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AN EVALUATION OF THE IMPACT OF MATERNAL SUBSTANCE
ABUSE ON INFANT AND CHILD ATTACHMENT

A Project
Presented to the
Faculty of
California State University,
San Bernardino

In Partial Fulfillment
of the Requirements for the Degree
Master of Social Work

by
Rachel Clare Caudillo

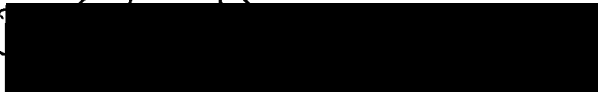
June 2006

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Approved by:


Dr. Thomas Davis, Faculty Supervisor
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5/23/06
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Dr. Rosemary McCaslin,
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ABSTRACT

This study examined the impact and extent to which drugs and alcohol, consumed by mothers prenatally and perinatally has affected their capacity to attach to her child. This thesis has addressed the role the dependent variables measured (i.e., drug(s)/substance(s) of choice, demographic information) played in the attachment process. Data was collected from mothers currently participating in perinatal substance abuse treatment at the San Bernardino County Rialto program. Findings have highlighted current strengths of the program as well as have implicated further needs in order to better provide services to women in recovery as well as their children.

ACKNOWLEDGMENTS

I would like to acknowledge the support and guidance of my thesis project advisor, Dr. Tom Davis, as well as the staff and clients of San Bernardino County's Perinatal Program in Rialto, for making this study possible. Additionally I would like to note contributions of Dr. Diane Halpern of the Berger Institute at Claremont McKenna College, as well as Tamara Hamai and Sarah Yoshida, who were available when needed most, answering my questions and providing pertinent information in a timely manner. It was a direct result of their efforts that I was granted permission to use the Kinship Center for Attachment Questionnaire, which guided my research. And finally, I would like to acknowledge and thank the many staff members and supervisors of the Department of Behavioral Health, San Bernardino County, with whom I interfaced over the course of my 3-year social work education. Particularly, Cynthia Curbow, LCSW and Chuck Buchanan, LCSW. Their knowledge and expertise in the fields of child attachment and perinatal substance abuse enhanced my learning experiences. Additionally, their provided mentorship, consultation, and supervision inspired my interest in child attachment issues as relating to my declared field of specialization, medical and perinatal social work.

DEDICATION

This project would not be possible without the loving and continuous support of my husband Rudy, and the unending daily inspiration my son Ethan provides; as I watch him grow and explore his world, and learn to rediscover life through his eyes. Without their love and encouragement I could not have reached my goals. I also would like to recognize 'La Familia' for their contributions. Without our countless school nights together; laughing, supporting and encouraging one another, the road to our destination would not be as enjoyable. And finally, I would like to thank my parents, Patricia and Clarence Rittmann, who have given me a lifetime of support, guidance, encouragement and love. They have served as role models I aspire one day to emulate. It is their loving example that has both empowered and inspired me to share such blessings with others less fortunate. I dedicate this work to them.

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CHAPTER ONE

INTRODUCTION

Problem Statement

Parental substance abuse, especially when it involves the prenatal exposure of children to drugs or alcohol, has been called 'the biggest threat to the well-being of children...today and in the next century'...Escalating parental use of drugs and alcohol has resulted in an increasing number of children born with prenatal drug exposure and an increase in the number of such children in need of out-of-home care.

(McCarty et al., 1999, p. 269)

According to the literature, children whose mothers abuse alcohol and/or other drugs face a high level of risk and increased vulnerability for physical, academic, and emotional problems. One of these emotional problems is lack of attachment.

Attachment is a reciprocal process by which an emotional connection develops between an infant and his or her primary caregiver. It influences the child's physical, neurological, cognitive, and psychosocial development. Attachment is necessary in that it helps children attain

full intellectual potential, sort out perceptions, think logically, develop social emotions, develop a conscience, trust others, trust themselves and become self-reliant, cope better with stress and frustration, reduce feelings of jealousy, overcome common fears and worries and increase feelings of self-worth (Kelly, 2003; Hofler & Kooyman, 1996). Attachment shapes how the child will relate to the world, learn, and form relationships throughout his or her life. Ideally, a healthy attachment will occur when the infant experiences a primary caregiver as consistently providing the emotional essentials such as touch, movement, eye contact and smiles, in addition to the basic physical necessities such as food, shelter and clothing (Kelly, 2003).

John Bowlby formulated these perspectives in his work on Attachment Theory, which is the basis for current attachment work and therapeutic interventions utilized by many social workers today. Mary Salter Ainsworth contributed to this theory, adding important concepts and methodological background, such as in her research of the impact of the "strange situation" on infant behavior and the concept of a "secure base" (Hofler & Kooyman, 1996). However, if this process is disrupted by the introduction of dangerous teratogens such as illicit drugs and or

alcohol into the baby's system while in utero, or if a mother's ability to adequately respond to her child in his or her first few years of life is reduced due to her drug/alcohol use, this child may not be afforded the opportunity to develop a secure base needed to support future healthy development.

Older children who display the characteristics of attachment disturbances often may project an image of self-sufficiency and sociability; however, they may be masking inner feelings of insecurity and self-hate (Kelly, 2003). Learned lessons of cause and effect do not come easily for children with poor attachment. They may have poor eating patterns, may steal or hoard food, display an inability to give and receive pleasure, show self-destructive behaviors and cruelty, engage in control battles at home and at school, have poor peer relationships, cheat, manifest speech difficulties and abnormal eye contact. In school, signs of learning disabilities and delays may surface. The child's parent may catch them "crazy lying" (i.e., lying for no other reason except to gain control, not necessarily to "get out of trouble"). They may be destructive to themselves or others, cruel to animals, or preoccupied with fire, blood and gore.

thereby have unrealistic role-expectations in this dyadic relationship, thus further perpetuating complications. Hofler and Kooyman (1996) say that these parents, lacking in their own levels of intimacy, wellbeing, and gratification, expect their babies to fill this void. In turn, these parents expect that their own children take on the parental role, and in fact, be the better parent. Subsequently, these children are at an increased risk for serious psychological problems in adolescence and adulthood (Kelly, 2003). This unhealthy phenomenon may result in deep childhood insecurities about their right to have their own basic emotional needs, their own value, and self-esteem (Hofler & Kooyman, 1996).

Although few reliable estimates exist regarding the number of children in the United States whose mothers are addicted to alcohol or other drugs, information available suggests the number to be surprisingly high. Researchers estimate that up to 15% of all American women between the ages of 15 and 44 years abuse alcohol or other drugs (Conners et al., 2004). Additionally, although the number of women of childbearing age using drugs has increased dramatically in recent years, the number of women being served by drug abuse treatment agencies has only risen slightly (Dakof et al., 2003). Estimates suggest that

millions of children are currently being raised in environments characterized by maternal addiction (Conners et al., 2004). Given the obvious instability in these children's lives, it is likely that they will lack the opportunity to develop the kinds of personal assets needed to protect them against the various risk conditions they face. These children appear to be reliving their mothers' childhood experiences, and without intervention, there is little reason to expect that they will be able to avoid the problems their mothers faced (Conners et al., 2004).

The State of California and federal government have worked together in developing programs and policies to intervene in this widespread social problem and alleviate its tremendous impact on the health and wellbeing of women, children, families and society. In California, legislation was enacted that funded an interdepartmental partnership with the California Health and Welfare Agency. Four agencies were involved in this collaborative effort, called Options for Recovery (OFR). These were the Departments of Alcohol and Drug Programs, Developmental Services, Health Services, and Social Services (Clayson et al., 1995). Under this program, the state was able to offer perinatal substance abuse treatment for pregnant and parenting women at seven pilot sites in both urban and

rural parts of the state. These OFR programs are currently operating statewide as a network of perinatal services available for mothers (Clayson et al., 1995). With the local and federal government's interventions and policy change enactments, the severity of this issue is obvious.

Purpose of the Study

The aim of the study was to evaluate the impact of maternal substance abuse on child attachment by means of surveying mothers currently in perinatal treatment for San Bernardino County's Perinatal Substance Abuse Treatment Program (PSATP) in Rialto. The posed method of study was chosen because of the researcher's accessibility to research subjects and needed aspects of the program vis-a-vis a previous field internship placement. This study has highlighted the effectiveness and necessity of substance abuse treatment that allows for the inclusion of children in their mothers' recovery. The PSATP was developed to address societal needs and assist in overcoming the previously mentioned phenomenon of attachment related to substance abuse. Social workers, drug and alcohol counselors and other clinical staff work to provide needed outpatient treatment to women with substance abuse issues and their children. In fact,

according to Clayson et al. (1995), social work-trained case managers are integral to this process.

This six-month program emphasizes recovery by instilling hope in the mothers about the possibility for positive change and a better life, as well as strengthening the bonds between mothers and children. The typical client, according to research, has three children, with 43 percent still residing with their mother. The remaining 57 percent reside out of home, either with relatives or in the foster care system (Clayson et al., 1995). Many of the women are at risk of losing their children to the custody of child welfare due to their substance abuse issues. The clinical staff work to address immediate barriers, as well as other issues these women face. Ondersma et al. (2000) identified 3 main exacerbating issues; poverty, domestic violence and depression. All aspects of the issues accompanying substance abuse are attended to as a means to deliver effective treatment as well as to encourage compliance.

In this researcher's observations made while working with these women, as well as confirmed by the research of Clayson et al. (1995) and Ondersma et al. (2000), the majority of these women have serious emotional or psychological problems, including a history of sexual

and/or physical abuse as children. These abusive patterns have been found to be carried into their adult lives, surfacing in violent relationships with their partners on whom they are also dependent (Clayson et al., 1995). Furthermore, there exists an ingrained mistrust in the women of 'the system'. As Clayson et al. (1995) note, this system mistrust is not unreasonable given their life experiences. Many have experienced extremely negative encounters with the criminal justice system and child welfare system, making them resistant in seeking prenatal care or other services, fearful their child or newborn will be taken away from them. Lack of parenting skills, partly due to their own inadequate parenting as children, also is common among these women (Clayson et al., 1995).

Women are referred to the program through the courts, often due to repeated drug related charges (under Proposition 36), through the Department of Children's Services (DCS) due to child endangerment, abuse and/or neglect issues, or as part of an existing reunification plan. Additionally, those that meet financial eligibility requirements (are Medi-Cal recipients) can self-refer. Notably, studies have found evidence suggesting that people with substance abuse issues initially coerced into treatment by their families, employers or the legal system

do as well in treatment as those that enter voluntarily (Dakof et al., 2003).

Currently, at the Rialto PSATP, supportive services are offered as well as therapeutic interventions to mothers with children who display attachment deficiencies. Individual and family sessions with both a pre-licensed (MSW) and a licensed clinical Social Worker (LCSW) are readily made available for the women and children as a means to address their needs. Psycho-educational groups, which focus on parenting and attachment, are additionally offered to the clients to aid in providing an array of available interventions to the mothers.

In studying the variables of substance abuse and child attachment, a quantitative research design was utilized. The instrument was distributed to the clients at the PSATP in Rialto as a means to obtain self-reports regarding mothers' prenatal and perinatal substance use and subsequent observable attachment manifestations in their children. The surveys were distributed to 29 consenting clients in the current full-time program as well as the part-time after-care components of the program in an effort to ensure a reliable sample.

Results have been reported to the agency's supervisor, due to her expressed interest in the study as

well as in its implications for improving delivery of client service.

Significance of the Project for Social Work

The significance of the project for social workers, serving as social change agents, is to assist in removing barriers by means of providing needed services to the disadvantaged. In acquiring the results from this conducted study, the agency has been aided in their expressed plight of modifying and improving current interventions and services provided; improving treatment delivery as well as further empowering the perinatal clients and their children in their predominant efforts at recovery, family preservation and/or family reunification. Additionally, this study resonated findings similar to research done by Clayson et al. (1995), regarding the effectiveness of perinatal treatment over time. Furthermore, the research acquired information useful for the generalist intervention process specifically in various stages of the perinatal treatment. It is the researcher's hope that acquired information will not only be used in assessing new clients in treatment, but also in the treatment planning, implementing and evaluating/terminating phases of treatment. The goal is

for this study's findings to facilitate quality treatment delivery on all levels for the clinical staff.

The question posed for this research was: Does a mother's prenatal and/or perinatal substance abuse affect a child's capacity for healthy attachment?

CHAPTER TWO

LITERATURE REVIEW

Introduction

The literature reviewed prior to the research process has been grouped in the following three sub-categories: Theories Guiding Conceptualization: Attachment Theory, Substance Abuse and Attachment, Substance Abuse: Treatment and Interventions. All have been incorporated and cited in the reference portion of this paper..

Theories Guiding Conceptualization: Attachment Theory

The theory of attachment, as first identified by Bowlby in the 1950s guides the research in the field of substance abuse and child attachment (Kelly, 2003; Field, 1996; Hofler & Kooyman, 1996).

According to Kelly (2003), Bowlby's notion of an attachment system serves as a biologically programmed means to control infant behavior. Signaling behaviors (i.e. crying, calling and searching for the caregiver) ensure survival by encouraging the caregiver's close proximity to the child. This system is activated during child distress. During a stressful period, the child looks to the caregiver for comfort and protection. Early

experiences in caregiving dictate the development of specific attachment patterns. Bolwby identified four types: secure, avoidant, resistant and disorganized. The type of attachment pattern the child develops will then dictate strategies used by that child when stressed.

Research indicates that there exists a validity and reliability problem with diagnosing attachment disorders. This, according to Kelly (2003), is due to the fact that attachment disorders manifest a range of serious behavioral disturbances in children who have experienced significant abuse, deprivation, and the loss of significant attachment relationships. The Diagnostic and Statistical Manual III (DSM III) provided the first diagnosis for "Reactive Attachment Disorder," and attachment disorders have further been refined in the DSM IV to include the two sub-types: Inhibited and Disinhibited (Kelly, 2003). Kelly (2003) also says that attachment therapy had its roots of origin in Rage Reduction Therapy (RRT) in the 1960s and 70s. During this time, RRT was used to treat children labeled as "Severely Emotionally Disturbed" (SED). It is known from research that attachment patterns are formed by about the age of 3 years and persist as mostly unconscious perceptions and remain relatively unchanged throughout life unless the

patterns are directly identified, resolved and revised (Kelly, 2003). It has additionally been argued that infants removed from their mothers for long periods of time during the first year of life may adversely affect ...the proximal processes of mother-child interaction and ultimately the attachment relationship (NICHD, 2001).

Attachment theory argues that the healthiness or unhealthiness of a child's attachments are related to what happens in specific development periods in the first few years of a child's life...it takes place at a particular developmental periods[sic], with just a few significant individuals in the child's world. (Dyer, 2004, p. 8)

Substance Abuse and Attachment

The above phenomenon can be applied to infants who are emotionally distanced from their mother due to her substance use; for we now know that this critical period in attachment formation in the first few years of life is further strained if alcohol, drugs and cigarette smoke are introduced into the child's environment; either prenatally or perinatally by the mother's use.

In research reviewed, some mothers summed up their lack in properly attending to their children as a result of their addiction,

I am supposed to supervise my kids, making sure they are not doing things they should not...I didn't, 'cause I was on drugs...; My relatives reported me because I left my baby with them for weeks without contacting them...; I forgot to send my kids to school...; My two-year-old was out fooling around in the neighborhood...; and My baby was tested drug-positive when delivered.

(Sun, 2000, p. 145)

As stated earlier, these children are at an increased risk for attachment problems according to several literature citations and empirical research conducted in the past five years (Conners et al., 2004; McCarty et al., 1999; Hill et al., 2000; Kelly, 2003; Dyer, 2004). However, with proper interventions, the literature optimistically cites the possibility for these attachment-deficient children to blossom and thrive (McCarty et al., 1999).

Substance Abuse: Treatment and Interventions

With early identification and treatment of these symptoms in young children, coupled with a stable and supportive environment, much research points to the fact that these children can overcome their emotional barriers, despite what McCarty et al., (1999) refer to as their "difficult beginnings" (Kelly, 2003; Dyer, 2004). As part of the intervention role with such afflicted families, the social worker must have the ability to empathize with the mothers battling addictions; to recognize and understand their underlying fear and pain. Sun (2000) goes on to say that this ability requires special training and despite such training, still remains difficult for those repeatedly working with children damaged as a result of maternal substance abuse.

Sun (2000) further recommends that therapeutic intervention should involve treating the mother and child(ren) as one unit. In this way, research shows that the anxieties, fears and uncertainties a mother may feel leaving her child in protective custody or with a relative caregiver can be eliminated. The mother and child then can learn together to bond and reinforce their deficiencies in attachment. Additional challenges, noted by Sun (2000) are faced by mothers with addiction issues raising infants and

young children; particularly if the child(ren) was prenatally exposed to drugs. Stress parenting these children can trigger relapse in women with drug and/or alcohol issues, as well as child abuse and neglect. In perinatal treatment, with the mothers and children being treated as one unit, parenting and accompanying stress issues can be dealt with during the course of treatment and recovery.

Summary

The literature has proven relevance to this project. It has guided the research as well as offered important insight into the attachment dynamic that exists between mothers and their children as impacted by prenatal and perinatal substance abuse. Additionally, it served as a starting point as well as point of reference to compare and contrast this study's findings and further implications in facilitating efficient perinatal treatment delivery.

CHAPTER THREE

METHODS

Introduction

The purpose of this study was to explore and ideally predict maladaptive attachment patterns among mother-child dyads where substance abuse has been a factor, and then subsequently work towards treatment and prevention. In utilizing a quantitative study design incorporating proven, reliable instruments as tools, captured data has been statistically analyzed as a means to find and explain correlational associations.

Study Design

A quantitative method of data collection was chosen due to the fact that it encourages responses by its anonymous nature. As in any research, there exists the potential for respondents to limit their candidness as a means to protect vital personal and potentially shameful family information from scrutiny. It was the researcher's rationalization that for this particular study, a qualitative face-to-face encounter would leave more potential for this undesirable possibility to occur. Transversely, it was felt that by using the alternate

method, respondents would feel more at ease and comfortable in disclosing.

Limitations to the study existed as well. With research being conducted at a small Perinatal Substance Abuse agency, the sample size was limited. It was the researcher's intentions not only to evaluate the validity of the findings, but also the significance as a means to enable application to the larger population. The research question was: Does a mother's prenatal and/or perinatal substance abuse affect a child's capacity for healthy attachment? In answering this question, the research findings will likely contribute to the social work field not only in providing education regarding the prevalence of this phenomenon, but also in implicating further needed components for drug prevention, resolution and treatment phases.

Sampling

The sampling base for the conducted research was the Rialto PSATP, a subsidiary of the Department of Behavioral Health of San Bernardino County. Twenty-nine consenting mothers of children under the age of 6, currently involved in some aspect of treatment in the program, agreed to participate in the study. Initial ambitions to survey the

majority of clients served at the time of data collection were achieved, being that all clients served at the clinic have admittedly used substances prenatally and/or perinatally resulting in circumstances leading to their receiving treatment. At the time of this study, the program had a total census with both programs (current treatment and after-care) of 40. Clients surveyed ranged in age from 20 to 39 years of age and identified as originating from either Hispanic, Caucasian, African-American or Asian racial/ethnic backgrounds. All participants were mothers currently in danger of losing custody of their children, or who are currently in the reunification planning/assessment stages through the courts and Child Protective Services (CPS). Participants of the research were explained the voluntary nature of the project and only the consenting participated.

The researcher went through appropriate channels to obtain approvals from both California State University San Bernardino (CSUSB) as well as San Bernardino County Department of Behavioral Health (DBH) to conduct research. The researcher first spoke with and gained informal approval from the PSATP supervisor, Cynthia Curbow, LCSW. Concurrently, the researcher completed the application processes for research approval from CSUSB's IRB as well

as the DBH's Research and Review Committee (RRC), chaired by Dr. Keith Harris, PhD. The project was found by both to be ethically sound. Subsequent to the approval gained by both organizational processes, the researcher received final approvals from the Department's program manager, Gary Atkins, MSW, Deputy Director Kimm Hurley-Smith, as well as the Department's Director, Allan Rawland, ACSW.

Data Collection and Instruments

The researcher used an instrument recently revised and utilized by the Kinship Center for Adoption to measure attachment. The Kinship Center is an agency that has provided needed services for adopted, fostered and relative cared-for children for approximately twenty years. The agency currently serves the State of California and has five offices; Salinas, San Jose, Santa Ana, Pasadena and Redlands. The instrument, called the Kinship Center Attachment Questionnaire (KCAQ), includes twenty items that measure relevant levels of attachment between caregiver and child. This particular instrument is to be used in measuring attachment of children aged 18 to 71 months. This instrument has been found by the Kinship Center and their research partner, the Berger Institute, to be reliable, valid, and culturally sensitive. The KCAQ

has been supplied by the agency for purposes of this research free of cost. A final report of this study's findings will be provided to Diane Halpern, PhD, former president of the American Psychological Association (APA), currently with the Berger Institute of Work Family and Children, who directly supervised the development of the instrument as well as data analysis involved in the process.

Variables analyzed for the purpose of this study were age, race/ethnicity, years of substance use, prenatal and/or perinatal usage, educational level, drug(s)/substance(s) used, total years of substance use, as well as KCAQ items of attachment. Additionally, in addendum to the provided KCAQ instrument, the researcher added items measuring demographics, as well as incorporated substance abuse questions and items from the Alcohol Severity Index (ASI), currently used in assessments at the perinatal agency.

The independent variables measured included substance abuse (both prenatal and/or perinatal), type of substance(s) used, age, race/ethnicity, and years of substance use. The dependent variables measured were level of attachment of the child in question, according to various items of attachment provided by the KCAQ

questionnaire. For respondents with more than one child, it was requested that they respond to survey questions with the child they identify as being most impacted by their substance use.

The surveying process was anonymous and confidential in nature, with no identifying information included. The fact that the participants were already in treatment at the time of research was believed to be beneficial to the research process. As noted by Connors et al. (2004), Women in treatment have fewer reasons to deny behaviors. For the most part, these women have reached a point in their lives where they want and are effectively seeking change. As Sun (2000) reports, these mothers want meaningful relationships with their children. Losing their children to the court as a result of drug abuse and noncompliance of case plans often imposes tremendous guilt. These mothers care how they are viewed by others and crave respect.

For this study, compliance was believed to have been facilitated as a result of the anonymous nature of the survey. Participants were explained that the results will aid in tailoring quality services for them and their children.

In addition to measuring the dependent variables of attachment, the researcher incorporated as previously mentioned, portions of the Addiction Severity Index (A.S.I.), an instrument currently used at the perinatal unit as an assessment tool with clients during their intake process. Utilizing key sections from that instrument as a guide, the researcher was able to obtain information regarding specific drug(s) of choice as well as frequency of usage among respondents, an important independent variable in measuring the impact of substance abuse on attachment.

All attachment items (20 items total) were measured ordinally, using a Likert scale range from "never/rarely" (zero) to "almost always" (six). A "not applicable" category was also included and scored accordingly (zero).

The KCAQ yields a total score, which is the sum of the rankings on all 20 questions. The higher the total score, the lower the level of child attachment to the respondent (mother). There are four subscales, but they are not reliable enough to interpret separately. These subscales are Positive Adjustment/Development (questions 12, 13, 14, 15, 17, 18, 19), Negative Behavior (questions 1, 2, 8, 9), Emotional Reactivity (questions 3, 6, 7, 11, 16, 20), and Distancing from Caregiver Support (4, 5, 10).

The substance abuse component, utilizing the above-described ASI instrument, utilized a nominal measurement, with responses being assigned a corresponding number code. Demographic information was measured utilizing a nominal level of measurement as well.

As in any research, strengths and limitations are prevalent. In this study, weaknesses such as small sample size and the likelihood for sensitive nature of the subject matter to elicit respondent anxiety were possibilities. However, these factors notwithstanding, the study weighed more heavily on its strengths. First, the study profited from the incorporation of reliable instruments that are currently being utilized in the research field of attachment. With this in mind, the study was well equipped to encourage consent of participants, as it has proven to be sensitive in nature. Additionally, the population chosen was believed to be a strength, as the consenting respondents were currently in some phase of Perinatal treatment and therefore more apt to be candid in their responses to this sensitive subject matter.

Procedures

Data was gathered in one day. Surveys were hand-carried to the agency by the researcher, and

administered by the researcher in one brief 20-minute session. Consenting respondents were notified of the anonymous and voluntary nature of the research, and were further informed that the results will be used to assist the agency in assessing current services provided, as well as in developing more effective treatment. Preliminary to survey completion, participants were read aloud the consent and debriefing forms by the researcher. The surveys were then distributed to the willing participants in a closed room. Tables used in the room allowed for adequate spacing between participants and therefore encouraged privacy. Participants were provided blank manila envelopes in which to conceal the completed instrument. The completed surveys, sealed in envelopes, were then retrieved by the researcher for further data analysis.

Protection of Human Subjects

In an effort to protect the anonymity of the clients researched, no names or identifying information was provided in the study. Consents and debriefing statements informing respondents of this fact were explained orally precluding survey completion. Participants were informed of the availability of the researcher to clarify items or

answer any questions during the process if needed, despite the availability of descriptive information included on the survey packet. After completing the process, participants returned the surveys in the provided envelope for later research analysis.

Data Analysis

The variables were used to construct various comparisons utilizing the SPSS system. Specifically, in assessing bivariate correlations with scale data, results from these analyses proved helpful in determining significance of the findings. Other statistics were also utilized in reporting findings, such as the mean, median and standard deviation. Relationships between variables examined were correlational in nature. All vital information captured assisted in interpreting data for improved treatment delivery.

Summary

The conducted research process and procedures were conducted as a means to capture relevant data in which to answer the posed research question, "Does a mother's prenatal and/or perinatal substance abuse affect a child's capacity for healthy attachment"? With this carefully calibrated process, willing participants were not found to

be traumatized with the sensitive nature of the topic, by
Perinatal staff report following completion of the study.

CHAPTER FOUR

RESULTS

Introduction

The purpose of this chapter is to present the findings of the study on the impact of maternal prenatal and perinatal substance abuse on child attachment. Frequency tables are presented as a means to provide information regarding the racial/ethnic make-up as well as educational level and age of the population studied. Bivariate analysis of retrieved data correlations among dependent variables of attachment and dependent variables of substance abuse data, found to be significant, are included in this chapter.

Presentation of the Findings

The sample group for this study consisted of 29 (N = 29) women, ranging in age from 20 to 39, currently involved in perinatal substance abuse treatment at San Bernardino County's PSATP in Rialto, California. The majority of the respondents surveyed were Hispanic (approximately 41%), followed by Caucasian (nearly 28%), African-American (24%) and Asian/Pacific Islander (3%), with no respondent identifying as "other." One participant failed to answer the race/ethnicity question (n = 28).

Below are the recorded frequencies for race/ethnicity of the study's participants.

Table 1. Respondent Race/Ethnicity

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid African-American	7	24.1	25.0	25.0
Caucasian	8	27.6	28.6	53.6
Asian/Pacific Islander	1	3.4	3.6	57.1
Hispanic	12	41.4	42.9	100.0
Total	28	96.6	100.0	
Missing System	1	3.4		
Total	29	100.0		

Below are the investigated statistical findings according to participant age.

Table 2. Respondent Age Frequencies

N	Valid	29
	Missing	0
Mean		28.69
Median		28.00
Std. Deviation		5.458
Minimum		20
Maximum		39

As mentioned, participants of the study ranged in age from 20 to 39, with 28 years (approximately 7%) being the average respondent age.

Below are the recorded frequencies according to respondent educational level.

Table 3. Respondent Educational Level Frequencies

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 8th grade	3	10.3	10.3	10.3
9th grade	3	10.3	10.3	20.7
10th grade	4	13.8	13.8	34.5
11th grade	4	13.8	13.8	48.3
12th HS diploma/GED	5	17.2	17.2	65.5
some college	10	34.5	34.5	100.0
Total	29	100.0	100.0	

The average respondent had a high school level education (17%); however the 34% respondents reported having an above average education of "some college." However, worth noting, a somewhat even distribution of educational levels emerged; with approximately 10% reporting an 8th grade level of education, as well as an approximate 10% reporting a 9th grade level of educational attainment. Almost 14% reported having a 10th grade education, and an equal percentage (approximately 14%) reported that they had an 11th grade education.

The most frequently reported drug of choice among study participants was amphetamines. Approximately 38% of women surveyed reported using amphetamines while pregnant and/or during the perinatal period ("almost always"), with the average response being "sometimes" (7%; mean = 3.28). Almost 28% reported "never/rarely" using amphetamines during the period in question. A little over 10% (10.3)

admitted to "occasional" use. Nearly 7% reported using amphetamines "sometimes," duplicated by 7% each of respondents reporting "often" and "usually" using the substance during the prenatal and/or Perinatal period. Detailed below are the recorded frequencies for participant amphetamine usage.

Table 4. Maternal Pre/Perinatal Amphetamine Usage
Frequencies

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid never/rarely	8	27.6	27.6	27.6
once in a while	3	10.3	10.3	37.9
occasionally	1	3.4	3.4	41.4
sometimes	2	6.9	6.9	48.3
often	2	6.9	6.9	55.2
usually	2	6.9	6.9	62.1
almost always	11	37.9	37.9	100.0
Total	29	100.0	100.0	

Bivariate analysis conducted showed significant correlations between child attachment and maternal substance abuse. The following tables represent several relevant bivariate correlations, used by the researcher to ascertain relationships between child attachment and maternal substance use.

Table 5. Correlations in Maternal Pre/Perinatal Amphetamine Use and Child Treatment of Animals

		Child is kind/gentle with animals	Mother used amphetamines pre/perinatally
Child is kind/gentle with animals	Pearson Correlation	1	-.399*
	Sig. (2-tailed)		.032
	N	29	29
Mother used amphetamines pre/perinatally	Pearson Correlation	-.399*	1
	Sig. (2-tailed)	.032	
	N	29	29

* Correlation is significant at the 0.05 level (2-tailed).

The relationship between mother's use of amphetamines pre/perinatally and the child being kind to animals was investigated using Pearson product-moment correlation coefficient. There was a strong positive correlation between the two variables [$r = .399$, $n = 29$, $p < .05$], with low levels of attachment associated with mother's use of amphetamines while pregnant and/or during the perinatal period.

Table 6. Correlations in Maternal Pre/Perinatal Amphetamine Use and Child Gets Upset When Things Don't Go His/Her Way

		Child gets upset when things don't go his/her way	Mother used amphetamines pre/perinatally
Child gets upset when things don't go his/her way	Pearson Correlation	1	-.474**
	Sig. (2-tailed)		.009
	N	29	29
Mother used amphetamines pre/perinatally	Pearson Correlation	-.474**	1
	Sig. (2-tailed)	.009	
	N	29	29

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

The relationship between child attachment as measured by child getting upset when things do not go his/her way and mother's amphetamine use was also investigated using Pearson product-moment correlation coefficient. There also was a strong positive correlation between the two variables [$r = .474$, $n = 29$, $p < .01$], with low level of child attachment associated with mother using amphetamines prenatally and/or during the perinatal period.

Table 7. Correlations in Maternal Prenatal Drug and/or Alcohol Use and Child Overreaction/Startle Response by Touch, Sound or Light

		Child overreacts/startled by touch, sound or light	Mother used drugs and/or alcohol while pregnant
Child overreacts/startled by touch, sound or light	Pearson Correlation	1	-.523**
	Sig. (2-tailed)		.004
	N	29	28
Mother used drugs and/or alcohol while pregnant	Pearson Correlation	-.523**	1
	Sig. (2-tailed)	.004	
	N	28	28

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

The relationship between attachment as manifested by the child overreacting/being startled by touch, sound or light, and prenatal exposure to drugs and/or alcohol was analyzed using Pearson product-moment correlation coefficient. A strong positive correlation was observed between the two variables [$r = .523$, $n = 28$, $p < .01$], with low level of child attachment associated with prenatal exposure to drugs and/or alcohol.

Table 8. Correlations in Maternal Pre/Perinatal Alcohol Intoxication and Child Overreacting/Startle Response to Touch, Sound or Light

		Child overreacts/startled by touch, sound or light	Mother drank to intoxication while pregnant/after birth
Child overreacts/startled by touch, sound or light	Pearson Correlation	1	-.431*
	Sig. (2-tailed)		.020
	N	29	29
Mother drank to intoxication while pregnant/after birth	Pearson Correlation	-.431*	1
	Sig. (2-tailed)	.020	
	N	29	29

* Correlation is significant at the 0.05 level (2-tailed).

And finally, the relationship between child attachment as manifested by child overreacting/startling by touch, sound or light, and maternal alcohol intoxication during pregnancy and/or during the perinatal period was investigated using the Pearson product-moment correlation coefficient. There was a moderate positive correlation between the two variables [$r = .431$, $n = 29$, $p < .05$], with low child attachment associated with mother's consumption of alcohol to intoxication during pregnancy and/or the perinatal period.

Summary

Chapter four reviewed the results of the study, presenting statistical information compiled from data collected. According to the results, participants tended to be predominantly Hispanic (41%), with an average age of 28 years. Additionally, the sample tended to have at least a high school education. The most commonly reported drug of choice was amphetamines; 38% of respondents admitted to frequent ("almost always") usage either during their pregnancy and/or during the perinatal period. There emerged evidence consistent with attachment deficits. Evidence of attachment deficits in children of mothers who used amphetamines pre/perinatally, as well as "any drug" while pregnant. Additional attachment deficits were noted by mothers who drank alcohol during one or both of the periods investigated; both "any amount" of alcohol and "to intoxication" reports by mothers appeared to subsequently impede the child attachment process.

CHAPTER FIVE

DISCUSSION

Introduction

This chapter presents a discussion of the study's findings, as well as reports on how said findings may be used to assist the County of San Bernardino's Perinatal Program in substance abuse treatment of mothers and their children. This chapter will address limitations inherent to the study, as well as social work practice implications for further work and research.

Discussion

This study investigated the impact of maternal substance abuse on infant and child attachment, as evidenced by survey report of women currently involved in San Bernardino County's PSATP. In researching the aforementioned population, the researcher concludes, consistent with the proposed question for research, that specific maternal substance abuse in the surveyed sample (particularly alcohol and amphetamines), both during the prenatal and/or perinatal period, does impact the child attachment process in specific items of healthy attachment as determined by the KCAQ instrument. Specific items of attachment investigated and found relevant by the

researcher are the following. The first relevant measure was a child's 'startle response' or overreaction to light, sound or touch. It has been determined that children with a low level of attachment will tend to overreact to said stimuli, more so than a child with healthy attachment. A second relevant measure of attachment can be termed as "child upset." The wording on the survey utilized reads, "child gets upset when things don't go his/her way." According to developers of the instrument used, children with low levels of attachment, more so than children with healthy attachments, tend to escalate when they do not get their way. A third and final measure of attachment found by the researcher to be relevant, was that of a child's capacity to be kind to animals. Developers of the KCAQ have determined through research of attachment patters that children with low levels of attachment congruently are frequently unkind to animals. This can be explained as the child's inability to emotionally connect, or 'attach' to objects, or in this case, animals. These items were chosen due to their ability to assist the researcher to come to a better understanding of attachment dynamics in children. Research findings suggest implications for further research with this population, as well as

modifications to current treatment and interventional procedures with mothers and children.

Results of the study resonate with a study by Espinosa et al. (2001), who reported disorganized/disoriented attachments among women with substance abuse issues and their children.

Possibilities for observed correlations in child attachment and substances used may be in relation to a mother's impairment due to the effects of the substance to her ability to adequately nurture and respond to infant and child cues common during the infancy period, and crucial to the attachment and dyadic bonding process. Without this needed stimulation and interaction, a critical period in the attachment process has passed, potentially causing a negative domino effect in proper emotional development. The result of such lags in this process can potentially manifest in the correlational observed attachment deficits, namely in the child's temperament when things do not go his or her way, startle response, and ability to demonstrate kindness and appropriate treatment in other interactions, such as with animals.

Limitations

The following three predominant limitations apply to the project. First, the research was conducted with a small (29) survey sample of low-income and predominantly Hispanic females living in the west end of San Bernardino County. Therefore results may not be applicable to all race/ethnicities, locales, or income levels. Second, it should be noted that the researcher did not marginalize prenatal and perinatal use, and instead, for the most part, lumped the two into one category. Perhaps if the two were measured independently, different findings would have been yielded. And third, due to timeframe limitations, extensive analysis of retrieved data could not be completed. Therefore, perhaps further implications relevant for perinatal treatment regarding the extent and specificities of maternal substance abuse exist.

Recommendations for Social Work Practice, Policy and Research

Information regarding the impact substance abuse has on mother-child attachment is relevant to the social work field predominantly in the interventional stages of perinatal treatment. Having been made aware of specific emotional developmental deficits relating to child attachment, a social worker, allying with the family unit,

can locate attachment lags and work therapeutically to strengthen dyadic relationships between mother and child. The social worker can educate perinatal childcare staff, keying them in on specific attachment items to look for in their daily interactions with children impacted by maternal substance abuse.

Social workers can impact the systems they interface with daily, proposing policy and practice changes to the current modes of intervening with perinatal substance abuse. For example, rather than removing infants immediately when urine toxicology reports yield positive results for prenatal exposure to drugs and/or alcohol, as some counties do, a hospital social worker can intervene, imparting knowledge and expertise regarding that critical perinatal period in the mother-child bonding process. Significant work can be done in the brief hospital stay with mother and child, as well as during the interim transitional phases before the mother engages in treatment. San Bernardino County (SBC) currently has a generally good protocol in dealing with prenatal exposure in hospitals. According to an interview with a Pomona Valley Hospital medical social worker, Megan Kramer, LCSW (personal communication, 2006), SBC does not generally require immediate removal of the infant, but instead

enlists the support of a nurse to visit the family in the home, as well as a social worker to intervene and provide support and assistance to mother and baby. However, Los Angeles County is not as 'lenient.' This county's protocol is for a risk factor survey to be completed (based on the type of drug found in the baby's system). If criteria are met, the baby most often is placed on hold, and related family or foster placement is located.

It should further be noted, according to Durfee and Titlton-Durfee (1990), and Ondersma et al. (2000), that the greatest current limitation in the policy debate of how to treat these mothers and their children is the lack of agreement upon the nature and extent of the problem. Social workers need to work towards finding a solution to uncertainties currently existing in the medical, legal, social services, and law enforcement spectrums of society regarding defining prenatal substance abuse. Suggested by research, the progress starts with collaboration and coordination of services to women and children. Social workers, working either for agencies or closely with such implicated agencies as Child Protective Services (CPS), substance abuse treatment, criminal intervention programs, perinatal health systems, community based family services, and residential treatment, can initiate the coordination

and subsequent collaborative efforts necessary, according to researchers, to affect positive change (Durfee & Tilton-Durfee, 1990; Ondersma et al., 2000).

Additionally, educational materials aimed at first-time mothers should be looked at. Currently, a popularized book for to-be mothers entitled, *What to Expect When You're Expecting* by Murkoff et al. (2002) perhaps lulls expectant mothers into a false sense of security regarding occasional alcohol consumption. "There's no evidence that a few drinks on a couple occasions early in pregnancy will prove harmful to a developing embryo" (p. 57). The translation is then left in the new mother's hands. How many are a "few drinks"? What is "early" in pregnancy? This seemingly confusing claim can lead to a multiplicity of understandings. The authors go on to say that a "celebratory half glass of wine on a very special occasion" is acceptable for an expectant mother (p.57). However, this too, especially to a mother battling addiction issues, can lead to potential over-generalization regarding frequency of consumption. How often does one "celebrate"? This is all left to the individual, who may not always be equipped to make the best decision. Perhaps teaching complete abstinence, based on the suggestions by this study's findings would best

eliminate confusion and thereby decrease the potential for resulting unhealthy attachment patterns to develop in the child.

And finally, further research investigating validity and reliability of findings utilizing this instrument, across varying regional, ethnic/racial and social classes is needed to determine a wider applicability to a diverse society and more importantly to the complexities of the issue of maternal substance abuse.

Conclusions

The following quote by authors Durfee and Tilton-Durfee (1990) best summarize not only the severity of the issue at hand, but also hope towards finding a solution.

Prenatal chemical abuse is the latest 'new frontier' in the world of child abuse. This dilemma is complex and may be the greatest long-term damage to children and families. Our response to these perinatal problems, however, may also provide the greatest opportunity to learn how to work together to provide services that truly offer prevention as well as

intervention services. (Durfee & Tilton-Durfee, 1990, p. 30)

By increasing awareness, improving education and interventional procedures, as well as implementing policy change, what has been referred to as 'the biggest threat to the well-being of children...today and in the next century...' (McCarty et al., 1999, p. 269) can be a faint and distant memory.

APPENDIX A
QUESTIONNAIRE

Attachment Questionnaire

The information provided on the following survey is completely anonymous and confidential. Your participation is voluntary and greatly appreciated. Please read each item below and circle the number that you think **BEST** describes how often your child engages in the behavior. Please answer all questions and circle only one number for each item. If you make a mistake, please put an "X" through the mistake and circle the right number. If you have more than one child whom you believe was impacted by your substance abuse, please choose the one whom you believe to be most affected. Please rate your child according to his/her **CURRENT** behavior.

Some items may describe behaviors that your child does not have the opportunity to perform or is not yet able to perform. For example, a 6-month-old child has not started to walk yet, so all items that assume the child can walk would not be applicable. For items that are **not applicable** to your child, please circle **NA**.

	0	1	2	3	4	5	6	
	never/rarely	once in a while	occasionally	sometimes	often	usually	almost always	
1. When I go to hold my child, he/she welcomes my affection -----	0	1	2	3	4	5	6	NA
2. While sucking or swallowing, my child looks me in the eye -----	0	1	2	3	4	5	6	NA
3. My child is excessively clingy-----	0	1	2	3	4	5	6	NA
4. If things don't go his/her way, my child gets upset-----	0	1	2	3	4	5	6	NA
5. When I try to hold my child, he/she stiffens or pushes away -----	0	1	2	3	4	5	6	NA
6. When adults try to make eye contact with my child, he/she has no problem making eye contact back -----	0	1	2	3	4	5	6	NA
7. When my child gets hurt, he/she refuses to let anyone comfort him/her -----	0	1	2	3	4	5	6	NA
8. My child understands what is said to him/her-----	0	1	2	3	4	5	6	NA
9. My child is very friendly to strangers -----	0	1	2	3	4	5	6	NA
10. My child learns from his/her mistakes and stops a behavior when that behavior results in a negative consequence -----	0	1	2	3	4	5	6	NA

11. When my child is in pain, he/she doesn't-----0 1 2 3 4 5 6 NA
12. My child is kind and gentle with animals-----0 1 2 3 4 5 6 NA
13. My child does not like being separated from-----0 1 2 3 4 5 6 NA
me except on his/her terms
14. My child is clumsy for his/her age (e.g., falls, -----0 1 2 3 4 5 6 NA
spills things)
15. My child tends not to settle, even after his/her-----0 1 2 3 4 5 6 NA
needs have been met (i.e diaper changed, fed)
by me
16. My child overreacts or is often startled by-----0 1 2 3 4 5 6 NA
touch, sound or light
17. My child is often listless (motionless) for no -----0 1 2 3 4 5 6 NA
medical reason
18. My child rarely holds onto or reaches for me -----0 1 2 3 4 5 6 NA
19. My child often does not smile back or respond ----0 1 2 3 4 5 6 NA
with actively to smiles and/or baby talk
20. My child often does not follow human-----0 1 2 3 4 5 6 NA
movement with his/her eyes
21. When upset, my child will attempt to hurt-----0 1 2 3 4 5 6 NA
him/herself by banging head, biting self or
pulling own hair
22. When my child was an infant, I breast fed-----0 1 2 3 4 5 6 NA
consistently for at least the first 2 mos.

Substance Use Information

For the following questions, please provide the requested information, using the same scale as above, or as directed by the particular question. All information included on this survey will remain anonymous and confidential and your voluntary participation is greatly appreciated.

1. While pregnant with my child, I used drugs-----0 1 2 3 4 5 6 NA
and/or alcohol
2. After my child was born, I used drugs and/or -----0 1 2 3 4 5 6 NA
alcohol
3. I used drugs either occasionally or consistently for _____ years of my life.
(please indicate # of years, rounded to whole years).
4. I drank (any amount) alcohol while I was -----0 1 2 3 4 5 6 NA
pregnant and/or after my child was born
5. I drank (to intoxication) alcohol while I was -----0 1 2 3 4 5 6 NA
pregnant and/or after my child was born
6. I used heroin while pregnant and/or after my -----0 1 2 3 4 5 6 NA
child was born
7. I used methadone while pregnant and/or after -----0 1 2 3 4 5 6 NA
my child was born
8. I used other opiates/analgesics while pregnant-----0 1 2 3 4 5 6 NA
and/or after my child was born
9. I used barbiturates while pregnant and/or after ----0 1 2 3 4 5 6 NA
my child was born
10. I used sedatives, hypnotics and/or -----0 1 2 3 4 5 6 NA
tranquilizers while pregnant and/or after my
child was born
11. I used cocaine while pregnant and/or after my -----0 1 2 3 4 5 6 NA
child was born
12. I used amphetamines while pregnant and/or -----0 1 2 3 4 5 6 NA
after my child was born
13. I used marijuana while pregnant and/or after-----0 1 2 3 4 5 6 NA
my child was born
14. I used hallucinogens while pregnant and/or -----0 1 2 3 4 5 6 NA
after my child was born
15. I used inhalants while pregnant and/or after-----0 1 2 3 4 5 6 NA
my child was born

Demographic Information

1. My race/ethnicity is best represented by the following title: (please circle one)
African American Caucasian Asian/Pacific Islander Hispanic Other
2. My age is _____
3. The highest level of education (school) I completed was: (please circle one)
a) 8th grade b) 9th grade c) 10th grade d) 11th grade
e) 12th (HS Diploma or GED) f) some college g) AA degree
h) BA/BS degree i) post graduate

APPENDIX B
INFORMED CONSENT

**INFORMED CONSENT
(TO BE READ ORALLY)**

The study in which you are being asked to participate is designed to investigate the relationship between mother-child attachment and alcohol and/or drug use. This study is being conducted by Rachel Caudillo under the supervision of Dr. Tom Davis, Assistant Professor of Social Work. This study has been reviewed and approved by the Institutional Review Board of California State University San Bernardino.

In this study, you will be asked to answer a series of questions regarding your child's relationship with you, as well as your prenatal or perinatal drug and/or alcohol use. There will be clinical therapists on hand during the process as well as after completion of the survey for support if you wish to discuss the affect of your substance abuse on your child. This study will require approximately 20 minutes (or less) to complete, but feel free to take as much time as you wish.

Please be assured that ANY information you provide will remain anonymous. At no time will you be asked to supply your name or any other identifiable information. Results will be used to enhance treatment services to both SB County Perinatal clients and their children.

It should be noted that as a result of participating in this study, uncomfortable memories might be activated. In an effort to minimize such risks, please feel free to speak with one of the clinical staff members on hand at any given time, in your daily process groups, or during your scheduled individual therapy sessions with the agency.

Please understand that your participation in this research is totally voluntary and you are free to withdraw at any time during the study without penalty. If you have any questions or concerns about the study, please contact Dr. Davis at (909) 537-3839.

I acknowledge that I have been informed of, and understand, the nature and purpose of this study, and I freely consent to participate. I acknowledge that I am at least 18 years of age.

APPENDIX C
DEBRIEFING STATEMENT

DEBRIEFING STATEMENT

Thank you for your participation in this research on the relationship between attachment and substance use. Three categories of questions were used in this experiment in order to capture needed data. The first is a group of questions regarding child attachment, the second group of questions relates to substance use and the third and final group of questions contains demographical information such as age, race/ethnicity and education. It is hypothesized that using drugs or alcohol both while pregnant and after pregnancy can affect the attachment process between mother and child.

If at any time during or after the completion of this survey you feel the need to speak with a professional, please feel free to speak with clinic supervisor Cynthia Curbow, LCSW.

Your anonymous responses on this survey will provide information in by which to measure the affects drugs and alcohol have on the attachment process. Results from the study will be used to improve and/or add needed treatment elements to the current perinatal program, as a means to improve services for both you and your child(ren). Also, by participating in this study, you should know that you are providing a key source of help in this process!

Your participation will remain anonymous. If you would like further information regarding the results of the survey, or have any additional questions regarding the research, please feel free to contact faculty advisor Dr. Tom Davis (909) 537-3839. I thank you again for your help in this process.

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