they were very upset.

After the incident all respondents took one or more steps toward prevention of future accidents. Eighteen or 72.0 per cent of the steps concerned an alteration of the home environment and four or sixteen per cent were concerned with a change of personal habits of the parents.

The open-end portion of the questionnaire gave the opportunity to respondents to enlarge on statements in the structured portion. Fifteen or sixty per cent of the respondents said a strong emotional impact was felt during

parents to change the environment of the child, advised

the poisoning accident. Five or twenty per cent said they were not very worried.

When asked if they felt they had learned something from the experience, all replied that they had learned something. The largest number of responses about their learning centered on the development of a new awareness of the physical growth and development of the child, about the child's curiosity and his ability to explore his environment.

All respondents replied they would have chosen to stay in the treatment room during treatment of the child had they been given a choice to do so or not. Fifteen or sixty per cent of the respondents gave reasons for the choice in terms of personal satisfaction of the desires and needs of the mother and four or sixteen per cent were in terms of satisfying the needs of the child.

Twelve or 48.0 per cent of the respondents experienced no reaction after the incident while thirteen or
52.0 per cent replied they had a delayed reaction.

In the final question respondents were given the opportunity to offer advice to others about prevention of poisonings. Fifty-two responses urged parents to develop a general awareness of the child's abilities and of the toxicity of common household products, advised parents to change the environment of the child, advised

changing personal habits, advocated more education for prevention, and offered suggestions of possible factors in all poisoning accidents.

Additional information from the interviews concerned facts about housing, the professional status of the mother, pregnancy in the mother, and sibling position.

. . This study was conducted to investigate the Status effectiveness of parental learning which took place in the quargency room following accidental poleonings by roung children. The spacific sign of the study were description of emotions folt, made upon the parent is the situation, and (2) the effectiveness of learning, through experience in the energoney room, as axprosted ... In the raview of literature there were sany ladiosaccidental-personings. The education of parents is the office or emergency room was suggested as the best again toward prevention of future poisoning eccidents. . However, physicions were confronted with the problem of teaching proventive measures to parents who were already wants and displayed strong emotions to the tretounk lineis. The subjects enterted water parents to oblighed who had experiment of excidental pointains and yers treated in a selected statement hempital. The clinical records

CHAPTER IV

of twenty-five children who had received treatment for as

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

I. SUMMARY OF THE STUDY

This study was conducted to investigate the
effectiveness of parental learning which took place
in the emergency room following accidental poisonings
by young children. The specific aims of the study were
to ascertain: (1) the impact, in terms of selfdescription of emotions felt, made upon the parent in
the situation, and (2) the effectiveness of learning,
through experience in the emergency room, as expressed
by parents.

In the review of literature there were many indications that physicians were interested in the problem of accidental poisonings. The education of parents in the office or emergency room was suggested as the best means toward prevention of future poisoning accidents. However, physicians were confronted with the problem of teaching preventive measures to parents who were already upset and displayed strong emotions to the incident itself.

The subjects selected were parents of children who had experienced an accidental poisoning and were treated in a selected military hospital. The clinical records

of twenty-five children who had received treatment for an accidental poisoning were examined. Parents who stayed with their children in the treatment room were selected for interview.

The normative-survey or descriptive method was used.

Data for a questionnaire were secured by an interview.

The questionnaire was divided into the introductory section designed to obtain identifying information about the population selected for interview, a structured portion, and an open-end portion. Items on the questionnaire were based on a review of literature, informal discussions with military medical officers, the results of the pilot study, and the investigator's own experience.

The structured portion of the questionnaire followed the sequence of phases in the experience of the parent from discovery of the poisoning to a time after the incident. The open-end portion contained questions designed to obtain an amplification of feelings about the accident and further evidence of learning that took place.

Data from the structured portion of the questionnaire were recorded and analysis of the open-end portion was done by entering data on three-by-five inch cards. The statements were then sorted and classified into major categories.

observed the child with the container of the ingestant

The analysis of the responses given by the twenty-five parents about the children who had accidental poisonings revealed that: (1) sixteen or 64.0 per cent were between the ages of ten and twenty-four months, (2) six or 24.0 per cent were poisoning repeaters, and (3) fifteen or 60.0 per cent came from families which had three children. The majority of the children in the study ingested medications such as aspirin and prescribed medications for adults.

The findings showed that of the twenty-five respondents sixteen or 64.0 per cent were mothers. Of these sixteen mothers, six or 37.5 per cent were pregnant at the time of the accidental poisoning. Five or 31.3 per cent of the sixteen mothers were professional graduate nurses. One father-respondent was a medical corpsman in a military hospital.

The majority of the respondents experienced the strongest emotional impact at the time of the discovery of the accident with a lowering of emotional responses as assistance was given by a sharing of the experience with others. Almost one-half of the respondents felt no delayed reaction while those who did so felt shaky and nervous upon arriving home from the hospital and after the treatment of the child.

The poisoning was discovered most often when parents observed the child with the container of the ingestant

in his hand. Most parents were very upset or panicstricken at that time and called the hospital for advice.

After parents called the hospital the majority or 88.0 per cent did not try to get the child to vomit and, instead, took the child to the hospital for treatment immediately.

while the child was being treated, the majority of parents stayed in the room, held the child and comforted him while either medications and water were given to induce vomiting or a lavage tube was inserted in order to remove the agent. Parents, at the time, were most often distressed or very upset.

respondents took some action toward prevention of future accidents; two said they did nothing. The majority of parents checked the home and surroundings for potential poisons and made some alteration in the environment. The majority either placed medicines on a high shelf or cleaning products on a high shelf. The central pattern seemed to be that if the child accidentally ingested medicines, parents placed medicines on a high shelf but gave no thought to storage of cleaning products. If the child ingested a cleaning product, such products were stored on a higher shelf but no thought was given to the storage of medications.

learn more about each child's individual abilities, his

During the interview period the dwelling of each respondent was examined. All homes lacked adequate storage space; two homes had locked storage space for cleaning products and one home had a locked medicine cabinet. The majority of parents kept cleaning supplies stored in cabinets other than under the kitchen sink but still within reach of the children. Most parents were trying to devise a better method of storing medicines but had failed to do so. Medicine cabinets in private homes, base housing, and mobile homes were constructed similarly and were not equipped with locks.

When asked if experience with accidental poisoning helped them to identify some learning, all respondents replied that they had learned something. They indicated they had learned in the following areas:

- (1) The renewed awareness of the physical abilities of the child to reach supposedly inaccessible objects.
- (2) The recognition of the need to alter the home environment.
- (3) The realization that more knowledge about toxicity of common household products and first aid measures in care of an accident victim was needed.

The identification of learning was reflected in the answers to the question in which parents were asked to offer any advice they felt would be useful to other parents. The majority of parents urged parents to learn more about each child's individual abilities, his

emotional needs, and the amount of supervision and discipline the child requires. The remainder of the respondents centered their answers on the need for education of parents about toxicity of common household products, preventive measures in accidental poisonings, and first aid measures to take if a poisoning occurs.

II. CONCLUSIONS

The following conclusions have been based on the findings of this study:

- (1) The majority of parents who discovered a poisoning accident made a decision for action, executed the action, remained with the child during treatment, and felt a strong emotional impact throughout the entire incident.
- (2) All but two respondents took some action in the form of alteration of the home environment, change of personal habits, and checking the home for hazards to prevent future accidents.
- (3) The majority of parents stated their learning took the form of a renewed awareness of the physical abilities of their child.
- (4) It is questionable if learning by parents was due to their experiences in the emergency room.

... (5) A study be done to determine if the children -

of professional people are more often involved in

- among the mothers of the children who experienced a poisoning accident.
- (6) The majority of dwellings occupied by military personnel and their dependents have inadequate storage space and there are no adequate facilities for locking the present storage cabinets for medications and cleaning products.

III. RECOMMENDATIONS

The following recommendations were made on the basis of the information revealed in this study.

- (1) The learning experiences provided by medical and nursing personnel in the emergency room be evaluated for learning effectiveness.
- (2) Classes in child growth and development for parents be stressed in public health teaching activities with the same intensity as classes in prenatal and postnatal care.
- (3) Further study be done on the possibilities of deliberate ingestion by children for satisfaction of unmet psychological needs.
- (4) A systematic study be done of the relationship between family tension and poisoning accidents.
- (5) A study be done to determine if the children of professional people are more often involved in

accidental poisonings than children of the other occupational groups.

(6) Public health nurses, in civilian and military public health nursing positions, cooperate with local Poison Control Centers and the Public Health Service in reporting of all poisoning accidents, the observations made, and the possible causative factors in each poisoning.

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Cal. Janua &. Wett, M.C. Chief, Preferentiant Services Fitzeleses Suspend Respital Decreas St. Calorado

Dear Call Water

This is to confirm our provides scattered at which time I soled pormission to conduct a study to investigate the laurning which takes place when payents are in a stressful situation in mind is the treatment of a years child following an accidental ingestion of a sciences egent. These children, dependents of the hilitary in the Depter area, were treated in the treatment result in the Padistric Clinic and the Outpatient Department of Fitzelman General Hospital in the past six to sight months.

The spoluted interview schodule will be utilized.

Home white will be made to parents of the children

involved; such home visits will be made on an appointment
basis and with the full permission of the parents involved.

Addresses, identifying information and other data necessary
will be evened from records in the Bedigtric Climia.

Accidental poisonings are of national concern and of immediate concern to Army Health Murses and Preventive Medicine personnel in each military installation. The findings of this study may be relevant and useful in each military installation where Army Health Murses are assigned.

If you would like to have a copp of the abstract of this thesis, I will be most happy to provide one for you.

Thems you for your assistance and occuparation.

Yours truly,

Mary E. Rellar Major, ANC Col. James A. Weir, M.C. Chief, Professional Services Fitzsimons General Hospital Denver 40, Colorado

Dear Col. Weir:

This is to confirm our previous conversation at which time I asked permission to conduct a study to investigate the learning which takes place when parents are in a stressful situation. The stressful situation in mind is the treatment of a young child following an accidental ingestion of a poisonous agent. These children, dependents of the military in the Denver area, were treated in the treatment rooms of the Pediatric Clinic and the Outpatient Department of Fitzsimons General Hospital in the past six to eight months.

The enclosed interview schedule will be utilized. Home visits will be made to parents of the children involved; such home visits will be made on an appointment basis and with the full permission of the parents involved. Addresses, identifying information and other data necessary will be secured from records in the Pediatric Clinic.

Accidental poisonings are of national concern and of immediate concern to Army Health Nurses and Preventive Medicine personnel in each military installation. The findings of this study may be relevant and useful in each military installation where Army Health Nurses are assigned.

If you would like to have a copy of the abstract of this thesis, I will be most happy to provide one for you.

Thank you for your assistance and cooperation.

Yours truly,

Mary E. Bellar Major, ANC

INTERVIEW SCHEDULE USED TO INVESTIGATE THE ATTITUDES OF THE PARENT DURING VARIOUS PHASES IN THE INCIDENT OF ACCIDENTAL POISONING IN YOUNG CHILDREN

THE INCIDENT:	TEN MEICH APPLIES IN BACH PHASE OF THE POISONING.
	APPENDIX B
	th meterial around his mouth.
	pilla were gene.
observed that	container was gone.
observed child	with container in his hand.
	ld looked sick.
new part part parts.	stricken.

INTERVIEW SCHEDULE USED TO INVESTIGATE THE ATTITUDES OF THE PARENT DURING VARIOUS PHASES IN THE INCIDENT OF ACCIDENTAL POISONING IN YOUNG CHILDREN

Age of childPrevious experience with	accidental
poisoning? YesNone How many child	dren do you
have? Who stayed with child in treatme	ent room?
Name of respondent Ingests	ant
Date of ingestion Date of inte	
PLEASE CHECK THE ITEM WHICH APPLIES IN THE INCIDENT:	N EACH PHASE OF
PHASE I. DISCOVERY OF THE POISONING.	
A. How did you discover the poisoning	g?
noted child with material around	his mouth.
observed that pills were gone.	
observed that container was gone.	
observed child with container in	his hand.
noted that child looked sick.	
other other	•
B. Please check the response which be how you felt during this phase of	est describes the incident:
not very worrieddistressedreally	afraid
very upsetpanic stricken	
very upant panto atribus	

A.	How did you decide on some action?
	called husband.
	consulted another adult (family member or neighbor).
	called hospital.
	tried to identify pills.
	read label on can, jar or bottle.
	knew the product and its potential dangers.
	other.
в.	Please check the response which <u>best</u> describes by you <u>felt</u> during this phase of the incident:
_not_v	ery worried distressed really afraid
	upsetpanic stricken
ASE II	I. ACTION AFTER A DECISION WAS MADE.
A.	I. ACTION AFTER A DECISION WAS MADE. What did you do after a decision was made?
	AN NUMBER ASSESSED
	What did you do after a decision was made?
	What did you do after a decision was made? _tried to get child to vomit. _took child to the hospital. _other.
А.	What did you do after a decision was made? _tried to get child to vomit. _took child to the hospital.
В.	What did you do after a decision was made? _tried to get child to vomit. _took child to the hospital. _other. Please check the response which best describes how you felt during this phase of the incident: very worrieddistressedreally afraid
B.	What did you do after a decision was made? tried to get child to vomit. took child to the hospital. other. Please check the response which best describes how you felt during this phase of the incident:
B.	What did you do after a decision was made? tried to get child to vomit. took child to the hospital. other. Please check the response which best describes how you felt during this phase of the incident: very worrieddistressedreally afraid upsetpanic stricken

PHASE IV	. ACTION WHILE CHILD WAS BEING TREATED:
A.	What did you do while the doctor treated your
	child in the treatment room?
	stayed in room and watched.
	stayed in room and watched.
	_stayed in room, talked with child.
	stayed in room, held child, assisted by giving
	water to produce vomiting.
801	stayed in room, held child while tube was inserted, comforted child.
	inserted, comforted child.
	_comforted child when blood tests were being done
	other.
B.	Please check the response which best describes
	how you felt during this phase of the incident:
	yes VHY, AT no, WHY?
not v	ery worrieddistressedreally afraid
very	upset panic stricken
PHASE V.	ACTION TAKEN AFTER INCIDENT, TOWARD PREVENTION OF FUTURE ACCIDENTS:
Α.	What did you do after the incident toward preven
	tion of more poisonings?
	NAME OF THE PERSON OF THE PERS
	_put a lock on the medicine cabinet.
	put a lock on the kitchen cabinets (where
	household cleansers, etc. are kept).
*	threw out all outdated medicines (over one year
	old).
	_flushed all outdated medicines down the toilet.
	placed all medicines on a high shelf (out of
2	reach of a four year old.)
	placed all cleaning products on a high shelf
	out of reach of a four year old).
	checked home and surroundings for potential poison
THE AMERICAN PROPERTY OF THE PERSON NAMED IN	other.

EXPERIENTIAL DISCUSSION

DO YOU FI SOMETHING PLACE.	EEL THIS EXPE	RIENCE H	ELPED YOU HE LEARNI	TO LEARN
STAYED	HAD BEEN GIVE IN THE TREATM WHY, if no, W	MENT ROOM	CE, WOULD	YOU HAVE R CHILD?
DID VOIL	EXPERIENCE AN	vy "DELA	VED REACTI	ON" AFTER
THIS INC	IDENT? IF SO	O, WHEN I	AS IT AND	WHAT HAPP
TNCE VOI	HAVE EXPERI	ENCED AN	ACCIDENTA	L POISONIN
HAVE YOU	ANY ADVICE TO ENTS AND OTH	O OFFER	THAT MIGHT	BE USEFUL