1985

Touch memories in psychiatric and non-psychiatric populations

Andrea Zojourner

The University of Montana

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TOUCH MEMORIES IN
PSYCHIATRIC AND NON-PSYCHIATRIC POPULATIONS

By
Andrea Zojourner
B.A., Occidental College, 1971

Presented in partial fulfillment of the requirements
for the degree of

Master of Arts
UNIVERSITY OF MONTANA
1985

Approved by

Chair, Board of Examiners

Dean, Graduate School

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To investigate the theoretical importance of early tactile experiences, an imagery-based tactile history questionnaire designed to elicit self-reports about early touch from significant others was developed and administered to 40 psychiatric inpatients and to matched nonpsychiatric controls. In regard to memories of infant-maternal touch, inpatients reported receiving significantly less affectionate touch, significantly more abusive touch, and rated touch as significantly less pleasant than did controls. For memories of both maternal-child and paternal-child touch, inpatients rated touch as significantly less pleasant than did controls. Overall, the memories of both inpatients as a group and women as a group included more abusive touch.
Acknowledgements

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Sincere thanks are extended to the other thesis committee members, Dr. George Camp, Dr. Christine Isaacs, and Dr. David Strobel.

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CHAPTER I

INTRODUCTION

"Within the animal literature, studies have revealed that early tactile contact can influence later emotional and physiological behavior (Harlow, 1971). . . . With human infants the classic work of Spitz (1946) and the more recent research by Montagu (1971) highlight the importance of touch as a stimulus essential for normal intellectual, emotional, and social development" (Whitcher & Fisher, 1979, p. 87).

LITERATURE REVIEW

Animal Literature

Research in the area of tactile stimulation and its effects, both long and short term on a developing organism, is relatively sparse. Within the animal literature, the mother-infant separation phenomenon has been the most widely explored aspect of this area with the pioneering studies of Harry Harlow (1958) being the most extensively quoted. In Harlow's classic paradigm, comparing a wire surrogate mother to a cloth surrogate monkey mother, the reactions of infant monkeys indicated a decided preference for the cloth surrogate monkey mother despite the fact that for half of the monkeys, only the wire surrogate mother lactated. Thus for those monkeys, contact comfort
was a variable of considerable import. The long term effects of deprivation of touch was addressed in Harlow's studies: monkeys who were separated from their mothers, including those exposed to the cuddly cloth surrogates, evinced behavioral anomalies later in life. These monkeys functioned poorly as mates and/or mothers and were deficient in other social behaviors as well. They were found to be significantly different from monkeys not raised in isolation in such indices as hyperactivity, apathetic behavior and violent behavior.

Other researchers have investigated this relationship between lack of contact in the infant mother relationship and both short term and long term dysfunctional behavior. Montagu (1971) cites a review of social isolation studies which showed that animals raised in structures that allow them to see, smell and hear each other but not touch, suck or cuddle, grow up with immense problems in living. Their symptoms include self-mutilation, inability to mate or mother, excessive fear and violence and failure to integrate into the dominance order. They also groom themselves and others less frequently than those who were not sensorially deprived, and they tend to make repeated bizarre movements, including pacing, rocking and self-clasping (Montagu, 1971, p. 61).

Suomi (1980) did a study on limited contact deprivation in monkeys—tactile contact was precluded by a glass screen placed between mother and infant. However, they could still hear and smell each other. He found that there were serious behavioral problems in
adulthood evidenced by those monkeys who had been behind the glass screen and that the severity and type of problem varied with the length of time behind the glass screen. Suomi reports that long term deprivation resulted in a pattern of uncoordinated, aggressive behavior coupled with avoidance of other animals while short term deprivation seemed to be associated with a clinging dependent behavior pattern which was so marked that other activities such as grooming and sexual interaction were nearly excluded from the animals' behavior repertoire.

There is evidence that disruption of the maternal infant bond has physiological as well as psychological effects (Kaufman & Rosenblum, 1967; Reite, 1981; Breese, 1973; Von Wagener, 1950). Von Wagener (1950) notes that in infant monkeys who were separated at birth from their mothers, that even feeding reflexes would be confused if the cages of these somatosensorially deprived monkeys were not at least lined with soft cloths. Reite et al. (1981) in research on infant monkeys found changes in body temperature control, heart rate control, EEG patterns, brain wave patterns and sleep patterns associated with separation from mother monkeys. He further suggests that results of electronic monitoring of these infant monkeys show that they are also more susceptible to disease and exhibit diverse weaknesses of the body—results he also attributes to the disruption of the attachment bond.

Prescott (1979) hypothesizes that recent studies (such as those already cited)

suggest that during formative periods of brain growth, certain kinds of sensory deprivation such as lack of touching and rocking by the mother, result in incomplete
or damaged development of the neuronal systems that control affection (for instance, a loss of the nerve cell branches called dendrites). . . . Thus the influence of the environment seems to be imprinted on the structure of the brain, which in turn shapes the environment (Prescott, 1979, p. 124).

Non-maternal sources of cutaneous stimulation have also been found to be important. Sayler and Solmon observed young mice raised in a communal nest, where the young litters of several females were combined. These mice showed a faster rate of growth, when compared to young raised by single females, perhaps in part due to increased tactile stimulation (Sayler & Solmon, 1969).

**Human Literature**

The infant mother separation paradigm has also been studied at the human level, with researchers finding deleterious effects on young children (Spitz, 1946; Bowlby, 1960, 1973; Robertson & Bowlby, 1952).

Cohen's (1982) article cites a study which found cognitive development to be related to touching. Control groups of young children who did not receive marked amounts of holding and touching within twelve hours of birth were compared to a group of children who did. Results indicated that children in the touch deprived group had significantly lower IQ's, lower reading readiness scores and relatively lower language development in follow-up studies conducted when the children were school-age.
Montagu (1971) addresses an entire book to the question of how tactile experiences affect behavior. Montagu argues that the cutaneous stimulation that mammals give their young is crucial at all levels of development. He argues that beginning with labor, an intense cutaneous stimulation, and continuing through life, touch is critical to the optimum development of the human being. Shirley (1939) studied children who were born prematurely—and thus perhaps may not have had optimum cutaneous stimulation in the labor process. She found that premature children, when compared to normally born children in that study, were inclined to be more highly emotional, anxious, hypersensitive to sound, and relatively slower in manual and lingual control. Pieper et al. (1964) found differences in emotional well being between Caesarian and normally delivered infants, as did Straker (1962). Higher frequencies of emotional disturbance and anxiety were related to Caesarian birth—birth without labor.

Touch is involved in labor and touch is also involved in breast feeding. Breast fed children show significant physical and mental superiority to bottle fed children (Kimball, 1968; Hoefer & Hardy, 1929).

The importance of touch continues beyond the first days and months of life. Research on infants in institutions has addressed the significance of human touch in not only maximizing development but in actually averting the death of socially separated human infants. Chaplin (1915) surveyed children's institutions in ten American cities and found that in nearly all cases every infant under two years of age died, a result which he reversed by boarding out babies to families.
instead of leaving them in the institution. Brensemann (1932) established a custom in his hospital that
every baby should be picked up, carried around and
"mothered" several times a day. At Bellevue Hospital
in New York, following the institution of "mothering"
on the pediatric wards, the mortality rate for infants
under one year fell from 30 to 35 percent to less than
10 percent (Montagu, 1971, p. 79).

Spitz (1946) and Bowlby (1952, 1961) have contributed theories on the results of infant separation—both Spitz's theory of anaclitic
depression and Bowlby's protest-despair model provide information on the deleterious effects of maternal deprivation and concomitant touch deprivation.

In adulthood, the effects of touch deprivation are yet to be fully explored. Harlow's experiments with motherless monkeys who were later behaviorally deficient in adulthood indicate that there are long term ramifications of lack of adequate tactile stimulation. Also, in a study of 49 primitive human cultures, Prescott (1979) found a significant relationship between rates of physical affection given to human infants and rates of violence within each culture. Where levels of infants' affection are high, violence is low and where levels of infant affection are low, violence is high among the adults in that culture.

Shevrin and Toussieng of the Menninger Clinic (1965) hypothesize that lack of optimum tactile stimulation in infancy results in disturbed tactile behavior evinced later in life. Others have
correlated the emotional deprivation associated with inadequate mothering with retardations in physical and mental behavioral growth (Patton & Gardiner, 1963).

That the effects of touch deprivation are far-reaching and may include severe emotional trauma in adulthood has been addressed by those who study behavior and some of the conclusions reached after clinical observations are:

The fundamental trauma of the schizoid personality is the absence of pleasurable physical intimacy between mother and child . . . . If the child's demand for this contact is not met with a warm response, it will grow up with a feeling that no one cares . . . he will "deaden" his body in order not to feel pain and by this means abandon reality (Lowen, cited in Montagu, 1971, p. 206).

Psychosomatic disorder tends to develop in individuals who have lacked the experiences of motherliness (Garner & Wenar, cited in Montagu, 1971, p. 227).

They (mothers who don't touch their children) extensively restrict the occasions for primary identification through withholding tactile experiences. Yet, if the infant is to differentiate himself from his mother, these primary identifications, tactile and otherwise, have to be dealt with . . . [then] the infant can form those secondary identifications
which pave the way to autonomy and independence (Spitz, cited in Montagu, 1971, p. 201).

While the above-mentioned literature has focused on the lack of affectionate touch, there is other literature that focuses on the presence of abusive touch—of physically and sexually abusive touch. While there is not a consensus on sex being a factor in physical abuse, Herms (1981) reviews studies on sexual abuse and concludes:

Those studies that have been done make it clear that boys are abused far less often than girls (p. 14).

Whether male or female

the abused child tends to be, or to be seen as, different or special. Sometimes the child was born prematurely (Altrocchi, 1980, p. 616).

Research on the long term effects of child abuse is sparse. Altrocchi (1980) says:

We cannot yet fully calculate the effect of child abuse (p. 614).

It is not unreasonable to suggest that child abuse can be expected to be related to later adult emotional well-being.

**Touch Inventories**

Past efforts in quantifying tactile contact in human adults have included Jourard's (1966) study of Body Accessibility. Jourard's study of Body Accessibility quantified the extent to which college students allow others to "see and touch" their bodies—the others being parents and closest friends of both sexes. He found that touch
usually occurs to the upper portions of the body and occurs most often between friends of the opposite sex. In that study, the format involved presenting a diagram in which the body was divided into fourteen parts and asking college student subjects to report where and by whom they had been touched during the last twelve months. Nguyen et al. (1975) used a similar format to look at the relationship in adult-to-adult touch between meanings associated with various kinds of touch and parts of the body where these different touches were applied. The Rosenfield et al. (1976) study replicated the early Jourard Body Accessibility study and found that, among those college students studied, fathers touched their daughters more than the fathers touched their sons and mothers were reported to touch sons and daughters equally.

Margaret Mead, in her book *Male and Female* (1949) comments that American mothers are likely to be closer to their daughters than to their sons. Several researchers have reported that in infancy and young childhood female children receive more tactile stimulation than male children (Clay, 1966; Mead, 1949; Sears et al., 1957; Goldberg & Lewis, 1969). In keeping with the previous speculative and research literature this study hypothesizes that adult reports of early touch experiences will be gender differentiated.

**Guided Imagery**

In devising the touch questionnaire which endeavors to elicit through pen and pencil means early tactile memories, this study utilized guided imagery as a technique to facilitate memory recall for
early experiences—the hypothesis being that evoking memories can be enhanced by lining up the sensations and feelings associated with these memories. Some theoreticians argue that

Imagery may be the main access to important preverbal memories or to memories encoded at developmental stages at which language, while present, was not yet dominant (Kepecs, 1954; Sheikh & Panagioton, 1975) (Sheikh, 1983, p. 393).

Past research has indicated that there are context effects in verbal memory (Smith, 1979; Glenberg & Bjork, 1978). In her review of the literature on memory retrieval, Strum (1982) found that memory retrieval techniques can vary as a function of accuracy of the memories produced and as a function of amount of recall. Strum notes that

Smith (1979) and his colleagues found that context influences recall . . . ("the general environmental context refers to the physical surroundings in which an event occurs, including location, size of the room, objects and persons present, odors, sounds, temperature, lighting and so forth . . ."). In a second series of studies, Smith found that context effects can be shown not only for physical presence in the original context, but that a strategy of reinstating the original context by mental representations was also effective in increasing free recall for words. Thus, mental representation of contextual information can be a
viable source of retrieval cues for recall (Strum, 1982, pp. 30-31).

Malpass and Devine (1982) showed that guided recollections enhanced the accuracy of eyewitness identification. In their guided memory instructions they endeavored to verbally recollect the context of the original situation after a five month delay. In their study the recall instructions were worded to evoke the memories of the witnesses for feelings and details of the original incident. In the literature on hypnosis Kroger and Douce (1980) have found that attempts to regress the subject back to a preceding time enhance recall significantly with affective laden material (Strum, 1982).

The Present Study: Purpose and Significance

While review of the psychological literature indicates that many authors suggest there is a theoretically significant relationship between early tactile experiences and later emotional well-being (Denenberg, 1963; Harlow, 1971; Levine, 1960; Spitz, 1946; Montagu, 1971) little, if any, empirical research has been done. Past research efforts involving quantifying human tactile contact has focused primarily on contact received by adults from adults (Jourard, 1966; Nguyen, Helsman, & Nguyen, 1975; Rosenfield, Kartus, & Roy, 1976).

As an avenue to investigate the relationship between early tactile experiences and later emotional well-being, the present "Imagery Based Tactile History" was developed to elicit memories of early affectionate and abusive touch. It differs from the tactile contact
inventories that have heretofore been developed, that is the Jourard's Body Accessibility Inventory, in that the present inventory quantifies tactile experiences in childhood as remembered in adulthood while Jourard's addressed only adult to adult contact as remembered in adulthood. This imagery-based Tactile History instrument is designed to emphasize early tactile experiences because of their theoretical significance and focuses on early childhood and infant time periods as remembered by adults. Additionally, in keeping with the findings (Smith, 1979; Smith, Glenberg, & Bjork, 1978; Strum, 1982; Kroger & Devine, 1980; Malpass & Devine, 1980) that context affects recall, this study introduces contextual clues through the use of guided imagery in its instructional sets to enhance memory through "more complete" personal involvement.

Therefore based on a review of the literature the following hypotheses were proposed:

**Hypothesis 1.** Inpatients will report having received less affectionate touch than controls. Responses are expected to vary as a function of sex.

**Hypothesis 2.** Inpatients will report having wanted relatively more affectionate touch than controls. Responses are expected to vary as a function of sex.

**Hypothesis 3.** Inpatients will report having received more physically and sexually abusive touch than controls. Responses are expected to vary as a function of sex.
Hypothesis 4. Inpatients will report having found the touch they report having received as relatively less pleasant than will controls. Responses are expected to vary as a function of sex.
CHAPTER II

METHOD

Design

The current investigation compared responses to an imagery-based infancy and childhood tactile history questionnaire between two groups of subjects: psychiatrically hospitalized inpatients and adults who had never before sought professional psychiatric or psychological services. Sex of subject was also a variable in the study.

Subjects

The questionnaire was administered to 50 adult psychiatric inpatients. Of these 50 questionnaires ten were considered unuseable due to the fact that respondents omitted one or more pages of the questionnaire. The questionnaire was also administered to 58 public library patrons who reported that they had never before sought professional psychiatric or psychological services. Of these 58 questionnaires, exactly 40 questionnaires were considered useable (respondents did not omit one or more pages and respondents matched inpatients on the basis of sex, age, and socioeconomic status of the family of origin).

The psychiatrically hospitalized adults were inpatients at Montana State Hospital, Warm Springs, Montana. The inpatient subjects were 16 females and 24 males who ranged from 18 to 56 years of age. The
controls were public library patrons in the Missoula City-County Library in Missoula, Montana, matched on age, sex, and socioeconomic status of the family of origin. To match for age, the ages of the inpatients (who were administered the questionnaire first) were placed into age categories with five-year ranges; the first age category was 18-22 and the last was 53-57. The controls were matched for age within the appropriate range, for sex and for socioeconomic status of the family of origin. Two match for socioeconomic status the Hollingshead Two-Factor Index of Social Position was used (Hollingshead, 1957).

In regard to the inpatients, permission was obtained from hospital officials to administer the questionnaires and subjects signed a consent form for the hospital (developed by Warm Springs Hospital officials) and a consent form for university officials (see Appendix A and B). Subjects were first asked by their unit supervisors if they would be interested in participating in a research project being run by a graduate student from the University of Montana. Those inpatients who expressed willingness to participate met with the investigator in small groups ranging in size from two to seven.

To obtain the control group, permission was received from the head librarian at the Missoula County Library for the investigator to select subjects within the library and to use a space in the library to administer the questionnaire to small groups (N < 8). Controls signed a university consent form (see Appendix B).
Materials

Imagery Based Tactile History Inventory. An imagery-based infancy and childhood tactile history questionnaire was developed for this research project (see Appendix C). The questionnaire is a pen and pencil inventory and includes one page of relaxation exercises (adapted from Shor & Orne, 1962), introductory imagery vignettes adapted from Lazarus (1976), guided imagery instructional sets, and 20 questions eliciting self-reports of memories of early tactile experiences (answer format adapted from LoPiccolo, 1974) from five sources: mother in infancy, and mother, father, siblings, and relatives in childhood. With respect to each of these five sources, the adults were asked to answer the following four questions:

-- remembered frequency of occurrence of affectionate touch received (on a 6-point Likert-type scale ranging from never to very frequently) every day,
-- desired frequency of affectionate touch from that source (on a 6-point Likert-type scale from much less often to much more often),
-- remembered frequency of occurrence of sexually or physically abusive touch (on a 6-point Likert-type scale from never to more than once a day), and
-- in general, the remembered degree of pleasantness of that touch (on a 6-point Likert-type scale ranging from extremely unpleasant to extremely pleasant).

Instructional sets preceded the questions on each source and utilized guided imagery to introduce contextual clues about infancy/
childhood to assist involving each person in their own early experiences.

The last two pages of the questionnaire consisted of demographic questions, at-risk questions, methodological checks, questions about the degrees of confidence in answers given and questions about current use of medications.

Scales Derived from the Tactile History Questionnaire. The questionnaire was designed to elicit self-report from adults on memories of touch received from mother, father, siblings and relatives in childhood and from mother in infancy. With respect to those five sources, the adults were asked to rate the following on 6-point Likert-type scales: (a) remembered and (b) desired frequency of affectionate touch received; (c) remembered frequency of sexually or physically abusive touch; and (d) in general, the remembered degree of pleasantness of touch from that source. For (a) remembered frequency of affectionate touch, scores for each subject were tallied across all five sources for a resultant Positive Touch Experience scale score. For (b) desired frequency of affectionate touch, scores for each subject were totalled across all five sources for a resultant Preference for Positive Touch scale score. For (c) frequency of abusive touch, scores for each subject were totalled across all five sources for a resultant Negative Touch Experience scale score. For (d) reported degree of pleasantness of touch received, scores for each subject were totalled across all five sources for a resultant Touch Sensation scale score.

Another scale score derived from this questionnaire resulted from totalling scores to the methodology check questions (questions concerning
how involved in the stories the subjects reported getting and how helpful they found the stories) for a resultant Methodology Check scale (summing questions 28, 30, and 31).

The Hollingshead Two-Factor Index of Social Position. In order to match for socioeconomic status (SES) of the family of origin for each of the subjects in both of the groups the Hollingshead Two-Factor Index of Social Position (Hollingshead, 1957) was used. Its guidelines and categories were used to code the SES of inpatients. Then library patrons were screened to obtain matched SES levels. (Although the Hollingshead Index can be termed "dated" it was deemed suitable for the purposes it was used for in this study, i.e., to determine SES of parents of people who are adults now, therefore it was ranking the SES of a previous generation.)

Procedure

Subjects at the Montana State Hospital were administered the questionnaire in small groups on their wards at the hospital. Inpatients had been asked by their unit supervisors if they would like to participate in a research project being done by a university graduate student. Interested inpatients were introduced to the investigator, who reiterated that she was a graduate student at the University of Montana doing research that involved filling out an anonymous questionnaire. Subjects who were willing and eligible to participate (no minors were used in this study) were read the Research Instructional Statement:

We're trying to learn how to measure tactile history and we'd like you to help us by answering the questions in the
material given to you. In some cases, you'll be asked to imagine yourself in different situations in your past . . . what is important is that you feel relaxed and then just answer the questions to the best of your ability. After you finish, we'd appreciate your giving us some idea of your reactions to these questions. If for any reason you are not able to follow through on the material or if you have any questions, just tell the person who handed you the questionnaire. We appreciate your willingness to spend time with this material. Before we begin, you will be asked whether or not you are comfortable enough to give written consent to participate in this study. All replies to questions will be kept confidential and only overall statistical results will be made available.

The subjects were asked to fill out the two consent forms (see Appendix A and B). Questionnaires and pencils were then handed out. After completion of the questionnaire, subjects were read the Debriefing Statement.

Thank you for your cooperation. Are there any questions or areas of concern? What are your reactions to this questionnaire? If you have any concerns that come up later, please (tell your ward counselor or) contact me at the University of Montana Department of Psychology. All individual replies will be kept confidential.
Thanks very much for your cooperation—it will help us learn how to measure tactile history.

Feedback to the debriefing queries were encouraged and recorded on the back of the questionnaire each subject had turned in.

Controls who were public library patrons were approached at the library as they browsed or read. The investigator introduced herself:

I am a graduate student at the University of Montana doing a research project and am looking for people who have fifteen or twenty minutes free to fill out an anonymous questionnaire for this research.

If the potential subject said she/he had time, she/he was first screened for age and his/her father's educational and occupational background. If the subject matched, she/he was told that a group would be starting in a few minutes in the designated corner of the library. The investigator would then get one or several more subjects in a similar manner. When a "matched" subject was waiting for a group to form and there were no other appropriate matched subjects readily available, other non-matched but similarly questioned subjects were administered the questionnaire with the matched subjects in order to keep constant the small group administration of the questionnaire. These non-matched subjects' questionnaires were not used for the purpose of data collection—only 40 matched control questionnaires were obtained. Before administering the questionnaire to an assembled group, the Research Instructional Statement was read to the group members. Then they filled out the consent form, then the questionnaire, and then they were read the Debriefing Statement.
The guidelines specified in the Hollingshead Two-Factor Index for SES grouping were adhered to in this research. However, a post-experimental check of the demographic data revealed that computational errors were made in assigning one library patron to an age category. Since this person was within two years of the appropriate category this was not considered a serious flaw in the matching. One other library patron was assigned to a social class that the patron was actually outside of by two points. This was not considered a serious flaw in the matching. In both these instances the subjects were included in the respective categories as originally assigned.

Another classification decision was made assigning a Hollingshead Index occupation code number. A numerical rating of "6" was assigned if the occupation listed was farmer and no further information was available as to whether the farmer was an owner, manager or laborer and when the highest completed educational level was listed as high school or below (see Appendix D for Hollingshead agricultural rankings). This situation occurred four times when coding inpatients' father occupation.

In regards to demographics, occupational and educational code numbers were assigned as specified in the Hollingshead Index. One inpatient questionnaire had father's educational level omitted. A number for that educational level was computed by averaging the fathers' educational levels for all other same sexed inpatients who had listed an identical father's occupational level as the inpatient under consideration. Similarly, for the one other inpatient who omitted
father's occupational level the number for the occupational level was computed by the process described above.

**Statistical Methodology**

Each of the hypotheses in this study was tested using a $2 \times 2$ analysis of variance with sex of respondent (female and male) and location of respondent (Warm Spring State Hospital and Missoula City-County Library) as the independent variables.

In addition to the total scale score analyses of variance, $2 \times 2$ analyses of variance were done on questions one through 20 inclusive.

Pearson Product Moment Correlations correlating questions 21 through 33 to scores on the Positive Touch Experience, the Preference for Positive Touch, the Negative Touch Experience, and the Touch Sensation scales were determined. Pearson Product Moment Correlations correlating questions 22 through 33 to sex and to location of subject was determined. Correlations between the methodology scale and sex and location were also computed.

An .01 level of significance was used in regards to questions 22 through 27 and question 32 which had smaller sampling distributions (yes/no answer formats). An .05 level of significance was used for the other questions which had a six-choice answer format. (For scoring of the questionnaire, see Appendix C, Tactile History Questionnaire. Note that higher scores were assigned to the "more desireable" answer choices, i.e., to more affectionate touch or to less abusive touch.)
CHAPTER III

RESULTS

Hypothesis 1. Inpatients will report having received less affection than controls. Responses are expected to vary as a function of sex.

When scores for the questions in the Positive Touch Experience scale were totalled, an analysis of variance yielded no significant sex or location related differences (Table 1). However, a strong trend for sex differences was noted ($F = 3.570, df = 1, p = .063$), with women reporting having received more affectionate touch than men (see Table 2).

Hypothesis 2. Inpatients will report having wanted relatively more affectionate touch than controls. Responses are expected to vary as a function of sex.

When scores for questions in the Preference for Positive Touch scale were totalled, an analysis of variance yielded no significant differences (Table 3) by sex or location.

Hypothesis 3. Inpatients will report having received more physically and sexually abusive touch than controls. Responses are expected to vary as a function of sex.

When scores for the questions on the Negative Touch Experience scale were totalled, an analysis of variance indicated significant
Table 1

2 X 2 ANOVA for Positive Touch Experience Scale

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Group Means, Standard Deviations, and Number of Valid Responses for Questions 1 Through 20 and for Scales

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Table 3

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differences due to sex (F = 6.396, df = 1, p = .014) and a strong trend due to location (F = 3.664, df = 1, p = .059) (Table 4). Females and Warm Springs inpatients each reported overall more sexually and physically abusive touch than did males or library patrons, respectively (see Table 2).

**Hypothesis 4.** Inpatients will report having found the touch they report having received as relatively less pleasant than will controls. Responses are expected to vary as a function of sex.

When scores for questions on the Touch Sensation scale were totalled, an analysis of variance yielded no significant differences (Table 5). However, a strong trend for location differences was noted (F = 3.396, df = 1, p = .069), with inpatients reporting experiencing the touch they did receive as less pleasant than the controls (see Table 2).

**Item by Item Analyses of Variance**

When two by two analyses of variance were done on questions one through 20, two sex related significant differences, six location related significant differences, and one significant two-way interaction were found (see Table 6).

Females reported significantly more sexually and physically abusive touches from both fathers and mothers in childhood (see Table 6 for ANOVAs and Table 2 for means and standard deviations).
Table 4

2 X 2 ANOVA for Negative Touch Experience Scale

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In comparisons between locations (see Table 6 for ANOVAs and Table 2 for means and standard deviations) inpatients reported that they found maternal-infant, maternal-child, and paternal-child touch all to be significantly less pleasant than did the library patrons. Inpatients reported significantly less affectionate maternal-infant touch and significantly more sexually and physically abusive maternal-infant touch than did the controls. Finally, inpatients reported that they would have liked to have received more affectionate touches from older friends and relatives significantly more than did the controls.

A significant two-way interaction was found for question 10, which asked for a rating of how much affectionate touch one would have liked to have received in childhood from brothers and sisters (or those thought of as brothers and sisters) (see Table 6). While controls as a group reported a desire for relatively more touch than did inpatients as a group, male controls reported a desire for relatively more touch than did female controls (see Table 7 and Figure 1).

Correlations

Pearson Product Moment Correlations were used to compare questions 21 through 33 with the four touch scale scores (Table 8). Since the sampling distributions were small for questions 22 through 27 and question 33 (yes/no answer format) an .01 level of significance was used for those questions and an .05 level was used for the remaining questions which had larger sampling distributions (six choice answer format).
Table 7

Two Way Interaction*--Question 10**

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<td></td>
</tr>
<tr>
<td>Library</td>
<td>4.708</td>
</tr>
<tr>
<td>Warm Springs</td>
<td>3.875</td>
</tr>
</tbody>
</table>

*significant two way interaction, $F = 4.722, p = 0.033$

**question 10 (regarding preference for frequency of affectionate touches desired from brothers and sisters)
Figure 1

Two Way Interaction*—Question 10**

*significant two way interaction, $F = 4.722, p = 0.033$

**question 10 (regarding preference for frequency of affectionate touches desired from brothers and sisters)
Table 8
Pearson Product Moment Correlations
Between Questions 21 through 33
and Touch Scale Scores

<table>
<thead>
<tr>
<th>Question</th>
<th>Positive Touch Experience Scale</th>
<th>Preference for Positive Touch Scale</th>
<th>Negative Touch Experience Scale</th>
<th>Touch Sensation Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>r - .1347 (75)</td>
<td>-.0444 (76)</td>
<td>.1142 (75)</td>
<td>.0736 (74)</td>
</tr>
<tr>
<td></td>
<td>p .125 (75)</td>
<td>.352 (75)</td>
<td>.165 (75)</td>
<td>.267 (74)</td>
</tr>
<tr>
<td>22</td>
<td>r -.1648 (79)</td>
<td>.1154 (80)</td>
<td>-.2355 (79)</td>
<td>-.2274 (77)</td>
</tr>
<tr>
<td></td>
<td>p .073 (79)</td>
<td>.154 (80)</td>
<td>.018 (79)</td>
<td>.023 (77)</td>
</tr>
<tr>
<td>23</td>
<td>r -.1127 (79)</td>
<td>.0355 (80)</td>
<td>-.4802 (79)</td>
<td>-.2603 (77)</td>
</tr>
<tr>
<td></td>
<td>p .161 (79)</td>
<td>.377 (80)</td>
<td>.000* (79)</td>
<td>.036 (77)</td>
</tr>
<tr>
<td>24</td>
<td>r -.0985 (79)</td>
<td>.355 (80)</td>
<td>-.4210 (79)</td>
<td>-.1986 (77)</td>
</tr>
<tr>
<td></td>
<td>p .194 (79)</td>
<td>.377 (80)</td>
<td>.000* (79)</td>
<td>.042 (77)</td>
</tr>
<tr>
<td>25</td>
<td>r .1209 (72)</td>
<td>.1048 (73)</td>
<td>.1313 (72)</td>
<td>.0847 (70)</td>
</tr>
<tr>
<td></td>
<td>p .156 (72)</td>
<td>.189 (73)</td>
<td>.136 (72)</td>
<td>.243 (70)</td>
</tr>
<tr>
<td>26</td>
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<td>.1334 (70)</td>
<td>.0227 (69)</td>
<td>.734 (67)</td>
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<td></td>
<td>p .159 (72)</td>
<td>.135 (70)</td>
<td>.427 (69)</td>
<td>.278 (67)</td>
</tr>
<tr>
<td>27</td>
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<td>-.4048 (69)</td>
<td>.0385 (68)</td>
</tr>
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<td></td>
<td>p .205 (70)</td>
<td>.148 (70)</td>
<td>.000* (69)</td>
<td>.378 (68)</td>
</tr>
<tr>
<td>28</td>
<td>r .0750 (79)</td>
<td>.3278 (70)</td>
<td>.1635 (79)</td>
<td>.2126 (77)</td>
</tr>
<tr>
<td></td>
<td>p .256 (79)</td>
<td>.001* (80)</td>
<td>.075 (79)</td>
<td>.032* (77)</td>
</tr>
<tr>
<td>29</td>
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<td>.1891 (79)</td>
<td>.2165 (77)</td>
</tr>
<tr>
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<td>p .057 (79)</td>
<td>.110 (80)</td>
<td>.048* (79)</td>
<td>.029* (77)</td>
</tr>
<tr>
<td>30</td>
<td>r .1039 (78)</td>
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<td>-.0409 (79)</td>
<td>.0222 (76)</td>
</tr>
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<td></td>
<td>p .183 (78)</td>
<td>.305 (79)</td>
<td>.361 (78)</td>
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<tr>
<td>31</td>
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<td>.008* (77)</td>
</tr>
<tr>
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<td>-.2578 (79)</td>
<td>-.1727 (77)</td>
</tr>
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<td></td>
<td>p .189 (79)</td>
<td>.194 (80)</td>
<td>.011 (79)</td>
<td>.067 (77)</td>
</tr>
<tr>
<td>33</td>
<td>r .1640 (37)</td>
<td>-.0140 (38)</td>
<td>.3138 (37)</td>
<td>.2226 (37)</td>
</tr>
<tr>
<td></td>
<td>p .166 (37)</td>
<td>.467 (38)</td>
<td>.029 (37)</td>
<td>.093 (37)</td>
</tr>
</tbody>
</table>

* indicates statistical significance, for questions 21-27 and 32, p = .01; for questions 28-31, p = .05. See text for explanation of significance levels.

r = correlational coefficients, p = probabilities, and ( ) = number of valid responses.
**Significant Correlations.** The Positive Touch Experience scale correlated significantly and positively with question 31 which dealt with the relative helpfulness of questionnaire story examples in reminding the subject about touches received in childhood (Table 8).

The Preference for Positive Touch scale correlated significantly and positively with questions 28 and 31 which dealt with reported involvement in the stories and reported helpfulness of questionnaire story examples in reminding the subject about the touches received in childhood (Table 8).

The Negative Touch Experience scale correlated significantly and positively with question 29 which dealt with how confident one felt that one's answers actually reflected what happened in childhood (Table 8). The Negative Touch Experience scale correlated negatively and significantly with questions 23, 24, and 27 which dealt with being separated from family when young, being abused when young, and having been born prematurely (Table 8).

The Touch Sensation scale correlated significantly and positively with questions 28, 29, and 31 which dealt with how involved one reported getting in the stories, how confident one felt that one's answers actually reflected what happened in childhood and the relative helpfulness of the story examples in reminding one about touches received in childhood (Table 8).

**Other Significant Correlations.** In addition to the correlations reported in Table 8, Pearson Product moment correlations correlating questions 22 through 33 to sex (female/male) and to location of subject (Warm Spring/library) were determined (Table 9). Also, the methodology
Table 9
Pearson Product Moment Correlations
Between Questions 21 through 33 and Sex and Location
and Between Methodology Scale and Sex and Location

<table>
<thead>
<tr>
<th>Question</th>
<th>Sex</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>22</td>
<td>r</td>
<td>-.0310</td>
</tr>
<tr>
<td></td>
<td>p</td>
<td>.393 (80)</td>
</tr>
<tr>
<td>23</td>
<td>r</td>
<td>.0748</td>
</tr>
<tr>
<td></td>
<td>p</td>
<td>.255 (80)</td>
</tr>
<tr>
<td>24</td>
<td>r</td>
<td>.1996</td>
</tr>
<tr>
<td></td>
<td>p</td>
<td>.038 (80)</td>
</tr>
<tr>
<td>25</td>
<td>r</td>
<td>-.1185</td>
</tr>
<tr>
<td></td>
<td>p</td>
<td>.159 (73)</td>
</tr>
<tr>
<td>26</td>
<td>r</td>
<td>.0442</td>
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<td>p</td>
<td>.358 (70)</td>
</tr>
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<tr>
<td></td>
<td>p</td>
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</tr>
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<tr>
<td></td>
<td>p</td>
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</tr>
<tr>
<td>29</td>
<td>r</td>
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<td>p</td>
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<tr>
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</tr>
<tr>
<td>33</td>
<td>r</td>
<td>-.0292</td>
</tr>
<tr>
<td></td>
<td>p</td>
<td>.431 (38)</td>
</tr>
</tbody>
</table>

28 + 30 + 31 r = .0886
          p = .219 (79)

* indicates statistical significance (p ≤ .01)

r = correlation coefficient, p = probabilities, ( ) = number of valid responses.
scale (totalling the answers to questions 28, 30, and 31) was correlated with sex and location of respondent (Table 9).

There were no significant sex related correlations; however a substantial correlational trend was found between question 24 on having been abused when young and being female (Table 9).

There were three location related significant correlations. Location correlated significantly and positively with questions 22, 24, and 32 which dealt with having sought professional psychiatric services in the past, being abused when young and reporting being on medication when taking the questionnaire (Table 9).

The methodology scale did not correlate significantly with either sex or location (Table 9).

Other Findings. Results of Pearson Product moment correlations for birth order (oldest, middle, youngest, or only child) did not significantly correlate with either sex or location of respondent.

Finally, demographic questions had included a question on birthplace (country) of mother and father. For each of the four groups (female—Warm Springs, female—library, male—Warm Springs, and male—library) in not less than one instance and in not more than two instances a parent of one of the subjects was born outside of the United States.
CHAPTER IV

DISCUSSION

Overview

Considerable psychological literature suggests a positive relationship between early affectionate tactile experiences and later emotional well being (Denenberg, 1963; Harlow, 1971; Levine, 1960; Spitz, 1946; Montagu, 1971). However, little, if any, experimental research has focused on a systematic comparison of the tactile histories of adults who are severely emotionally distressed and adults who are not severely emotionally distressed. As an avenue of investigation, this study compared self-reports of early affectionate and abusive touch in psychiatric and non-psychiatric populations. To elicit these memories, an imagery-based tactile history questionnaire was developed and administered to a group of psychiatrically diagnosed inpatients and a matched group of public library patrons who had never sought psychiatric or psychological services.

The findings of this study are consistent with the posited theoretical relationship between early tactile experiences and later emotional well-being in adulthood (Whitcher & Fisher, 1979; Montagu, 1971). The results indicate that it is the very early (i.e., in infancy) touch memories that are significantly related to later healthy functioning; in response to questions about tactile experiences in the maternal-infant relationship, the inpatients reported receiving
significantly less affectionate touch and significantly more abusive touch than did the controls. In addition, the inpatients reported experiencing maternal-infant touch as significantly less pleasant than did the controls.

Discussion of Hypotheses Findings

It can be argued from the results that the prediction of the first hypothesis (that overall inpatients would report less affectionate touch) was not supported due to the fact that the scale scores involved in hypothesis one involved both childhood touch ratings and infancy touch ratings. Because it was the very early affectionate touches in infancy that were critical the overall significance associated with "early" memories were "washed out" by the inclusion of the comparatively less crucial childhood memories. The results suggest that the very early (in infancy) affectional experiences are the touches crucial to later emotional well-being.

The sex related trend in this study indicating that females reported receiving more affectionate touch than males supports the literature which indicates that female children receive more tactile stimulation than male children (Clay, 1966; Mead, 1949; Sears et al., 1957; Lewis, 1969).

The prediction of the second hypothesis (that overall inpatients would report having desired more affectionate touch) was not supported. The data indicated that no group felt that they received as much affectionate touch as they desired. All groups in the 2 X 2 factorial analysis reported wanting more affectionate touch overall.
The prediction of hypothesis three (that overall inpatients would report more sexually and physically abusive touch) was partially supported by a strong location related trend. Also in reference to hypothesis three, there were significant sex related differences with women overall reporting having received more abusive touch than men, which supports similar research findings (Herman, 1981).

The prediction of the fourth hypothesis (that overall inpatients would remember that the touch they had received was less pleasant than the controls) was supported by a strong location-related trend indicating that the inpatients reported less pleasantness associated with the touch they did receive—a trend that is conceptually related to the results on the negative experience scale indicating that overall inpatients received more physically and sexually abusive touch.

Discussion of Item by Item Findings

In regards to both paternal-child and maternal-child touch the finding that women reported remembering receiving more abusive touch in childhood than did males supports the research findings that girls are three times more likely than boys to receive abusive touch (Herman, 1981). The findings that for maternal-infant, maternal-child and paternal-child touch inpatients rated touch as significantly less pleasant than did controls can be explained by comparing the group means to questions concerning reported amount of negative touch received for those categories respectively. A comparison of group means indicates that inpatients reported receiving more (not significantly more, but more) abusive touch from each source.

Inpatients reported receiving significantly less affectionate
maternal-infant touch and significantly more sexually and physically abusive maternal-infant touch than did controls which supports the theoretical relationship between very early tactile experiences and later emotional well-being.

The finding that there was a significant two way interaction for sex and location on desired amount of affectionate touches from brothers and sisters in childhood indicates that the controls reported wanting touches from siblings more than did the inpatients. Of the controls, males reported wanting affectionate touch from siblings more than the females did and of the inpatients, males reported wanting affectionate touch from siblings exactly as much as did the females. Perhaps this finding can be considered tentative since by chance alone one would expect one two-way interaction in the twenty questions asked.

The finding that inpatients reported desiring more affectionate touches from older friends and relatives gains meaning when reference is made to the responses to the question on the degree of pleasantness of the touch received from older friends and relatives. The inpatients reported more pleasantness associated with that touch so it could follow that they, more than the controls, would desire more of that affectionate touch.

It is noteworthy the methodology checks involved in the methodology scale score did not correlate significantly with either sex or location which suggests that the methodology did not differentially bias the results. Although the inpatients did not differ from controls in reported amount of involvement in the stories or in reported helpfulness of relaxation and imagery instructions, inpatients did report less
confidence that their answers reflected what actually happened in childhood.

This result can be interpreted, at least in part, by the line of reasoning that the inpatients are endeavoring to respond as truthfully as possible and are aware that they are on medication and are institutionalized and thus might be expected to have a poor self-confidence rating.

The viewpoint that the inpatients are trying to respond truthfully is substantiated by the results of a variety of internal check which indicated that inpatients are responding consistently. This consistency of response is revealed in a number of significant correlations. For example, responding "yes" on having sought professional psychiatric or psychological services in the past correlated with being in the Warm Springs group. Also responding yes to an "at risk" question on having been abused correlated with total Negative Touch Experience scale scores. In addition, reporting taking medication correlated with being in the hospital, as would be expected.

Discussion of Correlations

The finding that the Positive Touch Experience scale correlated positively with reporting that the examples of touch given in the stories were helpful in reminding one of touch received in childhood suggests that the examples of touch given in the stories were examples of positive touch and could be expected to facilitate remembering positive affectionate touch.

The Negative Touch Experience scale correlated positively with reported confidence in the accuracy of answers given. That is, reporting relatively less abuse was associated with reporting relatively more confidence in the accuracy of one's answers. Related findings included significant correlations between being an inpatient and reporting less confidence in the accuracy of answers and between being an inpatient and
reporting having been abused. That is being an inpatient is associated with lesser confidence and having been abused. It is not unreasonable to suggest that inpatients are endeavoring to respond as truthfully as possible and that their past abuse could be expected to result in lower overall confidence in themselves and in their interactions with the world around them. The Negative Touch Experience scale correlated negatively with reported early separation from family and reported premature birth which both supports the literature which suggests that premature babies and other babies seen as special or burdensome are vulnerable to abuse.

The Touch Sensation scale correlated positively with reported involvement in the stories, confidence in answers given, and the relative helpfulness of the stories which could follow from the reasoning that the more pleasant one found touch in general the more one would relate to the examples of positive touch given and find them helpful in remembering pleasant touches received. If one remembered touches were pleasant, confidence in answers given might be expected to be associated with those pleasant touches in much the same manner as lowered confidence is associated with negative touch.

**Conclusions**

While these results could have been due to a variety of causes (i.e., respondents' differential use of medications, difference in intelligence quotients of respondents), the results of this hypotheses testing are consistent with the theoretical relationship between early tactile
experiences and later emotional well-being. To the author's knowledge this is the first research to systematically assess the reported differences between psychiatrically hospitalized patients and controls with respect to their memories of early tactile experience.

There will always remain the question of whether adults' reports of memories are accurate representations of childhood experiences. Eagle (1984) says

quite obviously, adult patients' reports of early events are nothing more than current reconstructions and impressions of what occurred in the past—with all the possibilities of selection, construction and distortion to which memories are subject (p. 154).

However, Alfred Adler wrote

We do not, of course, believe that all early recollections are correct records of actual fact. Many are even fancied, and most perhaps are changed or distorted . . . but does this diminish their significance? What is altered or imagined is also expressive (Adler, 1937, p. 283).

The author would agree that what is remembered is "expressive" and of personal relevance. Sheikh (1983) writes that

mental images provide a unique opportunity to examine the "integration of perception, motivation, subjective meaning and realistic abstract thought" (Shorr, 1980, p. 99; see also Escalona, 1973, p. 393).

Finally, it is of note that
It appears that meaning is largely dependent on images; words arouse images that have accompanying emotional responses, and these responses are the source of meaning of words (Bugelski, 1970; Forisha, 1979). Arieti (1976) offers support to this conclusion by indicating that images make it possible for us to preserve an emotional attitude toward absent objects (p. 393).

Further research could include administering a revised version of the questionnaire to a larger number of psychiatric and non-psychiatric subjects. Also a revised questionnaire could be administered to a large group of college students to see if this instrument could adequately predict-postdict use of psychiatric services. An investigation could be made into the response patterns of hypnotically age regressed subjects to see how their answers compared to non-age regressed subjects' answers. Or all questions could be changed to the "infancy" time period to see if that would yield significant changes in response patterns (perhaps the mother-infant questions yielded the strongest findings not because of some special mother-infant dynamic but because of some special infant dynamic that would be interesting to look at in regards to father, siblings, and relatives). Further research could focus on the difficult and complicated issue of differentiating the long term positive and negative effects of affectionate and abusive touch respectively. Such questions as "Is abusive touch better than no touch at all?" or (along the lines of stress innoculation) "Can abusive touch have beneficial results?" need to be addressed.
In the broader sense, further research might be done using imagery based paper and pencil diagnostic devices to measure clinically relevant personality factors.
Considerable psychological literature suggests a positive relationship between early affectionate tactile experiences and later emotional well being (Denenberg, 1963; Harlow, 1971; Levine, 1960; Spitz, 1946; Montagu, 1971). However, little, if any, experimental research has focused on a systematic comparison of the tactile histories of adults who are severely emotionally distressed and adults who are not severely emotionally distressed. As an avenue of investigation, this study compared self-reports of early affectionate and abusive touch in psychiatric and non-psychiatric populations. To elicit these memories, an imagery-based tactile history questionnaire was developed and administered to a group of psychiatrically diagnosed inpatients and a matched group of public library patrons who had never sought psychiatric or psychological services.

In regard to infant-maternal touch, inpatients reported receiving significantly less affectionate touch, significantly more abusive touch, and rated touch as significantly less pleasant than did controls. For both maternal-child and paternal-child touch, inpatients rated touch as significantly less pleasant than did controls. Overall both inpatients as a group and women as a group reported more abusive touch.
The findings of this study are consistent with the posited theoretical relationship between very early tactile experiences and later emotional well being. To the author's knowledge this is the first empirical research to relate adult emotional distress to early touch memories.
References


APPENDIX A

Patient Consent Form (Hospital)
Patient Consent

By signing this consent form, I am consenting to voluntarily participate in a research project conducted by Andrea Zojourner of the University of Montana.

I understand the purpose of the research project and I wish to participate in that project. I also understand my identity and individual replies to the questionnaire will be kept confidential.

I further understand that I can refuse to answer any questions at any time and can stop answering the questionnaire whenever I wish.

________________________________________
Patient's Signature

________________________________________
Date

________________________________________
Treatment Staff Signature

________________________________________
Date
APPENDIX B

Patient Consent Form (University)
This questionnaire is designed to measure what adults remember about being touched in their early childhood years. You will be asked to imagine yourself as you were when you were a child and to try and remember the affectionate touches you may have received from your father, your mother, your brothers and sisters, and from older relatives and friends. You will be asked to estimate how often you received affectionate touches, how much more or less you would have liked to have been touched, and you will be asked if you received abusive touches when you were young. You will be asked, overall, how you felt about being touched when you were young.

If you feel you are the kind of person who might feel uncomfortable in imagining or remembering your childhood, we ask that you not participate in this study because there is a very slight risk that this questionnaire might then produce feelings of discomfort that may persist beyond the length of time it takes to fill out this questionnaire. If you find it difficult to remember feelings and reactions you may have had to being touched when you were young, we ask that you not participate in this study.

However it is anticipated that most people will feel relaxed and good at the end of the questionnaire and will benefit from the experience of reviewing and remembering parts of their childhood.

If, for any reason, you feel unable at any time to complete the experiment, please feel free to request that you be allowed to discontinue. We will talk with you about your experiences and explain to you any aspects of the study which need clarification.
If you have further questions about this study when you have completed it, please contact Andrea Zojourner at 243-4523 in Missoula. The results of this study will be kept confidential as far as individual replies are concerned; you will not be asked to put your name on the questionnaire itself and only overall statistical results will be available for review at a later date.

If you feel comfortable enough to give written consent to participate in this study please sign below.

_____________________________________________________________________
Name

_____________________________________________________________________
Date
APPENDIX C

Tactile History Questionnaire
Before you answer the questions that follow, please try to relax completely... allow yourself to relax all the muscles in your body... slowly... taking all the time you need... relax... slowly... tighten the muscles of your feet, then relax them, when you have done this, tighten them relax the muscles of your lower legs... then do the same for your upper legs... the muscles of your stomach... tighten them relax the muscles of your chest... take a deep breathe... exhale... relax the muscles of your arms... slowly feel all the muscles of your body relaxing... relax completely... breathe deeply several times...

When you feel relaxed, quite relaxed... relaxed enough to score eight or more on a one to ten relaxation scale, go on...
Allow yourself to go back in time and allow yourself
to remember what you were like when you were a child.
Picture in your mind other members of your family as they
were when you were young... with those memories in mind,
answer the following questions that relate to that time
in your life... the questions contain examples of
things that may or may not have happened to you... just
use them as examples to help you remember childhood
experiences. The details of the questions that don't apply
to you won't distract you from answering... also, the
questions do not have to be answered exactly as events
actually occurred... just relax and answer as best you can
as to how events probably did occur when you were young.
Please do not answer any questions until you feel that you
are in the mood of the questions... take your time... remember the experiences of your childhood based on what
you know about yourself and your feelings... relax...
Please picture your childhood home... you might have lived several places as a child, but nearly everyone thinks of one particular place as his or her childhood home... concentrate on that image... close your eyes for a moment if that helps... 

Now, take a tour in your imagination... spend some time going from room to room in your childhood home... as you go from room to room, look around carefully... see the furnishings... notice the size of the rooms... allow yourself to experience the odors, sounds, temperature and lighting in each room... close your eyes if that helps... slowly remember your childhood home. Take about sixty seconds to do this tour of your childhood home.
While imagining yourself as you were when you were a child, examine your memory for times when your Dad touched you affectionately... when your Dad or stepfather or someone you thought of as a father expressed caring and affection to you physically... were there times when he hugged you or rocked you or carried you... or when he tossed you up and down... were there times when he kissed you goodnight... maybe you can remember the special smell of his clothes when he was close... or the sound of his laugh when you played together... were there times when you made him a present... you gave it to him feeling a little excited wondering if he'd like it... your heart thumping as he smiled and maybe gave you a hug... maybe as he taught you to ride a bicycle... were there times when he took you gently by the hand. Try to review in your mind some of the times when he touched you affectionately.

1. When I was young, I received affectionate touches from my father or stepfather or someone I thought of as a father:
   - _never_ 
   - _only on special occasions_ 
   - _a couple of times a day_ 
   - _very rarely_ 
   - _about once a day_ 
   - _very frequently: everyday_

2. When I was young, I would have liked to have received affectionate touches from him:
   - _much less often_ 
   - _slightly less often_ 
   - _more often_ 
   - _less often_ 
   - _slightly more often_ 
   - _much more often_

3. When I was young, I received physically or sexually abusive touches from my father or stepdad or someone I thought of as my father:
   - _never_ 
   - _occasionally_ 
   - _daily_ 
   - _rarely_ 
   - _frequently_ 
   - _more than once a day_

4. In general, when I was young and my father or stepfather or someone I thought of as a father, touched me, I found the touch:
   - _extremely unpleasant_ 
   - _slightly unpleasant_ 
   - _moderately unpleasant_ 
   - _slightly pleasant_ 
   - _moderately pleasant_ 
   - _extremely pleasant_

Allow yourself to relax, breathe deeply before you go on to the next questions.
While continuing to imagine yourself as you were when you were a child, now
examine your memory for times when your mother touched you affectionately: . . . when
your mom or your stepmother or someone you thought of as a mother expressed caring
and affection to you physically, . . . were there times when she kissed you goodnight
or stroked your hair as she tucked you into bed, . . . when she touched your shoulder as
you showed her your schoolwork, . . . were there times when you were away from home, waiting
for her to come and pick you up, . . . you saw her coming and felt good and she smiled
and hugged you while she said hello, were there times when she rocked you, . . . were
there times when you got hurt and cried and your tears tasted salty and your mother
came to care for you and held you close, . . . were there times when you sat on her lap
as she read to you, . . . try to review in your mind times when she touched you
affectionately.

5. When I was young, I received affectionate touches from my mother or stepmother or
someone I thought of as my mother:

- never
- on special occasions
- a couple of times a day
- very rarely
- about once a day
- very frequently

6. When I was young I would have liked to have received affectionate touches from her:

- much less often
- slightly less often
- more often
- less often
- slightly more often
- much more often

7. When I was young, I received physically or sexually abusive touches from my mother or stepmother or someone I thought of as my mother:

- never
- occasionally
- daily
- rarely
- frequently
- more than once a day

8. In general, when I was young and my mother or stepmother or someone I thought
of as a mother touched me, I found it:

- extremely unpleasant
- moderately unpleasant
- slightly unpleasant
- moderately pleasant
- slightly pleasant
- extremely pleasant

Take a moment or two to let yourself blow down and relax...take all the time you
need before going on to the next questions............
While continuing to imagine yourself as you were when you were a young child, examine your memory for times when your brothers or sisters or those who seemed just like brothers and sisters to you touched you affectionately. . . when they hugged you or held your hand. . . were there times when they patted you on the back, or tickled you. . . were there times when you'd be watching television together. . . and they sat close enough to you to touch you as you watched t.v. and ate snacks. . . were there times when they playfully touched when you were in the back seat of the car on a long trip. . . were there times when they put their arms around you to comfort you. . . try to review in your mind some of the times when they touched you affectionately.

9. When I was young, I received affectionate touches from my brothers and sisters or those who seemed just like brothers and sisters:
   __never  __only on special occasions  __a couple of times a day
   __rarely  __about once a day  __very frequently: everyday

10. When I was young, I would have liked to have received affectionate touches from my brothers or sisters or those I thought of as brothers and sisters:
    __much less often  __slightly less often  __more often
    __less often  __slightly more often  __much more often

11. When I was young, I received physically or sexually abusive touches from my brothers or sisters or those I thought of as brothers and sisters:
    __never  __occasionally  __daily
    __rarely  __frequently  __more than once a day

12. In general, when I was young and my brothers and sisters or those I thought of as my brothers and sisters touched me, I found it:
    __extremely unpleasant  __slightly pleasant
    __moderately unpleasant  __moderately pleasant
    __slightly unpleasant  __extremely pleasant

Feel as relaxed as you can before proceeding........
While continuing to imagine yourself as you were when you were a child, examine
your memory for times when older relatives or older friends touched you
affectionately. . . were there times when you went to family reunions and they patted
you on the head and exclaimed how much you'd grown. . . or they held you on their lap
after the big meal when there were still good smells coming from the kitchen. . . or
times when your grandparents or aunts or uncles held you close. . . were there times
when they stroked your hair or took you by the hand. . . try to review in your mind
some of the times when they touched you affectionately.

13. When I was young, I received affectionate touches from older relatives or older
friends:

- never
- very rarely
- about once a day
- a couple of times a day
- very frequently: everyday

14. When I was young, I would have liked to have received touches from them:

- much less often
- slightly less often
- less often
- slightly more often
- more often
- much more often

15. When I was young, I received physically or sexually abusive touches
from older friends or relatives:

- never
- occasionally
- daily
- rarely
- frequently
- more than once a day

16. In general, when I was young and my older relatives or older friends touched
me, I found the touch:

- extremely unpleasant
- moderately unpleasant
- slightly unpleasant
- moderately pleasant
- slightly pleasant
- extremely pleasant
For this last set of questions, allow yourself to go even further back in time and think of yourself as you probably might have been when you were an infant. Chances are, you will not be able to remember events as they actually occurred when you were a baby, so just try to answer according to the way you guess they might have occurred. For these questions, imagine yourself as a baby... think of how you might have been when you were a baby and imagine how your mother or stepmother or whoever took care of you when you were an infant treated you then. Take as much time as you need to get in the mood of the questions....relax....

Imagine yourself having a wet diaper... feel the clammy stickiness... allow yourself to feel the irritation on your skin... you are crying... allow yourself to imagine similar times when as a baby you were distressed... perhaps a time when a blanket fell off and you were cold... perhaps a time when you were frustrated because a favorite toy was out of reach... or when you were feeling hungry... imagine yourself in distress... perhaps you were crying so hard that your face was red... allow yourself to imagine distress as an infant.

17. When I was an infant, and was in distress my mother or stepmother or someone I thought of as my mother probably came to me as soon as she noticed I was crying and touched me affectionately:

- never
- rarely
- occasionally
- usually
- very often
- fairly often

18. When I was an infant, I would have liked to have had her come to touch me comfortingly:

- much less often
- slightly less often
- more often
- less often
- slightly more often
- much more often

19. When I was an infant, I received physically or sexually abusive touches from her:

- never
- occasionally
- daily
- rarely
- frequently
- more than once a day

20. In general, when I was an infant and my mother or stepmother or someone I thought of as my mother touched me, I probably found the touch:

- extremely unpleasant
- slightly unpleasant
- moderately unpleasant
- slightly pleasant
- moderately pleasant
- extremely pleasant
NOW THAT YOU HAVE COMPLETED THE QUESTIONNAIRE, PLEASE ANSWER THE FOLLOWING:

age___

male___ female___

ages of brothers and sisters

_______ _______ _______ _______ _______

your occupation (please be specific i.e. grocery clerk, teacher, letter carrier):

(your usual/current occupation)

Occupation of your father (please be specific i.e. grocery clerk, teacher, letter carrier):

(your father’s occupation when you were a child)

Occupation of your mother (please be specific i.e. grocery clerk, teacher, letter carrier):

(your mother’s occupation when you were a child)

educational level

(self) father mother

(highest level achieved)

Partial grade school

Complete grade school

Partial high school

Completed high school

Partial college training

Completed college

graduate professional training

Place of birth (the state, or if not in the United States, specify the country)

self_________________ father_________________ mother_________________

I have sought professional psychiatric or psychological services in the past:

__yes ___no If yes, briefly explain:

I was physically separated from my family for any significant length of time during
my early years (birth to ten) due to illness, divorce etc.

__yes ___no If yes, briefly explain:

I was physically abused or sexually abused when I was young

__yes ___no If yes, briefly explain:

please turn the page
I was breast fed when I was young __yes __no
I was born cesarean __yes __no
I was born premature __yes __no

How involved did you feel you got in these stories?
__extremely involved __very involved __moderately involved
__slightly involved __hardly involved __not involved at all

How confident do you feel that your answers reflected what actually happened in your childhood?
__extremely confident __very confident __moderately confident
__slightly confident __hardly any confidence __no confidence

Do you feel that the relaxation and imagery instructions helped you to imagine yourself as a child?
__extremely helpful __moderately helpful __not helpful
__did not interfere __moderate interference __extreme interference

How much did the examples of touch given in the stories help remind you of the touches you received in childhood?
__extremely helpful __moderately helpful __not helpful
__did not interfere __moderate interference __extreme interference

If you are now on medications of any kind (aspirin, pain relievers, tranquilizers, anti-depressants, mood elevators, alcohol or drugs of any kind), please specify:

How do you think this medication affected your ability to imagine your childhood and to remember the touches you received then?
__interfered greatly __moderate interference __no interference
__did not help __moderately helpful __greatly helped

Thank you for your cooperation. If you have any questions or concerns about this questionnaire or if anything came up for you while you were remembering your childhood that you feel you need to talk about with someone, please mention this to the person who collects this questionnaire from you.
APPENDIX D

Coding Note for Hollingshead Two Factor Index
Coding Note for Hollingshead

Two-Factor Index

There is an "agricultural" occupation in all seven occupational ranks:

<table>
<thead>
<tr>
<th>Rank</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dairy owners (value over $100,000)</td>
</tr>
<tr>
<td>2</td>
<td>Farm managers (large concerns)</td>
</tr>
<tr>
<td>3</td>
<td>Farm owners ($25,000 - $35,000)</td>
</tr>
<tr>
<td>4</td>
<td>Farm owners ($10,000 - $20,000)</td>
</tr>
<tr>
<td>5</td>
<td>Small farmers</td>
</tr>
<tr>
<td></td>
<td>Owners (under $10,000), and . . .</td>
</tr>
<tr>
<td></td>
<td>Tenants who own farm equipment</td>
</tr>
<tr>
<td>6</td>
<td>Smaller Tenants who own little equipment</td>
</tr>
<tr>
<td>7</td>
<td>Farm helpers, and Share croppers</td>
</tr>
</tbody>
</table>