A study examined school and home variables as contributing factors in the development of communication apprehension in children. Subjects, 89 undergraduate students in 2 sections of a semester-long course in organizational communication and two sections of an introductory level course in interpersonal communication at a midwestern university, volunteered to take home instrument packets over their Thanksgiving vacation to be completed by parents and up to four siblings. Results indicated that positive reinforcement and encouragement by parents in the home and fathers' level of communication apprehension were the two most significant predictors of children's level of communication apprehension. Findings suggest that grade school, high school, and college environments were not significant predictors of a child's level of communication apprehension. (One table of data is included. Contains 32 references.) (RS)
School and Home Environments as Contributing Factors in the Development of Communication Apprehension in Children

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CA in Children

Abstract

Although the debilitating affects of communication apprehension are well known, we are comparatively less informed about the factors contributing to its development. This research examines school and home variables as contributing factors in the development of communication apprehension in children. Results indicate that positive reinforcement and encouragement by parents in the home and fathers’ level of communication apprehension are the two most significant predictors of children's level of communication apprehension. In this study, grade school, high school, and college environments were not significant predictors of a child's level of communication apprehension.
School and Home Environments as Contributing Factors in the Development of Communication Apprehension in Children

While the social sciences have produced a body of research investigating communication apprehension, the majority of these studies address either the effects of or treatment for communication apprehension with comparatively less attention directed toward its underlying causes (Payne & Richmond, 1984). We are well-versed in the consequences of communication apprehension, but comparatively less informed about the factors which contribute to its development (Daly & Friedrich, 1981). Researchers generally agree that the development of apprehension must be a multi-faceted process influenced by school environment as well as communication patterns within the context of the family (Daly & Friedrich, 1981; Richmond & McCroskey, 1992). Daly and Stafford (1984) stress the significance of examining these contributory factors when they argue that, "Understanding the developmental correlates of social communication anxiety provides critical points of departure for the integration and understanding of research, theory, and remediation strategies related to anxiety" (p.129). The goal of this study was to examine and clarify the relationship between home and school environments as contributing factors in the development of communication apprehension in children.

The Home Environment

The family is the context in which children initially develop a sense of self and basic motivations, values, identities, and beliefs are formed through interaction with parents and siblings (Gecas, 1981). In this context, communication behaviors are strongly influenced through interaction with significant others (parents and siblings) during the
first four years of life (Daly, 1977). Modeling of significant others' behavior as well as reinforcement for behavior(s) valued within a particular family shape the development of a child's attitude(s) towards communication, and consequently, the particular communication behaviors exhibited by the child. "The child, through imitation, modeling, or introjection acquires traits, characteristics, and values similar to the parents" (Hetherington & Frankie, 1967, p. 119). The presence of appropriate communication role models, positive reinforcement by parents and siblings for interaction, and appropriate communication skills training within the home are essential for discouraging the development of communication apprehension (Daly & Friedrich, 1981). Daly & Friedrich (1981) found that individuals reporting more positive reinforcement by their parents for attempts at communication experienced less communication apprehension than those individuals reporting less positive reinforcement. This finding generates the following hypothesis:

**H1:** Subjects with low communication apprehension will report significantly more positive parental behaviors and attitudes towards communication than subjects with high communication apprehension.

In the home, fathers dominate the socialization of their children by providing powerful role models and reinforcing acceptable social behavior. A significant body of research supports the position that children imitate a powerful role model (Bandura, Ross, & Ross, 1963; Bandura & Huston, 1961). Hetherington (1965) found that when using parents as models, both male and female children imitate the dominant parent. Bronfenbrenner (1960) suggests that "It is primarily the behaviors of the fathers that
account for the differential effects of parental behavior on the two sexes and for the individual differences within each sex" (p. 149). Although the communicative development of a child is influenced by both parents, "most theorists stress that the father is the more punitive parent and thus is relatively more effective in the inhibition of antisocial and undesirable behaviors" (Lamb, 1976, p. 12). Consistent with this research, Berquist, Bourhis, and Allen (1992) found that within the context of the family, fathers' level of communication apprehension was the best predictor of children's level of communication apprehension. This finding serves as the basis for the following hypothesis:

H2: Fathers' level of communication apprehension will be positively correlated with subjects' level of communication apprehension.

The School Environment

Although most children's early communication experiences occur within the context of the home, school and teacher eventually replace home and parents as the primary context within which communication behaviors are shaped. Once again, a combination of modeling, reinforcement, and skill acquisition contribute to the development of communication attitudes. Gecas (1981) discusses the importance of the school environment in the socialization of children.

But in the course of this socialization experience [school], other things are also learned, such as general norms and beliefs, and other aspects of the child are affected (personality characteristics, self-esteem). The main processes involved are direct instruction, buttressed by a system of costs and rewards (grading, use of praise, and manipulation of self-esteem), social comparison processes, and
expectancy effects. (p. 179)

Daly and Friedrich (1981) discuss the impact of the school context as a possible antecedent to the development of communication apprehension:

[School offers] much greater opportunities for experience with the extremes reinforcement contingencies, practice with peers and teachers in the development of skills, and the provision of a much larger number of models, the school may—if not serve as the predominant predictor-offer the potential for significant maintenance of the anxiety. (p.246)

Reflective appraisal theory provides one theoretical explanation for the development of communication apprehension within the context of the school environment. Beatty, Plax, & Payne (1984) argue that a person’s view of self, is influenced by what an individual believes others think of him/her. In the context of the home, "parents serve as the most important significant other in the developmental process, so self-appraisal reflects a person’s perception of the parent’s approval or disapproval of that person" (Beatty et al, 1984, p.269). In the context of school, children perceive teachers as substitute parents and in turn teachers see themselves in a parental role (Ljungren, 1980). The teacher in the role as a substitute parent, tends to have a more intense effect, whether good or bad, on students than actual parents (Stevenson, Keen, & Knights, 1963). Consistent with this literature, Daly & Friedrich (1981) found that individuals who reported more positive school communication patterns experienced less communication apprehension than those individuals who reported less positive communication patterns. This logically generates the following hypothesis:
H3: Subjects with low communication apprehension will report significantly more positive school and teacher responses to communication than subjects with high communication apprehension.

The affect of school on the development of communication attitudes appears to decline as individuals grow older and progress from grade school to high school (Daly & Friedrich, 1981; Bourhis & Allen, 1992). Children are most influenced during their formative years which occur in grade school. By the time individuals reach adolescence and high school, any predisposition towards communication apprehension has stabilized (Bronson, 1966; Kagan & Moss, 1962). One would predict that this decline would continue as individuals enter the university environment. This line of reasoning is tested in the following hypothesis:

H4: Positive responses to grade school communication will contribute more to the prediction of communication apprehension than positive responses to high school and/or college communication.

Using retrospective self-reports, Daly & Friedrich (1981) found that subjects' perceptions of the amount of positive reinforcement for communication interactions at home and in school contributed significantly to the prediction of communication apprehension. Taken together, home and school accounted for significantly more of the subjects' apprehension than either alone, although school affects predominated over home affects (Daly & Friedrich, 1981). In part, this study is an attempt to replicate these findings. However, Daly & Friedrich did not take into account the level of communication apprehension of the individuals' significant others in the home context.
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(pARENTS and siblings). In particular, fathers' level of communication apprehension is a significant predictor of children's level of communication apprehension (Berquist, Bourhis, & Allen, 1992). The present research extends both of these earlier studies by including the level of communication apprehension of the individuals' significant others within the home context, along with the individuals' perceptions of positive home and school communication environments. The combination of both approaches allows for a broader account of the relative and interactive contributions of home and school environments in the development of communication apprehension. Based on the preceding analysis, the following hypothesis was tested:

H5: Fathers' level of communication apprehension will contribute more to the prediction of communication apprehension in subjects than positive responses to home and school communication.

Methods

Subjects

Undergraduate students enrolled in two sections of a semester long course in organizational communication and two sections of an introductory level course in interpersonal communication at a midwestern university were invited to participate in the study in exchange for "extra-credit." Eighty-nine students agreed to participate (N = 89). The average age of these students was 20 (M = 20.78; SD = 3.15) with more female (n = 54; 60.5%) than male (n = 35; 39.5%) subjects participating. The average size of the families in the study was 4.72 (SD = 1.49). Twenty-one of the families had experienced a divorce (24.4%) and fifty-four of the mothers worked outside of the home at least part
Measure

Retrospective Reports. Home and school communication environments were measured using two instruments developed by Daly and Friedrich (1981). The first instrument measured subject's recollections of communication patterns within their homes and between the subjects and their parents. Subjects responded to thirteen items on a seven point Likert scale ranging from "strongly agree" to "strongly disagree." Representative items included: "my parents encouraged me to talk with them when I was a child;" "my parents encouraged me to communicate a great deal when I was a child;" and "as a child, I felt my parents paid very little attention to me." Data from the present study yielded an acceptable alpha coefficient of .81 for the home instrument. The second instrument measured subject's recollections of communication patterns during grade and high school. Subjects responded to nine items using the same Likert scale. Representative items included: "in grade school I was encouraged to talk;" "my grade school had the philosophy that kids were best seen and not heard;" "in high school the quiet kids were the ones who were praised;" and "in high school I was often corrected for mistakes made when talking." As an extension of the Daly and Friedrich (1981) study, perceptions of current college communication patterns were also measured. The five Likert items measuring subjects' perceptions of high school communication patterns were recast in the present tense and "college" was substituted for "high school." Representative items included: "in college the quiet kids are the ones who are praised;" "in college I am often corrected for mistakes made when talking;" and "college is a very quiet place." Data
from the present study yielded an acceptable alpha coefficient of .81 for the school instrument (grade school, high school, and college).

**Communication Apprehension.** Communication apprehension was operationalized using McCroskey's PRCA-24. The PRCA-24 has "evolved as the dominant instrument employed by both researchers and practioners for measuring trait-like communication apprehension" (McCroskey, Beatty, Kearney, & Plax, 1985, p. 165). The instrument has well established predictive and construct validity as well as high reliability (McCroskey, Daly, Richmond, & Falcione, 1977). Data from the current study yielded an alpha coefficient of .93 for the PRCA-24.

**Data Collection**

Prior to their Thanksgiving vacation, subjects were given an instrument packet which included: (a) a short demographics section requesting information about the subject's family; and (b) enough copies of the PRCA-24 and the Daly and Friedrich instruments for the subjects' parents and up to four of the subjects' siblings. Subjects were instructed to take the packet home during their Thanksgiving vacation and have each member of their family complete a copy of the instruments.

**Data Analysis**

This study used multiple regression to generate the impacts of various features on the prediction of subjects' level of CA. Multiple regression is intended to generate estimates of the variables affecting the dependent measure. The criterion variable in this study was the subject's level of CA. The predictor variables were: age, sex, family size, whether or not the subject's parents were divorced, father's level of CA, mother's level of
CA, sibling's level of CA, whether or not the subject's mother worked outside of the home, subjects' perceptions of home communication patterns, and subjects' perceptions of school communication patterns.

Results

Two statistically significant correlations of particular interest emerged in the present study. Table 1 provides a correlation matrix for all of the variables in the study. There was a significant positive correlation between subjects' perceptions of their home communication environment and subjects' level of CA ($r = .42, p \leq .01$) and a significant positive correlation between fathers' level of CA and subjects' level of CA ($r = .30, p \leq .01$). No statistically significant correlation emerged between subjects' perceptions of their school communication environments and subjects' level of CA ($r = -.01, p > .05$).

Using stepwise regression analysis, there was a significant regression equation for predicting subjects' level of communication apprehension [$F(2,72) = 11.35, p \leq .0001$]. The multiple correlation for the regression equation was .49 with an adjusted $R^2$ value of .24. Subjects' perception of their home communication environment and fathers' level of communication apprehension were both significant predictors of subjects' level of CA. The most significant predictor was home communication environment (Beta = .39, $t = 3.78, p \leq .001$) followed by fathers' level of CA (Beta = .26, $t = 2.55, p \leq .05$). None of the remaining predictors approached statistical significance once home communication
environment and fathers' level of CA were entered into the regression equation.

The first hypothesis predicted that subjects with low communication apprehension would report significantly more positive parental behaviors and attitudes towards communication than subjects with high communication apprehension. This prediction was supported ($r = .42, p < .01$). The results of this study replicate Daly and Friedrich's (1981) finding that parental behaviors in the home contribute significantly to the development of communication apprehension in their children. Parents who encourage and reward their children when they engage in effective communication interaction reinforce the development of socially acceptable and instrumental communicative behaviors.

The second hypothesis predicted that fathers' level of CA would be positively correlated with subjects' level of CA. This prediction was supported ($r = .30, p < .01$).

This finding is consistent with previous literature which suggests that, within the home environment, fathers' behavior and attitudes play a significant role in the development of a child's attitudes towards communication in general, and communication apprehension in particular (Hetherington & Frankie, 1967; Love, Kaswan, & Bugenthal, 1972; Lamb, 1976; Beatty & Dobos, 1993). The results also replicate Berquist, Bourhis, and Allen's (1992) finding that fathers' level of CA is related to childrens' level of CA.

The third and fourth hypotheses examined the relative contribution of grade school, high school, and college to the development of communication apprehension. Neither of these hypotheses were supported. These results failed to replicate Daly and Friedrich's (1981) finding that school communication patterns contributed more to the
development of communication apprehension than home communication patterns. Although we hoped to find that the relative contribution of school to the prediction of communication apprehension would diminish over time (hypothesis four) we were surprised to find that not only was their no diminishing of affect over time, there was no effect at all. Clearly, school does contribute to the development of communication apprehension in children, particularly at an early age. These results should not be interpreted to mean that there is no effect. A more likely explanation for the inability to replicate and extend these earlier findings can be found in population differences, sample size, sampling procedures, sampling bias, or instrumentation. The results do suggest that more needs to be done to determine which of these two positions more accurately reflects the relative contribution of school environment to the development of communication apprehension.

The fifth hypothesis predicted that fathers' level of communication apprehension would contribute more to the prediction of communication apprehension in subjects than positive responses to home and school communication. This prediction was not supported (home: Beta = .39, t = 3.78, p ≤ .001; fathers' level of CA: Beta .26, t = 2.55, p ≤ .05). Although fathers' level of CA was not the most significant predictor, these results clearly support the position that fathers, within the context of the home environment, contribute significantly to the development of communication apprehension in their children. The combination of positive reinforcement and modeling will clearly be influenced by a father's level of CA. Fathers high in CA will serve as inappropriate role models for their children, and, predictably, are less likely to reinforce those communicative behaviors in their
children which mitigate the development of communication apprehension. As Love, Kaswan, and Bugenthal (1972) indicate, fathers of anxious children are themselves withdrawn, neutral, nondirective, and anxious themselves.

Discussion

This study illustrates how replication can play an important role in the development of external validity for research examining the contributory correlates of communication apprehension. We agree with Kerlinger's (1973) lament that "replication is too seldom practiced in any research" (p. 681). No single study, however well designed and executed, can establish a generalization. This study, replicates Berquist, Bourhis, and Allen's (1992) finding that apprehensive fathers are likely to raise apprehensive children. These findings are also consistent with Hutchinson and Neuliep's (1993) findings that father's CA is significantly related to CA in their children while mother's level is not. These results also support Daly and Friedrich's (1981) finding that positive reinforcement and encouragement in the home at an early age are essential to developing a positive attitude towards communication with others.

However, this study does not confirm earlier findings by Porter (1977) and Daly and Friedrich (1981) who claim that school environment, particularly grade school, has a greater effect on the development of CA in children than their home environments. It is important to note that neither Porter nor Daly and Friedrich included father and mother's level of communication apprehension in their respective analyses. In this study, when parental CA is included as one of the predictor variables in the regression analysis, the effect of school is greatly diminished. At the very least, these results suggest a rethinking
of the role of school environment in the development of communication apprehension. These findings also suggest that CA may be more of a trait than has heretofore been acknowledged in the extent literature. There is some support for the position that one's genetic make-up contributes to the development of CA (Daly & Friedrich, 1981; McCroskey, 1982). One intriguing question is whether or not these particular findings replicate across generations. An examination of grandparent's CA would provide important information regarding the role of fathers and mothers in the development of CA in their children. Such a cross-generational result would provide additional evidence for a genetic predisposition for CA.
References


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* p ≤ 0.05
** p ≤ 0.01