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Development and Validity Testing of a Measure of Touch Deprivation

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Abstract

The goal of the present study was to develop and validate a measure of touch deprivation. One hundred ninety-eight undergraduate students completed the measure. The measure was shown to be both reliable and accounted for factorial, concurrent, predictive, and criterion validity. Results indicated that touch deprivation was related to several different variables, such as self-esteem and depression. Suggestions for future research and limitations were discussed.

The importance of touch cannot be overstated. Touch is a common aspect of human communication. Henley (1973) observed that touch has a huge impact on social psychology.

Researchers have noted the importance of touch on physical, mental, and emotional health (Derlega, Cantanzaro, & Lewis, 2001). Touch is an important part of human communication, because individuals constantly give and receive touch from others. Previous studies have shown that touch has an impact on compliance (Brockner, Pressman, Cabitt, & Moran, 1982), willingness to spend money shopping (Hornik, 1991), willingness to complete a survey (Hornik, 1987) and willingness to return money (Kleinke, 1977). Given that so many research studies have shown how touch affects interactions and behaviors, it was important to look at perceptions of touch. The goal of the present study was to develop and test a measure of touch deprivation.

Touch Deprivation

Touch deprivation or the lack of haptic communication is an understudied yet very important area of nonverbal communication. Knapp and Hall (1992) noted that "tactile communication is probably the most basic or primitive form of communication… In one sense, our first input about what 'life' is going to be like comes from the sense of touch." (p. 231). However, not everyone in society receives the amount of touch he or she desires or needs. In fact, research has shown that people who do not receive adequate amounts of touch develop various communication problems from reduced learning of speech (Thayer, 1986) to aggression (Field, 2002a).

Field (2002b) noted that touch is extremely important for the emotional, physical, and psychological growth and development for children. Extreme cases of touch deprivation have been cited in Romanian orphanages where children attained only half their height. Moreover, there children with extreme touch deprivation have had delays in cognitive development. Appropriate touch for children has been shown to help with sleep, reduce bad temper, and enhance academic performance (Hart, Field, Hernandez-Reif, and Lundy, 1998). Studies have found that babies who are touch appropriately are more likely to smile, cry less, and vocalize more than babies who were not touched appropriately (Field, 2002b). Prescott (1999) reported that more physical affection for children causes fewer incidents of physical aggression. In fact, Field, Morrow, Valdeon, Larson, Kuhn, and Schanberg (1992) found that increasing the amount of touch an adolescent receives through massage therapy can actually decrease violent tendencies. Furthermore, the Field et al. (1992) found that massages also helped to decrease adolescent anxiety as well. In essence, the massage therapy decreases dopamine levels while increasing serotonin levels, which ultimately decreases both aggressive and anxious tendencies. Hertenstein (2002) noted that touch has several communicative functions on infancy. In other words, positive touch elicits positive and emotions and vice versa.

Even adults are impacted by the type and amount of touch they receive. In one study conducted by Field (1995), she found that when elderly individuals were trained to give massages to neglected and abused infants the elderly individuals' levels of anxiety and depression decreased while the elderly individuals' levels of overall mood improved. Ultimately, touch studies have indicate that touch is very important because a lack of touch leads to communication development problems (Field, 1995), depression (Field,

1995), eating disorders (Gupta & Schork, 1995), aggression (Field, 2002a), self-injury behaviors (Turp, 2000). However, development of reliable means of measuring individual perceptions of touch deprivation has not been done. The current study sets out to design a measure of touch deprivation and test the reliability and validity of the measure.

Rationale

In an effort to ascertain the Touch Deprivation Scale's criterion validity, the study plans on examining the relationship between the newly developed scale and Gupta and Schork's (1995) Tactile Nurturance Scale. The Tactile Nurturance Scale was designed as a 3 item measure of touch deprivation, but the scale lacks both validity and reliability. The scale consists of three items and each item measures a completely different tactile issue: found memories of touch as a child, not enough touch as a child, and not enough touch as a child. Therefore, the following hypothesis is posed:

H1: There will be a relationship between touch deprivation and perceptions of tactile nurturance.

In an effort to examine the Touch Deprivation Scale's predictive validity, the study plans on examining the newly developed scale's relationship with depression. As previously noted above, increased touch has been shown to increase an individual's mood while decreasing anxiety and depression (Field, 1995). Because of the nature of this relationship, the opposite should also be true. Therefore the following hypothesis is posed:

H2: There will be a positive relationship between touch deprivation and depression.

In an effort to examine the Touch Deprivation Scale's predictive validity, the study plans on examining the newly developed scale's relationship with self-esteem. In addition to depression, touch deprivation should also be related to an individual's level of self-esteem because self-esteem and depression are negatively related constructs (APA, 1994); therefore, the following hypothesis is posed:

H3: There will be a negative relationship between touch deprivation and self-esteem.

In an effort to examine the Touch Deprivation Scale's concurrent validity, the study plans on examining the newly developed scale's relationship with perceptions of same-sex touching. Larsen and LeRoux (1984) developed the Same Sex Touching Scale to examine individual's perceptions of same-sex touching.

H4: There will be a relationship between touch deprivation and same sex touching.

Method

Participants and Procedures

Undergraduate students at a large southwestern university were participants in this study. Participants were told that they would receive course credit for filling out a survey and their response would remain anonymous. The participants were given a questionnaire with several touch scales. A total of 198 participants completed the entire questionnaire. The sample consisted of 101 females (52.9%), 81 males (45.5%), and 3 who did not respond (1.5%). The mean age of the sample was 22.23 (SD = 6.33).

Instrumentation

Touch Deprivation Scale. After reading the literature on touch deprivation, a 16 item Likert scale was created to measure the concept (Table 1). Each participant was asked to rate each question on the measure using a scale ranging from 1 *strongly disagree* to 5 *strongly agree*. To ascertain the factorial validity of the measure, a principle

component factor analysis with a varimax rotation was conducted. Four eigenvalues above 1 were found. However, nothing meaningfully loaded on the fourth factor and the scree test indicated that a three factor structure was appropriate. The three factors accounted for 53.82% of the variance.

Table 1 ***Touch Deprivation Scale***

		Absence of Touch	Longing for Touch	Sex for Touch
1.	I do not receive as much touch in my life as normal people.	.79	.08	-.12
2.	I receive a normal, healthy amount of touch from people.	-.77	-.22	-.05
3.	Human touch is not a daily occurrence in my life.	.73	.03	.09
4.	Touch from other people is a very common and natural part of my daily life.	-.72	.07	.02
5.	I often go for days without being touched by someone.	.71	.20	-.19
6.	I often feel like I'm untouchable because of the lack of touch from others in my life.	.67	.18	.25
7.	I receive a variety of forms of touch from a variety of different people.	-.64	-.16	.16
8.	I can go long periods of time without being touched by another person.	.55	-.02	-.33
9.	There are days where I would do anything just to be touched by someone.	.14	.86	.06
10.	I have longed for the touch of another person, any person.	.04	.83	-.09
11.	Some days I long to be held, but have no one to hold me.	.31	.75	-.05
12.	I often wish I could get more hugs from others.	-.05	.55	.33
13.	I've engaged in sexual behaviors for the pure purpose of being touched by someone.	.01	.18	.76
14.	I would never engage in sex with someone, just to be touched.	.03	.03	-.71
15.	I receive more touch than your average person.	-.35	-.18	-.49
16.	Even if someone hits me, at least I'm receiving human touch.	.27	.25	.32

All scores on the Touch Deprivation Scale were coded to indicate higher perceptions of touch deprivation. The first factor consisted of 8 items measuring the absence of touch (α = .85, M = 16.71, SD = 5.15). The second factor consisted of 4 items measuring an individual's longing for touch (α = .77, M = 9.97, SD = 3.47). The last factor consisted of 2 items measuring an individual's use of sexual contact to get touch (α

= .60, *M* = 4.70, *SD* = 2.22). The final two items loaded on multiple factors and were dropped from the analysis.

Tactile Nurturance Scale. The Tactile Nurturance Scale was developed by Gupta and Schork (1995) to measure an individual's level of touch deprivation. The scale consists of three items "I have fond memories of being hugged and/or cuddled by my parents/caregivers during my early childhood years;" "I wish I had been hugged or cuddled more during my childhood;" and "At the present time, I often wish I could get more hugs from others." Each item is measured using a ten step scale from 1 (*not at all*) to 10 (*markedly*). For the purposes of the current study, a factor analysis was conducted on the three items. However, only the second two items clearly loaded with each other. For the purposes of the current study, the second two items are summed together (*M* = 7.78, *SD* = 4.18). The alpha reliability for the Tactile Nurturance Scale was .70.

Depression. To analyze an individual's level of depression in this study, the depression subscale from Goldberg's (1972) General Health Questionnaire was utilized. The Depression Subscale consists of 5 statements measured using a Likert-type scale ranging from 1 *Not at All* to 4 *Much More than Usual*. The alpha reliability obtained in this study was .50 (*M* = 8.46, *SD* = 5.59).

Rosenberg Self-Esteem Questionnaire. The Rosenberg Self-Esteem Questionnaire was created by Rosenberg (1965) to examine an individual's positive perceptions of her or himself. The version utilized in this study is the shortened version utilized and tested by Vincke and van Herringen (2004). The scale consists of 6 statements measured using a Likert-type scale ranging from 1 *strongly disagree* to 5 *strongly agree*. The alpha reliability obtained in this study was .78 (*M* = 20.70, *SD* = 4.75).

Same-Sex Touching Scale. The Same Sex Touching Scale was created by Larsen and LeRoux (1984) to examine individual perceptions of same-sex touching. Participants who score high on the Same-Sex Touching Scale are more comfortable with same-sex touching than those who score on the lower end of the scale. The scale consists of 20 statements measured using a Likert-type scale ranging from 1 *strongly disagree* to 5 *strongly agree*. The alpha reliability obtained in this study was .96 (*M* = 63.69, *SD* = 16.65).

Results

The first hypothesis predicted a relationship between touch deprivation and perceptions of tactile nurturance. To conduct the analysis, a series of 2-tailed Pearson Correlations were conducted between tactile nurturance and the three factors of touch deprivation: absence of touch, r (189) = .14, p <.05; longing for touch, r (188) = .34, p <.0005; and sexual contact to get touch, r (190) = .22, p <.005.

The second hypothesis predicted a positive relationship between touch deprivation and depression. A multiple regression was conducted to evaluate how well the independent variables (absence of touch, longing for touch, & sexual contact to get touch) could predict the dependent variable (depression). The linear combination of the independent variables was significantly related to an individual's level of depression, $F(3, 183) = 18.41$, $p < .0005$. The sample multiple correlation coefficient, R, was .48, which indicates that approximately 23% of the variance of an individual's level of depression could be accounted for by the linear combination of the three factors of touch deprivation. Furthermore, all three factors of touch deprivation were shown to account for unique variance in an individual's level of depression: absence of touch ($\beta = .31$, $t = 4.53$,

$p < .0005$), longing for touch ($\beta = .34$, $t = 3.38$, $p < .001$), and sexual contact to get touch ($\beta = .20$, $t = 2.97$, $p < .005$).

The third hypothesis predicted a negative relationship between touch deprivation and self-esteem. A multiple regression was conducted to evaluate how well the independent variables (absence of touch, longing for touch, & sexual contact to get touch) could predict the dependent variable (self-esteem). The linear combination of the independent variables was significantly related to an individual's self-esteem, $F(3, 183) = 3.60$, $p < .001$. The sample multiple correlation coefficient, R, was .25, which indicates that approximately 6.1% of the variance of an individual's self-esteem could be accounted for by the linear combination of the three factors of touch deprivation. However, only absence of touch ($\beta = -.25$, $t = -3.26$, $p < .001$) accounted for any of the unique variance in an individual's self-esteem.

The final hypothesis predicted a relationship between touch deprivation and same sex touching. A multiple regression was conducted to evaluate how well the independent variables (absence of touch, longing for touch, & sexual contact to get touch) could predict the dependent variable (same sex touching). The linear combination of the independent variables was significantly related to an individual's perception of same sex touching, $F(3, 176) = 21.67$, $p < .0005$. The sample multiple correlation coefficient, R, was .52, which indicates that approximately 27% of the variance of an individual's perception of same sex touching could be accounted for by the linear combination of the three factors of touch deprivation. However, only absence of touch ($\beta = -.49$, $t = -7.22$, $p < .0005$) and longing for touch ($\beta = .38$, $t = 5.53$, $p < .0005$) accounted for any of the unique variance in an individual's perception of same sex touching.

Discussion

It is obvious that touch is perceived differently among people. The results suggest that there is a significant relationship between touch deprivation and perceptions of tactile nurturance. The strongest relationship was between touch deprivation and longing for touch. Individuals who are deprived from touch may need more nurturing. The two concepts seem to be very similar. The results also suggested that there is a positive relationship between touch deprivation and depression. The two concepts are highly related to each other. Hence, touch may be very valuable to individuals, who are depressed. Touch has been shown to be vital for infants' overall development (Field, 2002a, b). Hence, touch could play an important role in the emotional and physical development of depressed individuals. Findings also indicated that touch deprivation has an effect on self-esteem. Higher self esteem predicts lower levels of touch deprivation and vice versa. It is probable that more appropriate touch from others would be beneficial for building one's self esteem. Similar to depression, Field (2002a) noted that touch can have an impact on how a person communicates and views themselves. Thus, touch can be fruitful for healthier self esteems.

Findings suggests that same sex touching has an influence on perceptions of touch deprivation. Because same-sex touching is considered taboo for males, it may cause males to feel deprived of touch. Past research studies have noted that there are some differences in the way that people touch (Derlega, Cantanzaro, & Lewis, 2001). Specifically, research has suggested that men are less likely to touch the same sex compared to women. The types of same sex touching include touching arms around the waist, hugs, and massaging. Derlega, Lewis, Harrison, Winstead, and Costanza (1989)

found that male same-sex pairs exhibited less tactile intimacy than female same-sex pairs or in opposite-sex pairs. The findings of sex differences and touching behavior was similar to other studies on same-sex touching. Larsen and LeRoux (1984) examined same-sex touching and found that men had less favorable perceptions toward same-sex touching compared to women. Moreover, Anderson and Leibowitz (1978) discovered that in same sex dyads, men were more likely than women to engage in touch avoidance. Overall, men have different perceptions compared to women in regards to touching a member of the same sex. Studies have consistently shown that women display customary and conventional touching behaviors (Derlega et al., 1989). Touching behaviors among women is typically perceived as appropriate and less likely to indicate sexual involvement. Touching behaviors among men and women are also consistent with conventional heterosexual expectations about male and female behavior (Derlega et al., 1989). Nonverbal intimacy between men and women is usually considered as appropriate and is probably seen as sexual in nature. Thus, perceptions of same-sex touch may influence perceptions of touch deprivation.

Overall, findings revealed that the measure was shown to be both reliable and accounted for factorial, concurrent, predictive, and criterion validity. Thus, future studies on touch deprivation should use this measure. Moreover, the results indicate that many factors may influence perceptions of touch deprivation.

Limitations

There are a few limitations associated with this study. First, the study was done with college students. Hence, the results can not necessarily be generalized to the general population. Second, location of the college where the participants attended is considered to be extremely conservative. If more participants from other parts of the country filled out the survey, the results might be different. Third, the population of college students was rather homogenous. A more diverse population might have offered different results. Fourth, the study used a questionnaire format. If an interview or experiment was conducted, the results might have been more explanatory.

Future Research

There is still a lot of research that needs to be done on touch. Future research should include other populations, such as young children and older adults. Moreover, future research should provide more experimental designs concerning touch deprivation. Also, future research might look at other touch deprivation variables that might affect communication behavior.

Future research in this area would be profitable, because touch is such an important part of communication.

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