



Demographic differences in the substantiation of child abuse and neglect
by Thomas Arnold Curtis

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Science in Home Economics
Montana State University
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Abstract:

The purpose of this study was to determine if demographic differences existed between cases of child abuse and neglect which were reported to authorities and substantiated following investigation and those cases which were reported and not substantiated. A data set containing records of 12,616 incidents involving 10,476 children reported as abused or neglected during 1991 was obtained from the Montana Department of Family Services.

Seven different types of abuse and neglect were considered including physical abuse, emotional abuse, sexual abuse, physical neglect, emotional neglect, educational neglect, and medical neglect. The demographics of each of these was examined using the variables of gender, age, ethnicity, source of the report and relationship of the perpetrator to the victim.

The study found that overall 37.9% of the reported incidents of abuse or neglect were substantiated. Significant trends relating age and gender to reporting and substantiation rates were uncovered. The likelihood of substantiation of abuse and neglect varied based on the type of abuse or neglect and the victim's race, the relationship of the victim to the referral source, and the relationship of the perpetrator to the victim.

It was determined that there were demographic differences between cases of abuse and neglect which are reported and substantiated and those which are reported and not substantiated. These findings supported existing literature in some instances and contradicted it in others.

This study was conducted in part as a pilot for later research using expanded data bases. Recommendations for changes in certain data collection procedures are discussed as are suggestions for using the findings to screen reports of abuse and neglect.

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OF CHILD ABUSE AND NEGLECT

by

Thomas Arnold Curtis

A thesis submitted in partial fulfillment
of the requirements for the degree

of

Master of Science

in

Home Economics

MONTANA STATE UNIVERSITY
Bozeman, Montana

May 1992

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1992

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APPROVAL

of a thesis submitted by

Thomas Arnold Curtis

This thesis has been read by each member of the thesis committee and has been found to be satisfactory regarding content, English usage, format, citations, bibliographic style, and consistency, and is ready for submission to the College of Graduate Studies.

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A handwritten signature in dark ink, appearing to be "John D. ...", written over a horizontal line.

Date

22 May 1992

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ABSTRACT

The purpose of this study was to determine if demographic differences existed between cases of child abuse and neglect which were reported to authorities and substantiated following investigation and those cases which were reported and not substantiated. A data set containing records of 12,616 incidents involving 10,476 children reported as abused or neglected during 1991 was obtained from the Montana Department of Family Services.

Seven different types of abuse and neglect were considered including physical abuse, emotional abuse, sexual abuse, physical neglect, emotional neglect, educational neglect, and medical neglect. The demographics of each of these was examined using the variables of gender, age, ethnicity, source of the report and relationship of the perpetrator to the victim.

The study found that overall 37.9% of the reported incidents of abuse or neglect were substantiated. Significant trends relating age and gender to reporting and substantiation rates were uncovered. The likelihood of substantiation of abuse and neglect varied based on the type of abuse or neglect and the victim's race, the relationship of the victim to the referral source, and the relationship of the perpetrator to the victim.

It was determined that there were demographic differences between cases of abuse and neglect which are reported and substantiated and those which are reported and not substantiated. These findings supported existing literature in some instances and contradicted it in others.

This study was conducted in part as a pilot for later research using expanded data bases. Recommendations for changes in certain data collection procedures are discussed as are suggestions for using the findings to screen reports of abuse and neglect.

CHAPTER 1

ORIENTATION OF THE STUDY

Introduction

Nationwide in 1963, 150,000 incidents of suspected child abuse or neglect were reported to authorities (Martin & Besharov, 1991). By the late 1980's, that number had increased to 2,400,000 (Daro & Mitchell, 1990, cited in U.S. Advisory Board on Child Abuse and Neglect [USABCAN], 1990). The 16-fold increase in reports of maltreatment coincided with the implementation of mandatory reporting laws. The majority of reports were made by medical, educational, law enforcement, child care, and social service professionals who are statutorily required to report suspicions of neglect or abuse (American Humane Association [AHA], 1988).

Following receipt of reports of suspected child abuse or neglect, local child protective services investigate the allegations in an attempt to verify the maltreatment. Historically, between 40% (AHA, 1989) and 53% (National Center on Child Abuse and Neglect [NCCAN], 1988) of the reported incidents of abuse have been substantiated as a result of investigations by local child protective services. The remainder of cases, between 47% and 60%, were thus unsubstantiated.

Most available research has attempted to describe the population in which child abuse or neglect is substantiated. There is little information available on those families in which abuse is reported, but not substantiated. It is proposed that this thesis will attempt to answer the question: What are the differences between cases in which child abuse or neglect are reported and substantiated and those cases in which maltreatment is reported but not substantiated?

The research was conducted in conjunction with the Montana Department of Family Services (DFS), the agency responsible for child protective services in the state. The data was taken from the 10,476 incidents of abuse and neglect investigated by DFS in 1991. Following investigation, abuse and neglect allegations were substantiated in 4059 or 38.7% of the cases. A substantiated case is one in which DFS has been able to collect enough evidence through investigation to determine that the alleged abuse actually occurred. Included in the DFS data base was information on the type of abuse or neglect (sexual, physical, emotional, educational or medical) and demographic information on both the victim and the alleged abuser as well as the identity of the reporting source.

Purpose

The purpose of this research was twofold. The first was to develop a basic understanding of the characteristics of and differences between substantiated and unsubstantiated cases of

differences between substantiated and unsubstantiated cases of reported child abuse and neglect in an effort to lay a foundation for further research. This study provides a basic demographic description of each of these groups, highlighting their similarities and differences.

A second purpose was to develop information that will be of value in both the investigation and prevention of child abuse and neglect. A better understanding of the differences between substantiated and unsubstantiated reports may assist child abuse and neglect investigators in the development of more efficient screening methods. Enhanced understanding of cases in which abuse or neglect is not substantiated may place social workers and therapists in a better position to assist these families following an investigation.

It should be noted that lack of substantiation does not necessarily equate with absence of abuse or neglect. An unsubstantiated case is one in which DFS investigators have failed to find sufficient grounds to prove that abuse or neglect are present.

Theoretic Rationale

Systems theory proposes that the family is an open, social system. It functions not as a discrete, autonomous unit, but rather in the context of the other systems with which it co-exists. Researchers at the Marlborough Family Service in London, England, described child abuse in a family

...families do not exist in isolation: They have their own contexts, involving relatives and friends, the neighborhood, and indeed the wider social and political setting. Child abusing families often demonstrate this, having unparalleled powers to recruit and to keep engaged significant groups of professionals from a wide variety of disciplines. Child abuse in a systems framework is therefore defined as an event which is related to the structural requirements and interactional patterns of the family and the wider network as it becomes involved. (Asen, George, Piper, & Stevens, 1989, p. 46)

Bronfenbrenner (1979) described the effect of interlocking systems on individual development from an ecological viewpoint. He proposed that there are four basic systems which affect the development of a child. The microsystem is the child's pattern of activities and relations in a given setting, for example, the family or school. The mesosystem is made of interactions between the child's various microsystems such as between family or school or friends. The exosystems are those systems which affect the child, but with which the child has no direct contact, such as a parent's employer. The macrosystem refers to the culture as a whole and its belief systems. Garbarino (1977a) suggested that the ecological viewpoint is a valuable model for describing child abuse. He proposed that abuse is a pathological adaptation by both caregiver and child which is created by a coming together of forces within a microsystem.

Belsky (1980) and Seibel (1990) expanded the work of Bronfenbrenner, by suggesting a slightly different ecological model to explain child abuse. Belsky posited a four-part framework including, the micro, exo, and macro systems and

framework including, the micro, exo, and macro systems and adds ontogenic development. Ontogenic development includes all of the characteristics which an abuser brings into the relationship with the child. These characteristics might include poor health, physical disability, lack of education or abusive experiences in childhood.

Garbarino (1977b) suggested that child abuse occurs when stresses within the family microsystem reach a critical mass. Garbarino (1977a, 1977b) and Belsky (1980) both pointed to a linkage between these stresses and isolation of the family microsystem from other micro, meso, and exo support systems in families where abuse occurs.

This study attempts to describe patterns relating to child abuse and neglect within and among these systems. The relationship of the abuser and victim is a description of the microsystem. The relationship of the reporter to the victim may describe either an interaction involving a microsystem (i.e., family or school) and a exosystem (child protective services) or two exosystems (i.e., a therapist and child protective services). Ethnicity may be one indicator of a large macrosystem's influences on substantiation of child abuse and neglect.

Nominal Definitions

There are a number of distinct approaches used to define maltreatment of children (Graham, Dingwall, & Wolkind, 1985).

For the purpose of this paper, definitions were derived from the U.S. Department of Health and Human Services National Incidence Study of 1986 (NCCAN, 1988) and the American Humane Association's National Study on Child Neglect and Abuse Reporting (AHA, 1984). Following is a list of definitions used for this study.

Types of Abuse and Neglect

Physical Abuse: Action toward a child resulting in physical injury or potential physical injury to the child. This can range from shaking a child or twisting a limb to cuts, burns, broken bones, internal organ or brain damage.

Emotional Abuse: Includes three subcategories: (a) close confinement such as tying, binding, or confining a child to an enclosed area as a means of punishment; (b) verbal or emotional assault such as habitual patterns of belittling, denigrating, scapegoating, rejecting, or threatening with physical or sexual assault or abandonment; and (c) other or unknown abuse which includes attempted or potential physical or sexual assault, intentional withholding of food, shelter, or sleep as a punishment; or economic exploitation.

Sexual Abuse: Includes three sub-categories: (a) intrusion which is actual penile penetration;

b) molestation with genital contact where genital contact has occurred but there is no indication of intrusion; and
(c) Other or unknown which includes unspecified acts not known to have involved the genitals such as fondling of breasts or buttocks, or exposure.

Physical Neglect: Includes abandonment, expulsion from the home without other arrangements for care being made, custody-related inattention to a child's needs, inadequate supervision, and inattention or inadequate nutrition, clothing, hygiene, safety, or welfare.

Emotional Neglect: Includes inadequate nurturance or affection, chronic or extreme spouse abuse, permitted drug or alcohol abuse, permitted maladaptive behavior, such as delinquency, refusal or delay of psychological care, and neglect of developmental or emotional needs.

Educational Neglect: Includes permitted chronic truancy, failure to enroll, and inattention to special educational needs.

Medical Neglect: Refusal of health care or delay in seeking health care.

Fatality: A death resulting from abuse or neglect.

Other Definitions

Report: Information received by DFS alleging that a child has been the possible victim of abuse or neglect. A report may be submitted by someone mandated by law to report suspicions such as mental health workers, medical service suppliers, educators, child care providers, or law enforcement personnel. A report may also come from the general public such as concerned neighbors or relatives.

Investigation: The process used by DFS to determine the veracity of reported incidents of child abuse or neglect. This process varies based on jurisdiction and nature of the report. The investigation usually results in a finding that the report of abuse or neglect was substantiated or unsubstantiated.

Substantiated: Reported cases in which the investigation has uncovered sufficient evidence to determine that the abuse or neglect has occurred are classified as substantiated.

Unsubstantiated: Reported cases in which the investigation has not uncovered sufficient evidence to determine that the abuse or neglect has occurred are classified as unsubstantiated. Unsubstantiated does not mean that abuse or neglect have not occurred, only that insufficient evidence of the allegations is available to substantiate the report.

CHAPTER 2

REVIEW OF THE LITERATURE

Introduction

A review of literature was conducted to explore the extent to which the subject of reporting and substantiation of child abuse and neglect has been researched. The review is presented in two sections. The first section describes the research literature and its content. The second section is an examination of empirically derived descriptions of abusers, victims, and reporters. From this review of literature, a set of hypotheses was developed. These hypotheses are enumerated following the second section of the literature review.

Section 1. Research Literature

Quantitative research on child abuse reporting and substantiation is limited. While there are entire journals dedicated to the study of the maltreatment of children, little attention is given to these initial stages of intervention by child protective services.

One area of focus includes several studies which explore variables that affect the validity of reports and substantiation. Flango (1991) looks at means of increasing

substantiation rates through the use of central registries and through the development of risk-assessment models. Thoennes & Tjaden (1990) looked at the effect of custody disputes on sexual abuse allegations and found that only 50% of such allegations were substantiated. Zuravin & Watson (1987) found that anonymous reports were less likely to be substantiated than those filed by professionals. Knudsen (1989) looked at the affects that repeated complaints involving the same children over a period of years and nonreporting of known cases had on research. He found that the lack of reporting of many known cases of abuse and duplicate reporting of others should be cause for skepticism about child abuse statistics and the adequacy of interventions.

Eckenrode, Munsch, Powers, and Doris (1988) review a number of variables involved in the substantiation of sexual abuse reports in New York State. Eckenrode et al. focused on substantiated cases but makes no mention of the demographic features of those whose cases were not substantiated. Johnson and Showers (1985) reviewed 616 cases of children admitted to a Columbus, Ohio, hospital with injuries believed to be the result of abuse. They found that mothers were the most frequent perpetrators of abuse. Johnson and Showers research also reported that males constituted more than half of the abusers. Types of injuries varied with age and race, but not the sex of children.

Faller (1985) outlined problems which exist in the reporting to and investigations by child protective services. She reports that in 1980, 47% of reports by professionals were substantiated as compared to only 35% of the reports by nonprofessionals.

Section 2. Characteristics of Abuse and Neglect

Several publications describe reported and substantiated incidents of abuse and neglect. These publications were compiled by the American Humane Association (AHA, 1984, 1988, 1989) and the National Committee for the Prevention of Child Abuse (Daro & Mitchell cited in USABCAN, 1990) as well as various governmental agencies such as the National Center on Child Abuse and Neglect (1988) and the Montana Department of Family Services. The National Center on Child Abuse and Neglect Study of National Incidence (1988) reached the following conclusions regarding trends in the characteristics of maltreated children and their families. Except where noted, the following statistics are derived from that source.

Gender of Child

1. Females are more likely to be abused than males.
2. Females are abused more than neglected, while among males the rates are similar.
3. Females are sexually abused nearly 4 times the rate of males.
4. Females experienced more injuries than males.

Age of Child

1. Maltreatment, overall, increases reliably up through age 8.
2. Children 0-2 years old and 15-17 experienced somewhat more abuse than neglect.
3. For those older than 2 and under 15 abuse exceeded neglect.
4. Fatalities most often occur in the under 6 age category.

Child's Ethnicity

The characteristic of race was not related to the type or severity of maltreatment.

Gender of Perpetrator (AHA, 1988)

1. All maltreatment types: Males 46.7%, Female 53.3%
2. Physical Abuse: Males 50.5%, Females 49.5%
3. Sexual Abuse: Males 82.4%, Females 17.6%
4. All Neglect: Males 30.3%, Females 69.7%
5. Emotional Maltreatment: Males 42%, Females 58%

Relationship of Perpetrator to Victim (AHA, 1988)

1. About 80% of all abuse perpetrators fall into the "Parent" category; that is, natural, step, or foster parents. About 7% are other relatives, and about 12% are unrelated.
2. About 42% of sexual abuse is committed by parents, about 23% by other relatives and 35% are unrelated.
3. About 92% of neglectors are parents.

Family Size

There was no relationship between number of children in a family and the type or severity of abuse.

Type of County

There was no relationship between type of county (rural, urban or major urban) and the type or severity of abuse.

Source of Report (AHA, 1988)

1. Self (victim or perpetrator)	2.0%
2. Relatives, friends or neighbors	32.3%
3. Medical personnel	11.2%
4. School personnel	16.3%
5. Law enforcement	13.0%
6. Child care providers	11.4%
7. Anonymous	9.4%
8. Other (includes landlords clergy and others not classified)	2.3%

Conclusion

The existing literature provides detailed information on cases where maltreatment of children is substantiated. It supplies no empirically based description of the differences between substantiated and unsubstantiated cases of child abuse and neglect. Insufficient information is available in the literature to indicate if there are specific significant differences in the various demographic attributes of these two

possible outcomes of investigations by child protective services.

Given that no basis has been found in the literature to assume that there are demographic differences between substantiated and unsubstantiated cases of child abuse and neglect, the following hypotheses were tested.

Hypotheses

Hypothesis 1

There is no demographic difference between cases in which child abuse or neglect was reported and substantiated and those in which such behavior was reported and not substantiated.

Hypothesis 2

There is no demographic difference between cases in which physical abuse was reported and substantiated and those in which it was reported and not substantiated.

Hypothesis 3

There is no demographic difference between cases in which physical abuse was reported and substantiated and those in which it was reported and not substantiated.

Hypothesis 4

There is no demographic difference between cases in which emotional abuse was reported and substantiated and those in which it was reported and not substantiated.

Hypothesis 5

There is no demographic difference between cases in which physical neglect was reported and substantiated and those in which it was reported and not substantiated.

Hypothesis 6

There is no demographic difference between cases in which emotional neglect was reported and substantiated and those in which it was reported and not substantiated.

CHAPTER 3

METHODS

Introduction

The data for this study was provided by the Montana Department of Family Services. The sample included 10,476 incidents of child abuse or neglect investigated during calendar year 1991.

Data Collection

Suspected incidents of child abuse and neglect were reported to the local county DFS office. Investigations were conducted to determine the validity of the allegations. Each DFS office had autonomy to determine the method of investigation to be used in that county. DFS investigators throughout the state have received uniform training conducted by the state DFS (see Appendices A and B). Among training materials was the Protocol Notebook for Child Welfare Workers (Bertsche, Francetich, & Horejsi, 1985) which was prepared by the Department of Social Work at the University of Montana for DFS. The protocol is a description of the steps that should be taken by DFS workers in various situations as they investigate reported abuse. The protocol contains 14 stages

of investigation and intervention. It provides interviewing information and possible dialogues to be used, depending on the circumstances of the investigation and type of abuse or neglect being investigated. Another manual used in training was entitled Step by Step: Sixteen Steps Toward Legally Sound Sexual Abuse Investigations (Hindman, 1987). Hindman described legally sound techniques for investigating abuse.

Based on these guidelines, a decision was reached as to whether there existed sufficient evidence of abuse or neglect to require further intervention or the filing of criminal charges (see Appendix C). Following the investigation, a report was sent to the state DFS. These reports contained information about the incident, the participants and whether the local DFS was able to substantiate the report.

Variables

Each report described the type of abuse or neglect involved and whether the maltreatment had been substantiated. Categories included: physical abuse, sexual abuse, emotional abuse, physical neglect, emotional neglect, educational neglect, and medical neglect. The reports described the age, sex, and ethnicity of the victim and the relationship of the abuser. The source of the original report was also categorized. The reports were maintained in a discrete rather than cumulative form in the DFS computer which means that each of the variables from a particular investigation remained

linked to that case. Below is a complete listing of the variables that were considered. Appendix D is a copy of the report form used by DFS.

1. Type of Abuse or Neglect:

Physical abuse	Emotional neglect
Emotional abuse	Medical neglect
Sexual abuse	Educational neglect
Physical neglect	

2. Case Determination:

Substantiated	Unsubstantiated
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3. Gender of Child

4. Age of Child: For purposes of this study, the variable of victim's age was organized by combining children into groups based on the age of the child at the time of the investigation. Each group consists of all children whose ages fall within a 2-year block. For example, all of the children under the age of 2 are in the group identified as 0-1. All of the children who were either 10 or 11 years old at the time of the investigation are in the 10-11 group.

5. Ethnicity of child:

Caucasian	Vietnamese/Cambodian
Black	Asian/Pacific Islander
American Indian (see Appendix E)	Hispanic
Alaskan Native	Other or unknown

6. Relationship of Referral Source to Child:

Mother	Youth court
Father	Human/social services
Self	School
Sibling	Hospital staff
Other relative	Other medical professional
Neighbor	Residential staff
Child care provider	Legal guardian
Attorney	Economic assistance
Law enforcement	Other

7. Relationship of Perpetrator to Child:

Parent	Other caretaker
Other household member	Licensed/registered care provider
Caretaker substitute	School
Other	

Delimitations

Because this study was based on a sample drawn from reports originating in the state of Montana, it is not possible to generalize its findings to specific populations outside of Montana or the nation as a whole.

Limitations

This study was limited by the fact that it relies on investigations by DFS to substantiate abuse and neglect. There was no way to determine whether abuse or neglect has

occurred in those families in which it was not substantiated. It follows then, that some families which contributed to the description of the unsubstantiateds may have maltreated their children. The study was also limited by the fact that not all cases of child abuse were reported to the authorities. Without being able to draw a sample from the total population of abusers, it was impossible to know if the descriptions resulting from those investigated by DFS were representative of the total population.

The study was also limited by certain deficiencies in the data collection. For example, the data included a category defined as relationship of perpetrator. One of the options for reporting was parent, but it was not possible to determine from the data whether the parent was a mother or a father, stepfather or stepmother, or foster parents. Data on other family characteristics were not available. The researcher was limited to information required on DFS reports and was unable to seek additional data.

Analysis

The data contained in each of these cases was transferred from DFS in Helena to the Montana State University computers in Bozeman (see Appendix F). The methodology was similar to that which was used by Johnson and Showers (1985) in their study on injury variables in child abuse. Chi-square methods were employed to test differences between substantiated and

unsubstantiated reports based on the variables outlined above and to test each of the null hypotheses. The average percentage of cases that were substantiated or unsubstantiated in a given category was used as the expected value for that category. For example, in the category of Physical Abuse Reports by Female Victim Age, the overall percentage of cases which were reported and substantiated was also the expected value against which the substantiated cases for various age groups were compared. The overall percentage of substantiated cases in this category was 32.7; therefore, the expected percentage for females 14 and 15 years old was also 32.7. The actual percentage for substantiated cases in this age group turned out to be 42.3%. The difference between the expected value and the real value was tested using chi-square. This test determined that the difference between the actual 42.3% differs significantly at $\alpha < .5$ from the expected 32.7% given the overall number (n) of cases for this subcategory.

A minimum expected value of 5 in any given cell was required to avoid distortion (Huck, Cormier, & Bounds, 1974).

Significance

P-values represent the degree to which the differences between the expected values and the actual data may be attributed to chance. The level of significance or alpha was established at .05. This means that the null hypotheses were rejected if the difference between the variable and the

expected value happening by chance were less than 5%. The actual possibility of the differences occurring by chance is represented in the tables by the p-value. A p-value of .05 indicates that there is a 5% possibility that the difference between the actual and expected values happened by chance. A p-value of .50 indicates that there is a 50% possibility that the differences can be attributed to chance. A p-value of .00 indicates that there is no possibility that the differences can be attributed to chance.

CHAPTER 4

RESULTS

Introduction

The findings of this study are presented in seven sections. The first section is a generalized description of child abuse and neglect reporting and substantiation in Montana during 1991. The second section describes and analyzes the overall demographic factors in order to respond to the first null hypothesis which posited that there are no demographic differences between cases in which abuse or neglect is reported and substantiated and those in which abuse or neglect are reported and not substantiated. The remaining five sections describe the attributes of the various types of abuse and neglect in response to the remaining null hypotheses which state that there were no demographic differences between substantiated and unsubstantiated cases of physical abuse, emotional abuse, sexual abuse, physical neglect, and emotional neglect. Each section consists of an examination of the differences between substantiated and unsubstantiated reports based on gender, age, ethnicity, relationship of the referral source to the alleged victim, and relationship of the reported

perpetrator to the alleged victim. Tables describing educational and medical neglect are found in Appendices G and H.

Statistics

Chi-squares were used to determine whether the measured value for each demographic attribute within a variable differs significantly from the average substantiation rate for that variable.

Significance

Probability (p) values represent the degree to which the differences between the expected values and the actual data may be attributed to chance. The level of significance or alpha has been established at .05.

Findings

During calendar year 1991, 12,616 reports of child abuse and neglect involving 10,475 children were investigated by the Montana Department of Family Services (DFS). Of these cases 4,776 or 37.9% were substantiated, while 7,840 or 62.1% were unsubstantiated when the investigations were closed (see Table 1).

Table 1. Findings by Category

Type of Abuse or Neglect	Substantiated		Unsubstantiated		Chi-Square p	Total	
	Cases	Percent	Cases	Percent		Cases	Percent
Physical Abuse	966**	32.6	1,998	67.4	.0001	2,964	23.5
Emotional Abuse	710**	53.1	626	46.9	.0001	1,336	10.6
Sexual Abuse	484	37.1	819	62.9	.5939	1,303	10.3
Physical Neglect	1,988	34.7	3,734**	65.3	.0001	5,722	45.4
Emotional Neglect	423**	54.7	350	45.3	.0001	773	6.1
Medical Neglect	118	35.1	218	64.9	.3200	336	2.7
Educational Neglect	87**	47.8	95	52.2	.0074	182	1.4
Total	4,776	37.9	7,840	62.1		12,616	100.0

** Significantly greater than expected at alpha < .01

* Significantly greater than expected at alpha < .05

The volume of reports ranged from 5,722 cases of alleged physical neglect down to 182 cases of educational neglect. Substantiation rates ranged from a low of 32.6% for physical abuse to 54.7% for emotional neglect.

Hypothesis 1 - Overall Abuse and Neglect

The first null hypothesis stated that there is no difference between cases in which child abuse or neglect is reported and substantiated and those in which such behavior is reported and not substantiated. An evaluation of the data regarding abuse and neglect was conducted in order to determine if there were differences between substantiated and

unsubstantiated cases based on age, gender, or race of the victim, the identity of the referral source, or the relationship of the perpetrator to the victim. Chi-square formulae were used to determine whether substantiation rates for categories within these independent variables differed significantly from the average or mean substantiation rate for that variable.

Gender

The individual children reported were fairly evenly divided by gender. Of those included in reports 5,036 or 48.1% were male and 5,439 or 51.9% were female. However, 1990 census data indicates that 51.5% of the children in Montana under age 18 were and only 48.5% were (U.S. Bureau of Census, 1991) (see Appendix I). When this was taken into account, there were significantly ($p = .0001$) more female victims than would have been expected. The substantiation rate for males was 38.1% and 39.3% for females (see Table 2).

Table 2. Overall Abuse and Neglect Reports by Gender

Gender	Substantiated		Unsubstantiated		Total	
	Cases	Percent	Cases	Percent	Cases	Percent
Male	1,920	38.1%	3,116	61.9%	5,036	48.1%
Female	2,138	39.3%	3,301	60.7%	5,439	51.9%
Total	4,058	38.7%	6,417	61.3%	10,475	100.0%

Cases with female victims were most likely to be substantiated when they involved emotional abuse, emotional neglect, or educational neglect. All three had substantiation rates at or above 50%. Physical abuse and physical neglect were least likely to be substantiated for female victims (see Table 3).

Table 3. Reported Cases of Abuse or Neglect With Female Victims

TYPE OF ABUSE OR NEGLECT	Substantiated		Unsubstantiated		Chi-Square <u>p</u>	Total	
	Cases	Percent	Cases	Percent		Cases	Percent
Physical Abuse	476	32.8	976**	67.2	.0001	1,452	22.2
Emotional Abuse	390**	54.3	328	45.7	.0001	718	11.0
Sexual Abuse	362	38.4	580	61.6	1.0000	942	14.4
Physical Neglect	954	34.5	1,815**	65.5	.0001	2,769	42.3
Emotional Neglect	218**	55.9	172	44.1	.0001	390	6.0
Medical Neglect	69	39.2	107	60.8	.9087	176	2.7
Educational Neglect	49*	50.0	49	50.0	.0254	98	1.5
Total	2,518	38.5	4,027	61.5		6,545	100.0

** Significantly greater than expected at alpha < .01

* Significantly greater than expected at alpha < .05

Cases with male victims were also least likely to be substantiated for physical abuse and physical neglect. Cases of emotional abuse and emotional neglect were substantiated significantly more often than expected (see Table 4).

Table 4. Reported Cases of Abuse or Neglect With Male Victims

TYPE OF ABUSE OR NEGLECT	Substantiated		Unsubstantiated		Chi-Square p	Total	
	Cases	Percent	Cases	Percent		Cases	Percent
Physical Abuse	490	32.4	1,022**	67.6	.0001	1,512	25.0
Emotional Abuse	320**	51.8	298	48.2	.0001	618	10.2
Sexual Abuse	122	33.8	239	66.2	.1991	361	5.9
Physical Neglect	1,034	35.0	1,919*	65.0	.0148	2953	48.6
Emotional Neglect	205**	53.5	178	46.5	.0001	383	6.3
Medical Neglect	49	30.6	111	69.4	.1012	160	2.6
Educational Neglect	38	45.2	46	54.8	.1581	84	1.3
Total	2,258	37.2	3,813	62.8		6,071	100.0

** Significantly greater than expected at alpha < .01

* Significantly greater than expected at alpha < .05

Age

Each age group consisted of all children whose ages fell within a 2-year block. There were 367 cases in which the age of the victim could not be determined or was reported improperly.

The total number of reports by group tended to decrease as the children grew older. There were 1,494 investigations for abuse or neglect of children in the 0-1 group and only 487 cases for the 16-17 group (see Table 5).

Table 5. Overall Abuse and Neglect Reports by Age

Age	Substantiated		Unsubstantiated		Chi-Square p	Total	
	Cases	Percent	Cases	Percent		Cases	Percent
0-1	531	35.5%	963**	64.5%	.0052	1,494	14.8%
2-3	539	36.9%	923	63.1%	.0849	1,462	14.5%
4-5	538	40.2%	801	59.8%	.4346	1,339	13.2%
6-7	482	37.2%	812	62.8%	.1815	1,294	12.8%
8-9	461	38.9%	723	61.1%	.9315	1,184	11.7%
10-11	420	39.0%	658	61.0%	.9503	1,078	10.7%
12-13	413*	42.6%	557	57.4%	.0288	970	9.6%
14-15	373**	46.6%	427	53.4%	.0001	800	7.9%
16-17	200	41.1%	287	58.9%	.3990	487	4.8%
Total	3,957	39.1%	6,151	60.9%		10,108	100.0%

** Significantly greater than expected at alpha < .01

* Significantly greater than expected at alpha < .05

Census figures compiled in 1990 revealed that the populations in the 0-1 and 14-15 age groups were similar and that size of the group did not account for the decreases (U.S. Bureau of Census, 1991). The trend in the rate of substantiation was directly opposite. As the age of the child increased, the percentage of substantiations also increased. The number of unsubstantiated cases for children under the age of 2 was significantly greater than expected. The number of substantiated cases in the 12-13 age group was greater than expected. The number of substantiated cases in the 14-15 age group was also greater than expected.

Ethnicity

Over 80% of the victims for whom ethnicity was reported were Caucasian. Native American children made up only 8.9% of the total population under the age of 18 (U.S. Census Bureau, 1991), yet accounted for 16.3% of the total reported incidents (see Table 6). The substantiated cases were greater than expected for Native Americans. All others fell within expected ranges.

It should be noted that DFS grouped Vietnamese and Cambodians together in one category. In tables throughout this study, the Vietnamese/Cambodian group will be identified as Vietnamese. In the same way, Pacific Islanders are grouped with the Asians throughout this study.

Table 6. Overall Abuse and Neglect Reports by Victim's Ethnicity

ETHNICITY OF VICTIM	Substantiated		Unsubstantiated		Chi-Square p	Total	
	Cases	Percent	Cases	Percent		Cases	Percent
Caucasian	2,765	38.8	4,366	61.2	.0537	7,131	80.2
Native American	668**	46.0	783	54.0	.0001	1,451	16.3
Hispanic	59	34.7	111	65.3	.1920	170	1.9
Black	38	41.3	54	58.7	.8661	92	1.0
Asian	10	35.7	18	64.3	.7954	28	0.3
Vietnamese	3	30.0	7	70.0	N/A	10	0.1
Alaskan	5	71.4	2	28.6	N/A	7	0.1
Total	3,548	39.9	5,341	60.1		8,889	100.0

** Significantly greater than expected at alpha < .01

* Significantly greater than expected at alpha < .05

N/A = Expected value < 5 in one or more cell in this row

Referral Source

Data was available on 19 different reporting sources (see Table 7). Of those categories which identify a relationship between alleged victim and referral source, educators had the largest representation at 14.8%, followed by neighbors with 12.8%, and law enforcement with 10.5%. Relatives of the alleged victim filed 19.8% of the reports, while mothers filed 5.1%, fathers filed 4.3%, self (the victims) filed 2.5%, siblings filed .8%, and other relatives filed 7.1%. The largest single category of referral source was "Other," indicating either a source not included on the investigation forms or that the information was not available.

Reports filed by foster parents had the highest substantiation rate at 71.9%. This was significantly above the expected substantiation rate of 38.7%. The lowest substantiation rate was that of reports filed by fathers. Only 19.3% of the reports filed by this group were substantiated which is significantly below the expected rate.

Referrals from the alleged victim (self) and from law enforcement were both substantiated at a rate greater than expected. Educators, child care providers, and attorneys all had rates higher than expected. Other relatives, neighbors, and the category of "other" had lower than expected rates of substantiation.

Table 7. Overall Abuse and Neglect Reports by Referral Source

Referral Source	Substantiated		Unsubstantiated		Chi-Square p	Total	
	Cases	Percent	Cases	Percent		Cases	Percent
Mother	213	40.0	319	60.0	.5559	532	5.1
Father	89	19.6	365**	80.4	.0001	454	4.3
Self	133**	50.2	132	49.8	.0002	265	2.5
Sibling	42	47.2	47	54.5	.1246	89	.8
Other Relatives	248	33.2	500**	66.8	.0021	748	7.1
Neighbor	442	32.9	901**	67.1	.0001	1,343	12.8
Child Care Provider	136*	45.3	164	54.7	.0215	300	2.9
Foster Parent	23**	71.9	9	28.1	.0002	32	.3
Attorney	32*	52.5	29	47.5	.0380	61	.6
Law Enforcement	707**	64.6	388	35.4	.0001	1,095	10.5
Youth Court	41	32.9	44	52.1	.0903	85	.8
Human Services	166	36.2	293	63.8	.2860	459	4.4
Educators	640*	41.2	914	58.8	.0472	1,554	14.8
Hospital Staff	95	36.7	164	63.3	.5460	259	2.5
Other Medical	121	42.3	165	57.7	.2333	286	2.7
Residential Staff	11	39.3	17	60.7	1.0000	28	.3
Legal Guardian	2	100.0	0	0.0	N/A	2	.0
Economic Assistance	10	23.8	32	76.2	.0683	42	.4
Other	908	31.9	1,934**	68.1	.0001	2,842	27.1
Total	4,059	38.7	6,417	61.3		10,476	100.0

** Significantly greater than expected at alpha < .01

* Significantly greater than expected at alpha < .05

N/A = Expected value < 5 for at least one cell in this row

Perpetrators

Eighty-five percent of the alleged perpetrators fell into the parent category. Only 37.6% of the allegations against parents were substantiated (see Table 8). Statistics were not collected regarding the exact relationship of the perpetrator to the victim, making it impossible to determine if the "parent" was a mother, father, or stepparent.

Caretaker substitutes had a higher than expected rate of substantiation at 57.1. The other caretakers, other household members, and the "other" category also had significantly higher than expected rates of substantiation.

Table 8. Overall Abuse and Neglect Reports by Perpetrator's Relationship to Victim

Perpetrator	Substantiated		Unsubstantiated		Chi-Square p	Total Cases	Percent of Total
	Cases	Percent	Cases	Percent			
Parent	3,344	37.6	5,552	62.4	.1717	8,896	85.0
Other Caretaker	242**	45.2	293	54.8	.0008	535	5.1
Other Household Member	182**	45.5	218	54.5	.0022	400	3.8
Licensed Care Provider	19	37.3	32	62.7	1.0000	51	.5
Caretaker Substitute	36**	57.1	27	42.9	.0022	63	.6
School	2	40.0	3	60.0	N/A	5	.0
Other	232**	45.0	284	55.0	.0004	516	4.9
Total	4,057	38.3	6,409	61.2		10,466	100.0

** Significantly greater than expected at alpha < .01

* Significantly greater than expected at alpha < .05

N/A = Expected value < 5 for at least one cell in this row

Summary

Significant differences exist between substantiated and unsubstantiated reports of child abuse and neglect based on the demographic attributes contained in those reports.

Gender: There was a significant difference in the ratio of male to female victims based on the representation in the general population. Emotional abuse and emotional neglect were most likely to be substantiated for girls, while physical abuse and physical neglect were most likely to be substantiated for boys.

Age: As the age of the victim increased, the number of reports filed decreased. As age increased, the substantiation rate increased.

Ethnicity: Cases involving Native American victims were substantiated more frequently than expected. Native American victims were overrepresented based on the size of the Native American population in the state. Caucasians were underrepresented.

Referral Source: Substantiation rates varied greatly depending on the source of the report.

Perpetrators: Parents constituted the largest group of alleged perpetrators, but four other groups had higher rates of substantiation.

Significant demographic differences were found between cases in which physical abuse was reported and substantiated and those in which it was reported and not substantiated. Therefore the first null hypothesis was rejected.

Hypothesis 2 - Physical Abuse

The second hypothesis stated that there is no demographic difference between cases in which physical abuse is reported and substantiated and those in which it was reported and not substantiated.

Physical abuse is an action toward a child resulting in physical injury or potential physical injury to the child. This can range from shaking a child or twisting a limb to cuts, burns, broken bones, internal organ, or brain damage.

There were 2,964 reports of physical abuse investigated in 1991. Of these, 966 or 32.6% were substantiated.

An evaluation of the data regarding physical abuse was conducted in order to determine if there were differences between substantiated and unsubstantiated cases based on age, gender or race of the victim, the referral source, or the relationship of the perpetrator to the victim.

Gender

Female victims accounted for 51% of the physical abuse reports and male victims for 49% (see Table 9). There was not a significant difference in rate of substantiation based on gender.

Table 9. Physical Abuse Reports by Gender

Gender	Substantiated		Unsubstantiated		Total	
	Cases	Percent	Cases	Percent	Cases	Percent
Male	490	32.4%	1,022	67.6%	1,512	51.0%
Female	476	32.8%	976	67.2%	1,452	49.0%
Total	966	32.6%	1,998	67.4%	2,964	100.0%

Age

Reports involving children under the age of 4 were least likely to be substantiated for both males and females. The 14-15 age group had the highest substantiation rate for both genders. Reports involving children over 10 years of age were much more likely to be substantiated than those involving younger children (see Tables 10 and 11).

Physical abuse of males in the 2-3 age group was significantly more likely to be substantiated than it was for their female counterparts. The opposite was true for females in the 14-15 and 16-17 age groups for which reports were significantly more likely to be substantiated than would be expected when compared to males of the same age (see Table 12).

Table 10. Male Physical Abuse Reports by Victim Age

Age	Substantiated		Unsubstantiated		Chi-Square p	Total Cases	Percent of Cases
	Cases	Percent	Cases	Percent			
0-1	35	20.6%	135**	79.4%	.0012	170	11.7%
2-3	62	25.7%	179*	74.3%	.0295	241	16.6%
4-5	67	33.3%	134	66.7%	.8595	201	13.8%
6-7	54	30.5%	123	69.5%	.6274	177	12.2%
8-9	50	30.3%	115	69.7%	.6035	165	11.4%
10-11	62	37.6%	103	62.4%	.1906	165	11.4%
12-13	60	37.3%	101	62.7%	.2273	161	11.1%
14-15	56**	49.1%	58	50.9%	.0002	114	7.8%
16-17	26	44.1%	33	55.9%	.0787	59	4.1%
Total	472	32.5%	981	67.5%		1,453	100.0%

**Significantly greater than expected at alpha < .01

* Significantly greater than expected at alpha < .05

Table 11. Female Physical Abuse Reports by Victim Age

Age	Substantiated		Unsubstantiated		Chi-Square p	Total Cases	Percent of Cases
	Cases	Percent	Cases	Percent			
0-1	32	17.8%	148**	82.2%	.0001	180	12.9%
2-3	34	23.0%	114*	77.0%	.0149	148	10.6%
4-5	44	28.6%	110	71.4%	.3143	154	11.0%
6-7	46	29.3%	111	70.7%	.4104	157	11.2%
8-9	32	28.6%	80	71.4%	.4062	112	8.0%
10-11	54*	41.5%	76	58.5%	.0399	130	9.3%
12-13	76*	40.4%	112	59.6%	.0292	188	13.5%
14-15	88**	42.3%	120	57.7%	.0040	208	14.9%
16-17	50*	38.9%	69	58.0%	.0386	119	8.5%
Total	456	32.7%	940	67.3%		1,396	100.0%

**Significantly greater than expected at alpha < .01

* Significantly greater than expected at alpha < .05

Table 12. Substantiated Cases of Physical Abuse by Gender Compared by Age

Age	FEMALES		MALES		Chi-Square p	Total
	Substantiated		Substantiated			
	Cases	Percent	Cases	Percent		
0-1	32	17.8%	35	20.6%	1.0000	67
2-3	34	23.0%	62**	25.7%	.0099	96
4-5	44	28.6%	67	33.3%	.0576	111
6-7	46	29.3%	54	30.5%	.6030	100
8-9	32	28.6%	50	30.3%	.0864	82
10-11	54	41.5%	62	37.6%	.6483	116
12-13	76	40.4%	60	37.3%	.1346	136
14-15	88**	42.3%	56	49.1%	.0051	208
16-17	50**	38.9%	26	44.1%	.0052	119
Total	456	32.7%	472	32.5%		928

**Significantly greater than expected at alpha < .01

* Significantly greater than expected at alpha < .05

Ethnicity

Cases involving physical abuse showed no significant differences from expected values based on ethnicity. Of the cases with male victims, 87.1% involved Caucasian children as did 84.6% of the cases with female victims (see Tables 13, 14, and 15). This compares with 80.2% overall (see Table 6). There was a corresponding decline in the percentage of reports which involved Native American children for both genders.

