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Running head: PERCEPTIONS AND CONTROL OVER CHRONIC ILLNESS

The Influence of Parental Attitudes on Childhood Perceptions of Control
Over Chronic Illnesses: Comparison of Urban and Rural Populations

Thesis submitted to
The Graduate School of
Marshall University

In partial fulfillment of the
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Master of Arts
Clinical Psychology

by

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Abstract

The influence of parental attitudes on a child's extent of control over chronic illness was studied across both urban and rural populations. It was hypothesized that a child would perceive an internal locus of control if the parental attitude promoted self-efficacy and independence. Secondly, it was hypothesized that a child would utilize an external locus of control if the parental attitude promoted dependence on the environment. Finally, it was hypothesized that a comparison between rural and urban population perceptions of treatment and care for chronic illnesses would yield a greater internal locus of control for both parent and child within the urban field due to the accessibility of treatments and physicians. Twenty rural parent/child pairs and twenty urban parent/child pairs were given questionnaires upon arrival at their physician's office. The parent(s) and child were asked to complete separate portions of the questionnaire. The study's results suggest that parental control perceptions are not significant predictors of the control perceptions of their chronically ill children. Furthermore, the rural versus urban settings are not related to control perceptions. Several aspects of a child's environment can have an impact on his or her perceptions. Psychologists and physicians can offer constructive support once specific influences on the children's perceptions are discovered that may improve coping strategies as well as the child's adherence to medical regimen and treatments.

The Influence of Parental Attitudes on Childhood Perceptions of Control over
Chronic Illnesses: Comparison of Urban and Rural Populations

Definition of locus of control

Rotter (1954/1955/1960) defined locus of control as some action that the subject perceives to be reinforced. Whether it is labeled internal or external depends upon the type of reinforced action. Rotter places much emphasis on whether or not the subject perceives a causal relationship between the behavior and the reinforcement. If the action was perceived to be entirely of the subject's own behavior and was reinforced, it is believed to be internal control. If, however, the action was not entirely contingent upon the subject's behavior, it is thought of as luck, chance, or external control. An adult or child can have both internal or external beliefs. How (s)he is characterized depends on the predominant and current belief at the point of observation (Janelle, 1991).

The importance of locus of control has been documented in numerous studies. Past research has shown that one's perception of control affects self-efficacy (Cowen, Work, Hightower, Wyman, Parker & Lotyczewski, 1991). Other research has discussed the effects of locus of control on coping behaviors (Deci & Ryan, 1985; White, 1979). These studies are significant in providing an understanding of the impact of chronic illnesses such as diabetes, cancer, spina bifida, asthma on children's development. Adult and child populations experiencing chronic illness have been studied. Janelle (1991) discussed various factors that must be taken into consideration when observing children's locus of control. Factors such as age, sex, race, and socioeconomic status have been shown to affect the locus of control of a

child (Sytkoskee, Strickland & Watson, 1971; Nowicki & Roundtree, 1971; Baldo, Harris & Crandall, 1975; Gilmer, 1978; Coady & Bastien, 1985).

Childhood control concepts

Children experience both internal and external control beliefs at different times, in different situations. Researchers from both views of control have argued that children experience positive and negative attributes from each control belief (Lefcourt, 1967; Strickland, 1970; Janzen & Beeken, 1973). Generally, children with an internal locus of control are more aware of their surroundings, treatment, and information concerning their current situation. These researchers stated that internally controlled individuals take the steps to improve their condition and are generally concerned with their ability to adapt to their surroundings. Piaget (1926/1975) suggested that children with an internal locus of control attempt to take action and try to control the situation. However, children that are internally controlled may experience increased stress and self-induced guilt due to their perception of themselves as having control over all situations (Lefcourt, 1967). Children who are externally controlled have been reported as having more tolerance of chaotic and unpredictable situations. Externals also have a more realistic appraisal of influences and situational power (Janzen & Beeken, 1973). It has also been argued that externally controlled children may be characterized as alienated, powerless, passive, and compliant to their surroundings (Gurin, Gurin, Lao, & Beattie, 1969).

Locus of control among chronically ill children

From the few studies that examined locus of control among children with chronic illnesses, children with cancer (Stehbens in Routh, 1988) were generally found to be more internally controlled than children without the illness. He

found that, depending on age and the understanding of the illness, the child sees the cancer and death as a process involving physical harm, possibly as a result of some wrongdoing. Of the few studies that examined locus of control among children with congenital physical disabilities, Egglund (1973) compared locus of control scores from subjects with cerebral palsy to the locus of control scores of nondisabled subjects. Using the Nowicki-Strickland Scale for Children (Nowicki & Strickland, 1973), she hypothesized that the cerebral palsy group would score more externally than the other, nondisabled group. The results supported her hypothesis.

Center and Ward (1986), however, found different results within the cerebral palsy population. Within this study, cerebral palsy children who were integrated within the educational system showed no more externality than their nondisabled counterparts. Illustrating the importance of the education factor, Creer, Harm & Marion (Routh, 1988), examined internal control concepts among children with asthma. These researchers stated that the ongoing treatment process which asthmatic children must experience improves and becomes more effective as the child becomes educated, thus gaining an internal control.

Parental locus of control

Similar to the childhood characteristics of internal control, an adult expressing an internal control belief may be more alert to the environment of the sick child. The parent may focus a large amount of energy on his/her own skills to try to improve the child's surroundings because of this. (S)he may research the illness to gain knowledge about possible treatments, therefore placing himself/herself in a better position to cope effectively with the life changes due to the child's illness (Davis & Phares, 1967). Just as an externally controlled child has a greater tolerance for stressful events (Janzen & Beeken, 1973) the externally controlled adult may have a better coping mechanism and tolerance for a child's experiences.

The distinction between internally and externally controlled adults becomes radically important when discussing how the adult reacts to the illness in the presence of the child. Many researchers have described adults with an internal locus of control (Piaget, 1975; Penk, 1969; Lefcourt, 1972) as persons who attempt to confront surrounding situations and attempt to improve poor ones. Those who are externally controlled do not seem to try to better their situation because they do not believe any action would change the situation.

Research: effects of parental attitudes on child self-reports of illness

Of the research concerning childhood coping abilities with an illness (Cowen & Work, 1988) children were shown to use three "protective factors". The first, were positive dispositional factors such as activity level and personality. The second, a close relationship with family members. The third factor, the availability of extrafamilial support. Cowen and Work discussed the effects of a productive relationship between the child and parents. The researchers stated that the way in which the parents cope with the illness has an impact on the child's self-efficacy and coping ability.

Past research (Weissman, Orvaschel & Padian, 1980; Rachman, 1977) has described this relationship between parental reaction and child reaction to illness. It has been suggested that the relationship between child and parent(s) is important in the development of the child's self-efficacy. Bandura (1977) believed that this knowledge of a person's self-efficacy is important for making predictions about the person's amount of input in his/her coping behaviors and tolerance to different situations.

Rachman (1977) discussed the process to which children indirectly acquire views of their illness. The two processes involve "vicarious exposure and socially

transmitted information and instruction" (Hart & Bossert, 1994, p. 83). Rachman continued to suggest that the display of fear or lack thereof by a mother or father throughout the situation was an important predictor of the child's reaction.

Wolman & Basco (1994) found supporting information when adolescents with Spina Bifida were observed. The researchers identified factors affecting self-esteem and coping behaviors with the use of a structured interview that included the Rosenberg Self-Esteem Inventory. Analyses identified notable factors that related to the quality of relationships with parent. Wolman & Basco (1994) suggested that:

Parents who treated their children age-appropriately and did not inhibit their activities had a positive influence on their child's self-image, as reflected in higher self-esteem and lower self-consciousness (p. 546).

Additional research (Resnick, 1986; Resnick & Hutton, 1987) found consistent results showing the effects of overprotection on the self-image of cerebral palsy children. The researchers suggested that a parent who is overprotecting his/her child is shielding the individuation of that child.

Rural Setting

Although the physical symptoms of a chronic illness are similar across rural and urban settings, the problems and the way in which members of each area cope may be different. Rural populations consist of small towns, open land, and isolated areas. Population is lower in rural areas, compared to urban areas. Jones (Ergood & Kuhre, 1978, c.16) described the members of rural settings as being self-reliant and having a value system consisting of religion, pride, neighborliness, and family solidarity.

Rural persons are religious in that they, mostly, seek meaning in life from religious sources. There is a large extrafamilial support system with this type of value. These persons are proud and do not want to disturb or behold others.

The average rural person seeks independence and strives for self-efficiency. Although each member seeks independence, the community works together through neighborliness. Each member assists others with needs and problems. Loyalty is very important, especially within the family. Family members gather when there is sickness, death, or disaster.

Chronic illness within rural settings

A family needing special medical treatment for a chronically ill child experiences both advantages and disadvantages within the rural setting. Advantages include the value system of the rural person. Through values such as neighborliness and family solidarity, a family in need of support and care is attended to. The large support system around the child through the chronic illness experience can be helpful in the well-being of all involved.

Beyond the close ties of the rural community lie disadvantages that could be harmful to the treatment of the chronically ill child. Sherman (1992) stated that there is a small likelihood that persons among rural populations have health insurance. He continued to describe the falling wages, poor health care, poor housing, and the lack of funds for schools in rural areas. A rural family, usually, must travel long distances to receive appropriate medical treatment and supervision. As a result, parents may need to miss work and face possible job termination, and the family unit may experience stress brought about by the role changes required to provide the necessary treatment.

Locus of control within rural settings

The direct relationship between one's control concept and residency is unclear at this time. Few researchers have concentrated on rural persons' value in God and religion (Ebmeier, Lough, Hath & Artio, 1991). These researchers stated that some rural children faced with hospitalization looked toward God. They suggested

that the children questioned some illnesses as some form of punishment. Other researchers (Nalven, 1970) suggested that the child's control concept depends on the situation and how it is related to the child's environment. He states that a child becomes fearful and feels a loss of control with items of common concern. In contrast, Ergood & Kuhre (1978) suggested that the rural person's value of pride may influence an internal locus of control.

An important factor in the child's coping behavior is age. Piaget (1966) reported that children from 7 to 11 years of age were in the concrete operational stage. Within this stage, the child is able to use thought processes to experience events and actions and develop an understanding. Similar to other ages, the children look to their parents when creating their own cognitive model of an experience.

Urban settings

Urban areas usually consist of large amount of people, business and communication sites, and a vast amount of resources. The U.S. Census Bureau states that an urban area may have 20,000 plus persons throughout its suburbs, central cities, and intermediate areas (Sherman, 1992). An urban area provides several services for its inhabitants. Services such as hospital care, home health care, and the latest medical treatments are readily available. This serves as an advantage for individuals and families that live in an urban area. Another advantage is the accessibility of transportation and the small amount of time needed to receive the services. More money within the education system also seems to improve the living situation.

Similar to the rural areas, there are also disadvantages to living within an urban area. Issues such as: high cost of living, increasing death rates, higher crime rates, and the lack of support throughout the community continue to cast a shadow

over urban living. Families experience more divorce rates and there is a lack of close, extended families.

A chronically ill child has a greater chance to receive medical treatment if his/her family is able to get to the service agent. The child may be able to attend more treatments and the parents are able to read the latest literature on the illness if the family lives within the urban area. Urban children may have more opportunities to become familiar with a local hospital, as well (Jessee, Strickland, Leeper, & Hudson, 1986). These and other factors could affect the level of stress to the chronically ill child and family members.

Unlike the rural child, the urban child may be in need of the familial support needed during the treatment and illness experience. In a study by Lambert (1984) preschool children and children of parents who stayed away during the child's hospital visit were subject to high degrees of stress. The urban child's family has a higher chance of being separated. Urban children with illness were more likely to have a higher self-concept, a familiarity with the hospital and treatments, and a lower level of stress (Lambert, 1984; Salkind, 1981; Hart & Bossert, 1994).

Locus of control within urban settings

It is unclear through research, whether the urban child develops an internal or an external control when experiencing a chronic illness. From the results of Jessee, Strickland, Leeper, & Hudson (1986) a child may experience some internal control because of the familiarity of the surroundings and process. However, research has not studied the connection between locale and the control concept.

Present study

The goal of the present study was to determine the influence of parental locus of control on the locus of control of the chronically ill child and the comparison of such across rural and urban populations. Research suggests that familiarity of the

treatment process. family support and a healthy self-concept affects locus of control (Deci & Ryan, 1985; White, 1979; Nalven, 1970; Strickland, Leeper, Jessee & Hudson, 1987). It was hypothesized that urban children are more likely to have internal control concepts. Also, it was hypothesized that parents with external control beliefs will have a chronically ill child with an external control belief.

Researchers have used self-reports to find that parents have similar views of the chronic illness with the children (Rachman, 1977). A correlation between parental and child control beliefs would assist in the improvement of the psychological and medical treatment experience for both internally and externally controlled children with a chronic illness. Furthermore, if a comparison between rural and urban chronically ill populations detects factors restricting appropriate care and a healthy feeling of control, then techniques and improvements can be made to enhance the health care within both areas.

Method

Participants

The sample, drawn from various community health services representing rural and urban strata, was comprised of approximately thirty-seven total pairs of parent(s) and child with asthma. Specifically, 19 rural parent/child pairs and 18 urban parent/child pairs were observed. The average age of the children was approximately 12.3 years, ranging from 9 to 17 years of age.

Procedure

Questionnaires were sent to participating health services to be made available to patients. The child and his/her parent was asked to read and complete the questionnaire. The questionnaire included the Opinion Questionnaire (Mulder, Dougherty, Teel, Midkiff, Murray & Smith, 1994), a Supplemental Parent Questionnaire, the Adult Nowicki-Strickland Internal-External Control Scale,

and the Children's Nowicki-Strickland Internal-External Control Scale.

The Opinion Questionnaire was used to briefly assess parental views on several belief systems (Appendix 1). Parents were asked to report the degree to which they agreed with several belief statements based on a Likert scale with 1 being total disagreement and 6 being total agreement.

The Supplemental Parent Questionnaire was used to gather demographic information, educational history, living situation factors, treatment history, and the coping strategies of the chronically ill child and his or her family members (Appendix 2). Parents were asked to check the appropriate information for each category, as it pertained to the family unit.

Locus of control for the children was measured by forty items from the Children's Nowicki-Strickland Locus of Control Scale (CNSIE; Nowicki & Strickland, 1973). The CNSIE is a paper and pencil measure of the locus of control measure consisting of an inventory of forty items such as "Do you believe that most problems will solve themselves if you just don't fool with them?," "Are some kids just born lucky?" The CNSIE is appropriate for children from ages 9 through 18 (Appendix 3). Each item was read aloud by the parent or read by the child, if appropriate. The child was instructed to answer by marking either yes or no next to the question. The final score was the total number of items answered in an externally controlled direction. Therefore, higher scores indicate a more external locus of control.

The CNSIE is a widely used research instrument for locus of control assessment. Alphas range from .65 to .70 and test-retest reliabilities from .63 to .76. Nowicki and Strickland (1973) reported nonsignificant correlations between locus of control scores and social desirability for subjects. The validity has been well established.

The Adult Nowicki-Strickland locus of control scale was designed to assess the construct of locus of control of reinforcement (Appendix 4). The parent(s) of the chronically ill child were asked to complete forty items which are answered either yes or no. The instructions for each scale are generally the same as follows:

"We are trying to find out what men and women your age think about certain things. We want you to answer the following questions the way you feel. There are no right or wrong answers. Don't take too much time answering any one question, but do try to answer them all."

The adult subjects was asked to answer questions that are similar to the child locus of control scale. The final score was the total number of items answered in an externally controlled direction. Alphas range from .70 to .83 and test-retest reliabilities from .56 to .83. The validity is well established.

Results

Table 1 provides a summary description of the demographic information of the respondents.

Influence of Parental Control Beliefs on Child Control Perceptions

Pearson-product moment correlations were calculated, separately for rural and urban populations, to investigate the influence of parental promotion of self-efficacy and independence versus the promotion of dependency on the control reports of the child subjects. No relationship was found between the parent and child control reports.

Comparison of rural and urban control reports

An analysis of variance (ANOVA) was used to investigate any differences between the rural and urban parental and child control reports. The final hypothesis predicted that the urban parent/child pairs would report a more internal

locus of control given the accessibility of treatment facilities and physicians, while it was expected that the rural subject pairs would be more externally controlled. The ANOVA, however, did not indicate a statistically significant difference between the two groups (see Table 2).

Additional Findings

Additional t-test analyses attempted to discover information on individual responses to belief statements of the opinion questionnaire that would seem to affect the control reports of both adult and child populations. It was found that only the statement, "Do you believe good people should not have bad things happen to them," correlated significantly with the adult Nowicki-Strickland score, only, $t(29) = -2.21, p < .05$.

Discussion

The purpose of this study was to determine whether an influence lies between parental belief systems and those of the children with a chronic illness, specifically asthma. An attempt was also made to compare rural to urban persons based on the parent and child perceptions of control. By understanding the perceptions of a child with a chronic illness, concerning his or her environment, treatment, the role of family members and health professionals, aims toward establishing a supportive environment and increased adherence to medical regimen may be obtained.

The results did not support the research hypotheses. There was no statistically significant difference found in the Nowicki-Strickland Locus of Control scores of child subjects with asthma and their parents, regardless of whether the family was rural or urban. Also, the scores of the children whose parents promoted an internal locus of control did not result in significantly more internality than the scores of the children whose parents promoted an external locus of control, or vice versa. In

addition, control scores of the subjects living in the urban setting did not reveal significantly more internality than the scores of the rural subjects.

Although the results were statistically nonsignificant, several interesting issues are raised concerning adult and child control perceptions and their impact on adjustment to a child's chronic illness. Specifically, what aspects of the child's environment influence his or her need for control? Past research has established a peer influence on the child with chronic illness (Weissman et. al., 1980). It has been reported that child self-assessments of symptoms corresponded more with that of peers than mother assessments. Although it is uncertain, at this point, as to the influences involved in the child control perceptions an interesting correlation was uncovered between the parental response to one belief question and the adult externality control scores. When asked, "Do you believe good people should not have bad things done to them?" those adult subjects who answered yes tended to have a stronger perception of external control. The perception that good people should not be harmed by environmental factors may contribute to how they perceive the chronic illness and the treatment plan. The chronic illness may be perceived as an uncontrollable condition.

Concerning the correlational results, results consistent with the past literature have shown that variables such as age, sex, IQ, and one- versus two-parent households, did not hold significant correlations with child locus of controls (Janelle, 1992); this was also found in the present study. A significant correlation has been found, however, between the impact of socioeconomic status and locus of control (Lefkowitz, Tesiny & Gordon, 1980). Although such a correlation has been noted, it is difficult to label rural and urban settings within the present study by socioeconomic status, since information regarding parents' financial situations was not available.

It should be noted that this study is exploratory. It tested two groups (rural and urban) child and parent pairs from three locations for a limited time and made simple comparisons of the two groups' locus of control scores. The results have limited generalizability because of the small sample size. It is also difficult to generalize the findings of similar research due to the differences in severity levels of chronic illness. Another limitation is the lack of geographical separateness between the rural and urban subjects. When considering other comparisons of rural and urban settings, the areas in which the data collection took place were not quite different from one another. In addition, those subjects who lived in a rural setting reported that they were able to reach their physician and treatment within a thirty minute time span. Given the nature of this study, the selection and number of subjects were areas of limitation, as well, due to the inability to randomly assign subjects with asthma and the difficulty assessing the area of chronic illness.

One should also consider the fact that the questionnaires were given to the parent(s) and child to complete in the same room while waiting to see the physician. Individual interviews were not gathered to control for any influence the parent(s) may have had on the child's responses to each question. Further research should obtain interviews from the children and parents in different rooms, if possible, as a solution to possible influence on the child portion by the parent.

Implications and Conclusion

Bandura (1977) suggested that one's knowledge of a child's self-efficacy was important for making predictions concerning the initiation of and amount of energy invested in his or her coping behavior. He also mentioned that a direct relationship lies between one's self-efficacy and environmental factors such as parental relationships, peer relationships, perceptions of reinforcements and punishments and many other factors. It is important to keep the individual child in mind when

discussing treatment options, rather than the chronic illness as one unit with certain treatment possibilities. To achieve optimal care, medically and psychologically, for the child with chronic illness, personal characteristics should be considered.

Finding the influencing factors in the child's perceptions of the illness, self, and relationships may assist in a personal treatment setting and better coping strategies for both the child and other family members.

With additional information concerning environmental influences on the chronically ill child's self-efficacy and sense of control, health professionals will be able to understand reactions to the current treatment (depression; anxiety) and provide the necessary environment required by the internally or externally controlled child. Deci and Ryan (1985) reported that knowledge about a person's efficacy can potentially help explain behavior and adaptation in several situations. Thus, effects within the home and school environment, for the child, and the home and work environment for the parents can be understood and treated appropriately.

Little research is available in the comparison of coping strategies for chronic illnesses in rural and urban settings. Individual characteristics, as well as any constraints from the living situation, should be taken into consideration for an effective treatment. Health professionals should begin to search for the principles that define each individual and treat the child and family members, accordingly. Future research should rely on the benefits and deficits of living in the rural or urban area. In addition, more information is needed on the aspects of the child's environment which influence the child's conception of the illness and help determine coping behaviors of that child. With more information, treatment of the various chronic illnesses should improve and become more individualistic.

References

Baldo, R., Harris, M., & Crandall, J. (1975). Relations among psycho-social development, locus of control and time orientation. *Journal of Genetic Psychology, 126*, 297-303.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84*, 191-215.

Center, Y., & Ward, J. (1986). The Nowicki locus of control scales: An Australian study of normal and cerebral palsied school children. *Exceptional Children, 33*, 207-213.

Coady, H., & Bastien, C. (1985). Locus of control and the effects of incentives on children. *Journal of Psychology, 119*, 271-275.

Cowen, E. L., & Work, W. C.. (1988). Resilient children, psychological wellness, and primary prevention. *American Journal of Community Psychology, 16*, 591-607.

Cowen, E. L., Work, W. C., Hightower, A. D., Wyman, P.A., Parker, R., & Lotyczewski, B. S. (1991). Toward the development of a measure of perceived self-efficacy. *Children Journal of Clinical Child Psychology, 20*, 169-178.

Creer, T. L., Harm, D. L., & Marion, R. J. (1988). Part I. Life-threatening conditions and chronic diseases: Childhood asthma. In D. K. Routh(Ed.), *Handbook of pediatric psychology* (pp.162-189). New York: Guilford Press.

Davis, W. L., & Phares, E. J.. (1967). Internal-external control as a determinant of information-seeking in a social influence situation. *Journal of Personality, 33*, 547-561.

Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum.

Ebmeier, C., Lough, M. A., Huth, M. M., & Artio, L. (1991). Hospitalized school-age children express ideas, feelings, and behaviors toward God. *Journal of Pediatric Nursing, 6*, 337-349.

Egglund, E. T. (1973). Locus of control and children with cerebral palsy. *Nursing Research, 22*, 329-333.

Ergood, B. & Kuhre, B. (1978). *Appalachia: Social context past to present*. Dubuque, IA: Kendall/Hunt Publishing Company.

Gilmer, T. M. (1978). Locus of control as a mediator of adaptive behaviour in children and adolescents. *Canadian Psychological Review, 19*, 1-26.

Gurin, P., Gurin, G., Lao, R., & Beattie, M. (1969). Internal-external control in the motivation dynamics of Negro youth. *Journal of Social Issues, 25*, 29-53.

Hart, D., & Bossert, E. (1994). Self-reported fears of hospitalized school-age children. *Journal of Pediatric Nursing, 9*, 83-90.

Janelle, S. (1992). Locus of control in nondisabled versus congenitally physically disabled adolescents. *The American Journal of Occupational Therapy, 46*(4), 334-340.

Janzen, H. L., & Beeken, D. (1973). An analysis of the applicability of the locus of control construct. *Alberta Journal of Educational Research, 19*, 295-302.

Jessee, P., Strickland, M., Leeper, J., & Hudson, C. (1986). Nature experiences for hospitalized children. *Children's Health Care, 15*, 55-57.

Lambert, S. A. (1984). Variables that affect the school-age child's reaction to hospitalization and surgery: A review of the literature. *Maternal-Child Nursing Journal, 13*(1), 1-18.

Lefcourt, H. M. (1967). Effects of cue explication upon persons maintaining external control expectancies. *Journal of Personality and Social Psychology, 5*, 372-378.

Lefcourt, H. M. (1972). Recent developments in the study of locus of control. In B.A. Maher (Ed.), *Progress in experimental personality research*, 6, 1-39.

Mulder, P. L., Dougherty, A., Teel, W., Midkiff, J., Murray, K. & Smith, L. (1994). Rural West Virginia: A cross-cultural perspective with implications for clinical intervention. *The West Virginia Journal of Psychological Research and Practice*, 3, 9-25.

Nalven, F. B. (1970). Manifest fears and worries of ghetto vs. middle-class suburban children. *Psychological Reports*, 27, 285-286.

Nowicki, S., & Roundtree, J. (1971). Correlates of locus of control in a secondary school population. *Developmental Psychology*, 4, 477-478.

Nowicki, S. & Strickland, B. R. (1973). A locus of control scale for children. *Journal of Consulting and Clinical Psychology*, 40, 148-155.

Penk, W. E. (1969). Age changes and correlates of internal-external locus of control scale. *Psychological Reports*, 25, 856.

Piaget, J. (1975). *The child's conception of the world*. Totowa, NJ: Littlefield-Adams. (Original work published 1926).

Rachman, S. (1977). The conditioning theory of fear-acquisition: A critical examination. *Behavior Research and Therapy*, 15, 375-387.

Resnick, M. D. (1986). Sociological and social psychological factors influencing self-image among physically disable adolescents. *International Journal of Adolescent Medical Health*, 2, 211-221.

Resnick, M. D., & Hutton, L. (1987). Resiliency among physically disabled adolescents. *Psychiatry Annual*, 17, 796-800.

Rotter, J. B. (1954). *Social learning and clinical psychology*. Englewood Cliffs, NJ: Prentice-Hall.

Rotter, J. B. (1955). The role of the psychological situation in determining the direction of human behavior. In M. R. Jones (Ed.), *Nebraska Symposium on Motivation* (pp. 245-269). Lincoln, NE: University of Nebraska Press.

Rotter, J. B. (1960). Some implications of a social learning theory for the prediction of goal directed behavior from testing procedures. *Psychological Review*, 67, 301-316.

Salkind, N. J. (1981). *Theories of human development*. New York: D. Van Nostrand.

Sherman, L. (1992). *Falling by the wayside: Children in rural America*. Children's Defense Fund: Washington, D. C.

Stehbeens, J. A. (1988). Part I: Life-threatening conditions and chronic diseases: Childhood Cancer. In D. K. Routh (Ed.), *Handbook of pediatric psychology*, (pp. 135-161). New York: Guilford Press.

Strickland, B. (1970). Individual differences in verbal conditioning, extinction and awareness. *Journal of Personality*, 38, 364-378.

Strickland, M. P., Leeper, J., Jessee, P., & Hudson, C. (1986). Children's adjustment to the hospital: A rural/urban comparison. *Maternal-Child Nursing Journal*, 16(3), 251-259.

Weissman, M., Orvaschel, H., & Padian, N. (1980). Children's symptom and social functioning self-report scales: Comparison of mothers' and children's reports. *The Journal of Nervous and Mental Disease*, 168 (12), 736-740.

Wolman, C., & Basco, D. E. (1994). Factors influencing self-esteem and self-consciousness in adolescents with spina bifida. *Journal of Adolescent Health*, 15, 543-548.

White, T. (1979). Competence as an aspect of personal growth. In M. W. Kent & J. E. Rolf (Eds.), *Primary prevention of psychopathology: Vol. III Social Competence in children* (pp. 5-22). Hanover, NH: University Press of New England.

Zytoskee, A., Strickland, B. R., & Watson, J. (1971). Delay of gratification and internal versus external control among adolescents of low socioeconomic status. *Developmental Psychology*, 4, 93-98.

Table 1

Subject Demographic Information

	<u>Rural</u>	<u>Urban</u>
<u>Male</u>	2	4
<u>Female</u>	15	16
<u>M</u>	7.6	11.6
<u>SD</u>	3.6	4.0

Table 2

Subjects responding from rural and urban settings

	Rural		Urban	
	M	SD	M	SD
Adult	17.6	4.5	19.5	3.5
Child	19.0	4.6	21.0	4.2

Disagree				Agree		
1	2	3	4	5	6	N/A

God helps those who help themselves

If everyone would just volunteer some time to a good cause, we could solve most of societies problems

If people want a better life they should join together in groups to make changes

Children have feelings just like adults

If my community offered free mental health information classes I would go to them

I have read the Bible

What I do in my own home is my own business

Being poor is all right because the poor will be rich in heaven

Strangers are just friends we have not met yet

People with high expectations are in for a big let down

I would like to travel to other places where the people are very different than me

There are some private or personal subjects that should be spoken of only at home and never in public

My religion is the most important source of comfort and help in my life

I would like to put a big, high fence around my yard so that I could have privacy

I did not have to go through as much as my parents had to go through

Appendix 2

Supplemental Parent Questionnaire

Directions: Check the box that most applies to you and your situation.

General Information

Yes No

Has anyone in your family been in any type of counseling or had problems with their nerves?

Have you felt lonely during your child's illness?

Have you tried anything different that your doctor didn't recommend (i.e., home remedies)?

Have there been any financial difficulties associated with your child's illness?

Do you have medical insurance or a medical card?

Do other children help in the daily care of their brother or sister?

Are your friends supportive of you and your child?

Do you ever feel stressed out?

Do you ever feel overwhelmed?

Have you needed any emotional support due to your child's illness?

Does your clergy/pastor counsel your family?

Do you ever wonder why this happened to your child?

Do you ever feel like the illness is a punishment?

Do you believe good people should not have bad things happen to them?

Do you feel you treat your child differently because (s)he is ill?

Education

1. How often does (s) he miss school?
homebound?

- 1) once per month
- 2) 2-3 times per month
- 3) 4-5 times per month
- 4) 5-7 times per month
- 5) Rarely ever
- 6) Other: How often?

2. Has your child ever been

- 1) yes
- 2) no

If so when and how long?

Living Situation

1. Check the one that best describes where you live:

- 1) city, near relatives
- 2) country, near relatives
- 3) city, not near relatives
- 4) country, not near relatives

2. About how long of a drive is it to your child's regular doctor?

- 1) less than 30 minutes
- 2) 30 minutes to an hour
- 3) one hour to two hours
- 4) more than two hours: How long? _____

3. About how long of a drive is it to the closest hospital?

- 1) less than 30 minutes
- 2) 30 minutes to an hour
- 3) one hour to two hours
- 4) more than two hours: how long? _____

Treatment History

1) How often does your child go to the doctor's office?

- 1) once a year
- 2) twice per year
- 3) once per month
- 4) other: How often? _____

2) Is your child currently receiving special academic services? For example, learning disabilities, gifted program etc.?

- yes
- no

If so what type? _____

How long? _____

3) Is your child receiving any other special medical treatments such as chemotherapy, radiation treatments, etc.?

- yes
- no

If so what type? _____ How long? _____

4) Do you ever have doctors, nurses, etc. visit your home?

___ yes ___ no

How often? _____

5) Is it ever hard to understand diagnosis, medications, treatments, or progress reports of your child?

___ yes ___ no

6) Have you ever been upset or frustrated with the care/treatments your child has been given?

___ yes ___ no

7) Please specify what medications your child takes:

Name of medication: _____ Dosage: _____

Times: _____

Name of medication: _____ Dosage: _____

Times: _____

Name of medication: _____ Dosage: _____

Times: _____

Name of medication: _____ Dosage: _____

Times: _____

Please check other problems for your family, as they relate to your child's illness

- ___ missing work for child's health care
- ___ emotional stress on child with illness
- ___ emotional stress on siblings
- ___ child discipline problems
- ___ problems with relatives not understanding illness
- ___ marital problems
- ___ problems with child's friends not understanding illness
- ___ lack of support
- ___ child not taking medications or not wanting to go to doctor
- ___ other: please specify _____

Miscellaneous

1. On average how much play time do you spend with your child each day?

- ___ 1) less than 10 minutes
- ___ 2) 10-20 minutes
- ___ 3) 20-30 minutes
- ___ 4) more than 30 minutes: please specify: _____

2. How much time do you spend each day thinking about your child's illness?

3. Who would you turn to for emotional support?

- clergy
- spouse
- boyfriend/girlfriend
- neighbor
- friend
- coworker
- other: please specify: _____

4. If you found that you needed financial support, who would you turn to?

- spouse
- boyfriend/girlfriend
- neighbor
- friend
- coworker
- church
- parents
- other relatives or other: please specify _____

Because each child is special and unique, please include any information regarding your child's special strengths and skills: _____

Appendix 3

Child Nowicki-Strickland Internal-External Locus of Control Scale

Directions: Mark "Y" for yes or "N" for no based on your agreement or disagreement to the statements below.

1. ___ Do you believe that most problems will solve themselves if you just don't fool with them?
2. ___ Do you believe that you can stop yourself from catching a cold?
3. ___ Are some people just born lucky?
4. ___ Most of the time do you feel that getting approval means a great deal to you?
5. ___ Are you often blamed for things that just aren't your fault?
6. ___ Do you believe that if somebody works hard enough he or she can succeed?
7. ___ Do you feel that most of the time it doesn't pay to try hard because things never turn out right anyway?
8. ___ Do you feel that if things start out well in the morning that it's going to be a good day no matter what you do?
9. ___ Do you feel that most of the time parents listen to what their children have to say?
10. ___ Do you believe that wishing can make good things happen?
11. ___ When you get reprimanded does it usually seem its for no good reason at all?
12. ___ Most of the time do you find it hard to change a friend's (mind) opinion?
13. ___ Do you think that cheering more than luck helps a team to win?
14. ___ Do you feel that it's nearly impossible to change peoples' minds about anything?
15. ___ Do you believe that your family should allow you to make most of your own decisions?
16. ___ Do you feel that when you do something wrong there's very little you can do to make it right?
17. ___ Do you believe that most people are just born good at sports?
18. ___ Are most of the other people your age stronger than you are?

19. ___ Do you feel that one of the best ways to handle most problems is just not to think about them?
20. ___ Do you feel that you have a lot of choice in deciding who your friends are?
21. ___ If you find a four leaf clover do you believe that it might bring you good luck?
22. ___ Do you often feel that whether you do your work has much to do with what kind of credit you get?
23. ___ Do you feel that when a person your age decides to hit you, there's little you can do to stop ?
24. ___ Have you ever had a good luck charm?
25. ___ Do you believe that whether or not people like you depends on how you act?
26. ___ Will your family usually help you if you ask them to?
27. ___ Have you felt that when people were mean to you it was usually for no reason at all?
28. ___ Most of the time, do you feel that you can change what might happen tomorrow by what you do today?
29. ___ Do you believe that when bad things are going to happen they just are going to happen no matter what you try to do to stop them?
30. ___ Do you think that people can get their own way if they just keep trying?
31. ___ Most of the time do you find it useless to try to get your own way at home?
32. ___ Do you feel that when good things happen they happen because of hard work?
33. ___ Do you feel that when somebody your age wants to be your enemy there's little you can do to change matters?
34. ___ Do you feel that it's easy to get friends to do what you want them to?
35. ___ Do you usually feel that you have little to say about what you get to eat at home?
36. ___ Do you feel that when a someone doesn't like you there's little you can do about it?

- 37. ___ Do you usually feel that it's almost useless to try in work because most other people are just plain smarter than you are?
- 38. ___ Are you the kind of person who believes that planning ahead makes things turn out better?
- 39. ___ Most of the time do you feel that you have little to say about what your family decides to do?
- 40. ___ Do you think it's better to be smart than to be lucky?

Appendix 4

Adult Nowicki Strickland Internal-External Locus of Control Scale

Directions: Mark "Y" for yes or "N" for no based on your agreement or disagreement to the statements below.

1. _____ Do you believe that most problems will solve themselves if you just don't fool with them?
2. _____ Do you believe that you can stop yourself from catching a cold?
3. _____ Are some people just born lucky?
4. _____ Most of the time do you feel that getting approval means a great deal to you?
5. _____ Are you often blamed for things that just aren't your fault?
6. _____ Do you believe that if somebody works hard enough he or she can succeed?
7. _____ Do you feel that most of the time it doesn't pay to try hard because things never turn out right anyway?
8. _____ Do you feel that if things start out well in the morning that it's going to be a good day no matter what you do?
9. _____ Do you feel that most of the time parents listen to what their children have to say?
10. _____ Do you believe that wishing can make good things happen?
11. _____ When you get reprimanded does it usually seem its for no good reason at all?
12. _____ Most of the time do you find it hard to change a friend's (mind) opinion?
13. _____ Do you think that cheering more than luck helps a team to win?
14. _____ Do you feel that it's nearly impossible to change peoples' minds about anything?
15. _____ Do you believe that your family should allow you to make most of your own decisions?
16. _____ Do you feel that when you do something wrong there's very little you can do to make it right?
17. _____ Do you believe that most people are just born good at sports?
18. _____ Are most of the other people your age stronger than you are?
19. _____ Do you feel that one of the best ways to handle most problems is just not to think about them?

20. ____ Do you feel that you have a lot of choice in deciding who your friends are?
21. ____ If you find a four leaf clover do you believe that it might bring you good luck?
22. ____ Do you often feel that whether you do your work has much to do with what kind of credit you get?
23. ____ Do you feel that when a person your age decides to hit you, there's little you can do to stop?
24. ____ Have you ever had a good luck charm?
25. ____ Do you believe that whether or not people like you depends on how you act?
26. ____ Will your family usually help you if you ask them to?
27. ____ Have you felt that when people were mean to you it was usually for no reason at all?
28. ____ Most of the time, do you feel that you can change what might happen tomorrow by what you do today?
29. ____ Do you believe that when bad things are going to happen they just are going to happen no matter what you try to do to stop them?
30. ____ Do you think that people can get their own way if they just keep trying?
31. ____ Most of the time do you find it useless to try to get your own way at home?
32. ____ Do you feel that when good things happen they happen because of hard work?
33. ____ Do you feel that when somebody your age wants to be your enemy there's little you can do to change matters?
34. ____ Do you feel that it's easy to get friends to do what you want them to?
35. ____ Do you usually feel that you have little to say about what you get to eat at home?
36. ____ Do you feel that when a someone doesn't like you there's little you can do about it?
37. ____ Do you usually feel that it's almost useless to try in work because most other people are just plain smarter than you are?
38. ____ Are you the kind of person who believes that planning ahead makes things turn out better.

39. _____ Most of the time do you feel that you have little to say about what your family decides to do?

40. _____ Do you think it's better to be smart than to be lucky?

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