

**LIFE EVENTS, SCHOOL AND FAMILY ENVIRONMENT'S
RELATIONSHIP TO GRADE 8 FRANCOPHONE STUDENT'S
MENTAL HEALTH**

by

CARMEN LORAND

A Thesis

presented to the University of Manitoba

Faculty of Graduate Studies

in partial fulfillment of the

degree of

MASTER OF EDUCATION

**in the Department of Curriculum: Mathematics
and Natural Sciences**

Winnipeg, Manitoba

(c) Carmen Lorand



National Library
of Canada

Bibliothèque nationale
du Canada

Canadian Theses Service Service des thèses canadiennes

Ottawa, Canada
K1A 0N4

The author has granted an irrevocable non-exclusive licence allowing the National Library of Canada to reproduce, loan, distribute or sell copies of his/her thesis by any means and in any form or format, making this thesis available to interested persons.

The author retains ownership of the copyright in his/her thesis. Neither the thesis nor substantial extracts from it may be printed or otherwise reproduced without his/her permission.

L'auteur a accordé une licence irrévocable et non exclusive permettant à la Bibliothèque nationale du Canada de reproduire, prêter, distribuer ou vendre des copies de sa thèse de quelque manière et sous quelque forme que ce soit pour mettre des exemplaires de cette thèse à la disposition des personnes intéressées.

L'auteur conserve la propriété du droit d'auteur qui protège sa thèse. Ni la thèse ni des extraits substantiels de celle-ci ne doivent être imprimés ou autrement reproduits sans son autorisation.

ISBN 0-315-51611-9

Canada

LIFE EVENTS, SCHOOL AND FAMILY ENVIRONMENT'S RELATIONSHIP
TO GRADE 8 FRANCOPHONE STUDENT'S MENTAL HEALTH

BY

CARMEN LORAND

A thesis submitted to the Faculty of Graduate Studies of
the University of Manitoba in partial fulfillment of the requirements
of the degree of

MASTER OF EDUCATION

© 1989

Permission has been granted to the LIBRARY OF THE UNIVER-
SITY OF MANITOBA to lend or sell copies of this thesis, to
the NATIONAL LIBRARY OF CANADA to microfilm this
thesis and to lend or sell copies of the film, and UNIVERSITY
MICROFILMS to publish an abstract of this thesis.

The author reserves other publication rights, and neither the
thesis nor extensive extracts from it may be printed or other-
wise reproduced without the author's written permission.

ABSTRACT

Few research projects have looked at the family environment, the school environment and life events as perceived by the students in relation to their mental health. This study used six questionnaires, answered by grade eight students in Manitoba Francophone schools, in two sitting sessions of 40 minutes each, to gather the data on the family environment, the school environment, life events, physical health and mental health. Using Pearson Correlations, statistically significant relationships were found between variables in the family and school environment and mental health whereas no relationship was found between life events and mental health. However, due to the small sample size it was not possible to determine which environment influenced mental health the most.

ACKNOWLEDGEMENTS

I would like to extend my gratitude to several people who have helped me during the completion of my thesis. Thank you to my advisor, Dr. Dexter Harvey, for his encouragement and guidance, and to my committee members, Dr. Riva Bartell, Dr. Harvey Williams and Dr. James Welsh for their assistance and direction.

I would like to thank Linda Needen for assisting me during the computer analysis of the research data.

I would like to extend my appreciation to the superintendents, school personnel and all the participants for their cooperation during this study.

I would like to thank Connie Lagimodiere for typing this paper.

A thank you to my husband Jack for his understanding and continuous support.

Carmen Lorand

TABLE OF CONTENTS

Abstract	i
Acknowledgements	ii
Table of Contents	iii
List of Appendices	v
CHAPTER	
I STATEMENT OF THE PROBLEM	1
General Background	1
Specific Problem Statement	6
Definition of Terms	7
Conceptual Framework	8
Statement of Hypothesis	14
Limitations and Delimitations	15
II LITERATURE REVIEW	17
Family Environment	17
School Environment	45
Life Events	53
Child's Health	64
Conclusion	64
III PROCEDURES OF INVESTIGATION	66
Design of the Study	66
Instruments	67
Pilot Study	76
Research Population	77
Procedure	78
Statistical Analysis	79
IV RESULTS	81
Adolescent Mental Health	81
Results of the 51 Participants	82
The Family Environment	87
The School Environment	89
Life Events	90
Physical Health	91
Interactions	92

V CONCLUSIONS AND RECOMMENDATIONS	93
Discussion	93
Summary	96
Conclusion	99
Limitations	99
Recommendations for Further Research	100
Bibliography	102

LIST OF APPENDICES

- | | | |
|----|--|-----|
| A. | The Child's Physical Health and Sociodemographic Data | 111 |
| B. | Letters presented to the superintendents, the principals and the parents | 112 |

CHAPTER I

STATEMENT OF THE PROBLEM

General Background

The magnitude of mental health problems is usually considered to be important yet no accurate data on its prevalence are available. For Canada, 362,076 individuals with mental health disorders were discharged from a psychiatric hospital, a general hospital or an institution in 1982-83, and these institutions provided approximately 34 million days of care for mental health disorders in this same year (Statistic Canada, 1982-83). Many more individuals have probably been treated by psychiatrists, psychologists and physicians without being admitted to hospital so that the statistics available only shows part of the problem.

In Manitoba in 1986-87, 134,509 psychiatric patients were serviced by psychiatrists and other medical practitioners (Manitoba Health Services Commission 1987). This means that about 12.56% of Manitoba's population received treatment for mental health problems. This percentage is probably not accurate since some patients might have seen more than one physician thus being counted twice; but on the other hand, many people who were serviced by a psychologist or a mental health worker were not counted in this number. At the present time, for lack of more accurate statistical information, it is concluded

that roughly 12.56% of Manitoba's population experienced mental health problems in 1986-87.

When looking at the problem of mental health in children and adolescents, the only statistics found were for New York State who evaluated the need for mental health services at 11.8% (New York State, 1984) and for Canada who estimated that between 10% and 15% of children and youths had emotional and learning disorders (Commission on Emotional and Learning Disorders in Children, 1970, p. 59). Not enough data were available to calculate with any accuracy the percentage of children or adolescents with mental health problems in Manitoba.

Children with mental health problems appear to be at greater risk for mental health problems in adulthood than children who show no symptoms of mental illness. Welner, Welner, and Fishman (1979) found that adolescents with bipolar depression and those with schizophrenia had a poor prognosis, while of the sixteen patients with unipolar depression six had a favourable prognosis and ten were moderately disabled. Waldrons (1976) also reported that 75% of the adults who had suffered from neurosis as children were mildly ill at follow-up compared to 15% of the control group consisting of children from the same elementary school class. In a follow-up study of autistic children, Rutter (1970) found that about half lived in full-time residential care 12 to 20 years later, and that about two-thirds remained severely socially handicapped and unable to lead an independent life. It is therefore, important to try to identify factors which are related

to adverse mental health in very young children.

Numerous factors have been related to children's and adolescents' mental health status. The family characteristics found related to mental health were: family size (Werner and Smith, 1980; 1982); and the child's gender (Werner and Smith, 1980; 1982; Emery and O'Leary 1982). In the child's family environment, parental psychopathology has long been associated with mental health problems in children (Weissman, Prusoff, Gummon, Merikangas, Leckman, Kidd, 1984b; Famularo, Stone, and Popper, 1985; Hudgens, 1974; August and Stewart, 1984). Family discord and poor parent-child relationship were found to be two influential variables in families where parental psychopathology was present (Quinton and Rutter, 1985; Emery, Weintraub, and Neale, 1982; Kauffman, Grunchbaum, Cohler, and Gamer, 1979).

The family structure (such as two-parent family, single-parent family, reconstituted family or guardians) in itself did not appear to be related to adjustment problems in adolescents (Woody, Colley, Schlegelmilch, Maginn, and Balsanek, 1984; Raschke and Raschke, 1979; Dancy and Handal, 1980; Kagel, White, and Coyne, 1978). In the studies examining this relationship, family conflict (Raschke and Raschke, 1979; Kagel et al., 1978), parental stress (Woody et al., 1984), spouse-type relationship (Woody et al., 1984) parental psychopathology (Woody et al., 1984) and personal development (Kagel et al. 1978) appeared more important. When the parent-child relationship was examined, the variables related to the adolescents' mental health status were:

quality of parenting (Nihira et al., 1984), family conflict (Nihira et al., 1984; Loeber and Dishion, 1984; Rich and Rothchild, 1979), feeling rejected (Loeber, and Dishion, 1984), mental health problems in parents (McKenry et al., 1984), and communication problems (Blotcky, Tittler, and Friedman, 1984). When the relationship was examined from the adolescent point of view, family conflict and personal development were identified as being important (Fox, Rotatori, Machklin, Green and Fox, 1983).

It has been suggested that it is the child's perception of his/her relationship with his/her parents which is more important in predicting adjustment than the parent's perception of the parent-child relationship (Schaefer, 1965; Serot, and Teevan, 1961). Differences in the way children with mental health problems or behavioral problems and normal children perceived their parents have been found; the children with adjustment problems seeing their families less favourably (McKenry, Tisheler, and Kelley, 1982; Fox, et al. 1983).

A relationship between psychiatric disorders in children and physical health problems was found by Hudgens (1974), and Friedman, Corn, Hurt, Fibel, Schulick and Swirsky, (1984); whereas Werner, and Smith (1980) found physical health and perinatal stress related to adjustment problems.

Few studies have looked at the quality of school life in relation to mental health; more has been done in relation to antisocial behaviour or delinquency. A relationship between the school and delinquency was reported by Gath, Cooper, and Gattoni,

(1972), Reynolds, Jones, St. Leger (1976), and Rutter, Maughan, Mortimore, Ouston, and Smith (1979) meaning that to some degree the schools might be a determinant of delinquency. The factors identified as influencing the adolescents were: school size (Heal, 1978), formal punishing system (Heal, 1978), academic emphasis (Rutter et al. 1979; Marjoribanks, 1978; Finlayson, and Lougran, 1976), teachers' action in lesson (Rutter et al., 1979), teachers' relationship with students (Rutter et al., 1979; Finlayson, and Lougran, 1976), school interpersonal orientation (Marjoribanks, 1978), peer perceived as deriving less social and emotional satisfaction (Finlayson, and Lougran, 1976), availability of incentives and rewards (Rutter et al., 1979), good conditions for pupils (Rutter et al., 1979), and the extent the children were able to take responsibility (Rutter et al., 1979). The children's perception of their school also influenced their behaviour and their commitment to school (Marjoribanks 1978; Wright, Cowen, and Kaplan, 1982; Finlayson, and Lougran, 1976).

In the child's social environment, adults outside the nuclear family and peers have been associated with children's mental health status (Kauffman et al., 1979). Social environment is a variable difficult to measure and will not be examined further since the present study focuses on the immediate child environment.

Life events, as a measure of stress, have now come to be considered as important variables in relationship to children's

mental health status. Several investigators have found a statistically significant relationship between life events and mental health problems in children and adolescents (Cohen-Sandler, Berman, and King, 1982; Dooley, and Fitzgerald, 1984; Greene, Walker, Hickson, and Thompson, 1985; Rangaswamy, and Kamakshi, 1983; Tyerman, and Humphrey, 1983; Vincent, and Rosenstork, 1979). Although statistically significant correlations between life events and mental health measures or illness were found, the strength of these associations is weak with a median of approximately .15.

Specific Problem Statement

An extensive review of the literature indicated that the family environment, the school environment, life events, the child's health, the peer group and adults outside the nuclear family could be related to the child's mental health status. The family environment, the school environment and the child's health appeared to be the most important variables along with life events in explaining mental health problems, but these factors have not been explored conjointly. The question is: "How much of the variance in mental health status could be explained by the family environment, the school environment and life events as perceived by the students?"

Definition of Terms

In this study the meaning of the following terms will be:

Mental Health: is a continuum ranging from good mental health to psychiatric illness. It can be measured using different instruments which establish a cut off point between what is considered normal and abnormal.

Family Environment: includes all the components that characterize the family such as; the number of people in the family, the gender of the members of the family, the relationship between the different members of the family and the relationship between the family and the community.

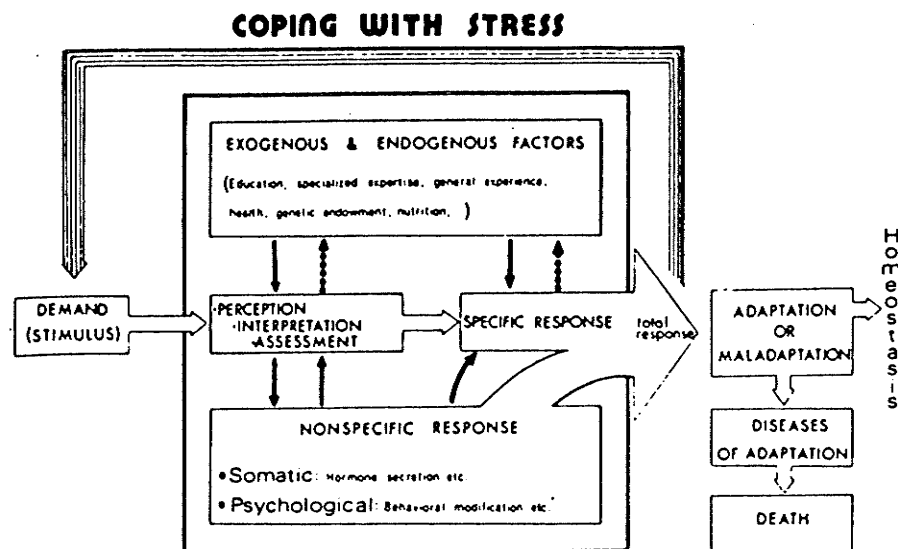
School Environment: includes all the components that characterize the school such as: its physical characteristics, the relationship between the students and teachers, the administrative organization and the relationship between the school personnel and the community.

Life Event: is anything that happens in the life of an individual demanding adaptation. List of events demanding adaptation and happening sufficiently frequently to be worth measuring were established by several authors to measure stress.

Qualitative Aspects of Life Events: is anything that happens in the life of an individual demanding adaptation which are intrinsically disvalued such as death, divorce, unemployment, illness, failing in school or intrinsically valued such as marriage, making a new friend, involvement in extracurricular activities.

Conceptual Framework

Selye (1976) defined stress as "the state manifested by a specific syndrome which consists of all the nonspecifically induced changes within a biologic system" (p 64). Although his work has focused on the biological response to stress he did not ignore the psychological component as evidenced in the article "On stress and coping mechanisms" (Tache and Selye, 1978). In this article the following diagram is presented to explain the stress theory.



Reproduced from the article "On stress and coping mechanisms"
(Tache and Selye, 1978 p. 17).

In this theory the individual responds to the stressor or stimulus, depending on his/her perception of the stressor which is influenced by a combination of endogenous and exogenous factors. The endogenous factors being inherited traits whereas the exogenous factors are the physical, social, intellectual and psychological environment. With the individual's assessment of the stimulus comes the specific response and the nonspecific response. In the nonspecific response two factors are included: the somatic response which entails the biological changes taking place and the psychological response which can include a change in thinking process, in emotional status and in behaviour. Here the physiological and psychological aspect of stress have been integrated with the somatic response being in the biological realm whereas the necessary conditions for stress and the psychological reaction to stress would be within the psychological domain. This integrated approach to stress has further been advanced by Mikhail (1981).

Although Selye's theory of stress is generally accepted by the medical profession, the nonspecificity of the stress response and the single specific syndrome (The General Adaptation Syndrome) have been challenged by some authors. Mikhail (1981) demonstrated how the arguments of those researchers can be reconciled with Selye's theory; mainly that the strength of the stimulus or stressors might be responsible for achieving the differences in their observations.

According to Selye's theory the perception of the stressor by the individual is critical; if unnoticed it would cause no stress. As the endogenous and exogenous factors vary with each individual, each person will probably perceive and react differently to the same stimulus. Some studies (Schaefer, 1965; Serot and Teevan, 1961) have suggested that the child's perception of his relationship with his parents is more important in predicting adjustment than the parent's perception of the parent-child relationship. The children's perception of their school also influenced their behaviour and their commitment to school (Marjoribanks, 1978; Finlayson and Lougran, 1976; Eato and Lerner, 1981; Wright, Cowen, and Kaplan, 1982). Even if the research could be done from the parent's and teacher's perception, it appears important to have the children's perception of the different factors. Consequently it was decided to limit this research to the children's perception of the different stimuli.

The present research attempts to identify factors in the family and school environment which would create stress and contribute to non-normative psychological changes in children. The family has long been seen as a crucial environment in the development of the children's mental health. Erikson (1968) developed an eight stage model of psychosocial development in which the interaction of the primary care givers with the child is of primary importance for a healthy development.

The empirical research supports this notion in that family discord and poor parent-child relationship were found to be the two most influential variables associated with mental health problems in children (Quinton and Rutter, 1984; Emery, Weintraub, and Neale, 1982; Kauffman, Grunebaum, Cohler, 1979). A warm, affectionate relationship between mother and child, and between father and child were associated with better adjustment in children (Loeber and Dishion, 1984; Rich and Rothchild, 1979; Nihira, Mink, and Meyers, 1985; Gantman, 1978; Blotcky, Tittler, and Friedman, 1982). The family's involvement in extrafamilial activities and support for personal development appear to enhance the children's mental health adjustment (Kagel, White, and Cohen, 1978; Stiffman, Jung, and Feldman, 1986; Fox, Rotatori, Macklin, Green, and Fox, 1983).

Family structure has not been strongly related to children's mental health; however, family conflict and parent-child relationship were found to be important factors (Raschke and Raschke, 1979; Woody, Colley, Schlegelmilch, Maginn, and Balsanek, 1984; Farber, Felner, and Primavera, 1985).

In the family environment, on the one hand, family conflict and poor parent-child relationship appear to be the most important stressors which could bring stress and hence place the child at greater risk for mental health problems, on the other hand, support for personal development and active extrafamilial involvement appear to enhance mental health adjustment in children. As the family environment, in which several factors

have been related to mental health, has the main responsibility in meeting children's needs, it would be logical for the family environment to have the most impact on children's mental health. The family environment was thus seen as the most important variable in relation to children's mental health.

Nowadays, the school is the main environment where children tests their accomplishments. It has the responsibility to help them develop confidence and skills which will enable them to take their place in the world, and thus, was seen as an important variable in explaining mental health problems in children. A stage of development in Erickson's theory, industry versus inferiority, coincides with middle childhood when children develop intellectual skills, physical skills, and a sense of personal accomplishment. As they evaluate their accomplishments in comparison with peers, they can view themselves basically as competent in their activities and feel industrious or they can view themselves as incompetent and feel inferior. Although no research has examined the quality of school life in relation to mental health, the school appears to have an impact on student behaviour and achievement (Gath, Cooper, and Gattoni, 1972; Reynolds, Jones, and St. Leger, 1976; Heal, 1978; Finlayson and Loughran, 1976; Marjoribanks, 1981; Rutter, Maughan, Mortimore, and Ouston, 1979).

Life events have been seen as normative events occurring in the life of an individual that act as psychological stressors demanding adaptation and have thus been related to mental and

physical illness. It has been suggested that, to explore the pathogenic effect of life events, not only outstanding or extraordinary events should be taken into account but all the events, globally, in the life of an individual in a specified period. Here it is assumed that the stress produced by each event is cumulative and that it is this total quantity of stress that would be related to symptoms or illness in the individual and not the qualitative aspect of the event. Although most authors examined the relationship between mental health and the total quantity of life events, some authors examined the qualitative aspect of the events as well. An association between life events and mental health has been found but it is probably fairly small. The relationship between life events and psychological health is thought to be important. Sterling et al. (1985) said in the opening sentence of their article: "Stressful life events have long been recognized to affect people's adjustment adversely" whereas Tyerman and Humphrey (1983) said: "Despite the obvious importance of life stress." Vaux, and Ruggiero (1983) went even further in saying: "empirical research has accumulated suggesting that stressful life change plays an etiological role in both somatic and psychological disorder." Because of the importance attached to life events in the literature it will be included in this study.

The child's physical health has been related to mental health (Rutter et al., 1970; Werner and Smith, 1980; Hudgens, 1974; Friedman et al., 1984).

Interactions might exist between all the variables discussed above; however, they have not been studied conjointly in relation to mental health. The interactions between the family environment, the school environment and life events in relation to the adolescents' mental health status will be examined.

The adolescents' mental health might affect the family environment and the school environment; the direction of the association cannot be specified.

Statement of Hypothesis

Based on the literature reviewed, the following hypothesis was formulated:

Adolescent mental health will have the greatest relationship to the family environment followed in order by the school environment and then life events.

The variables of the study were measured by the following instruments:

1. the family environment on the following dimensions:
 - a) family relationship and personal growth using the Family Environment Scale (Moos and Moos, 1981).
 - b) parent-child relationship using the Children's Report of Parent Behaviour Inventory (Schludermann and Schludermann).
2. the school environment on the following dimensions:
relationship, personal development, system maintenance

- and system change using the Classroom Environment Scale (Moos and Trickett, 1974).
3. life events using the Social Readjustment Rating Scale (Coddington, 1972a).
 4. the adolescent's physical health using a questionnaire developed by the investigator and mental health using the symptom checklist SCL-90-R (Derogatis, 1977).
 5. and by examining the interrelationship between 1,2,3,4

Limitations and Delimitations

Since this is a correlational study, a cause and effect relationship is excluded between the dependent variable (adolescents' mental health status) and the independent variables (family environment, school environment and life events). The data being based on self administered questionnaires were the subject's perspective without being corroborated by data from other relevant sources, such as parents, teachers, and trained observers. The life event measure is retrospective and therefore, subject to recall error.

The small sample size and nonrandom sampling procedure do not permit generalization of the results of the study to the entire French population in Manitoba.

This study does not attempt to measure the influence of the peer group or of adults outside the nuclear family, on the student's mental health status and is limited to the student's perception of their environment as all the questionnaires were

completed by students only. The study included only students attending a Francophone school and cannot be generalized to other ethnic groups.

CHAPTER II

LITERATURE REVIEW

In this chapter the factors associated with children's and adolescents' mental health will be reviewed. The family environment will be examined followed by the literature review related to the school environment and life events. Finally the effects of physical health problems on psychiatric disorders will then be briefly discussed.

Family Environment

Multidimensional studies

The multidimensional studies will first be reviewed followed by those examining a specific variable in relation to children's mental health status. Only a few authors surveyed general populations looking at several variables in the family environment, which could influence children's mental health status (Werner, and Smith, 1980 and 1982; Stiffman, Jung, and Feldman, 1986).

Werner, and Smith reported in 1980 and 1982 on two different aspects of a cohort study, carried out with 660 children, born in 1955 on the island of Kauai, Hawaii, from the prenatal period to age 18. These children of immigrant workers represented a variety of cultural backgrounds. Attrition remained low with 88% of the cohort participating in the 18 year follow-up. Data were first gathered when the mothers were four weeks pregnant, then,

when the child was 2 years of age, 10 years and 18 years using multiple assessment tools (records of physicians, hospitals, schools, public health, mental health and social service agencies, examinations by physicians, cognitive assessment by psychologists using the Cattell Infant Intelligence Scale and the Vineland Social Maturity Scale, teacher's checklists of physical learning and behaviour problems observed in the classroom, family interviews, the Bender Gestalt, the Primary Mental Abilities Test, clinical interviews with the children at 18 years of age and personality tests). Perinatal stress was measured by a paediatrician who scored the severity of some 60 complications occurring during the prenatal, labour, delivery, and neonatal period and he assigned an overall rating of: 0 - not present; 1 = mild; 2 = moderate; and 3 = severe. A second paediatrician, independently reviewed all cases with overall scores of 2 and 3. Low standard of living increased the probability of exposure of the infant to biological stress and early family instability, however, poverty alone was not sufficient to cause coping problems. According to the author it was the increased biological stress and early family instability that led to behaviour and learning problems. In this study, boys were significantly more affected by environmental factors than girls and the resilient boys came from smaller families but this was not found with girls. The resilient boys also were more often the eldest of the family. The children who had survived moderate perinatal stress had three times the incidence rate of mental

health problems compared to the total cohort at age 18. Some of these findings were supported by Stiffman et al. (1986) who looked at several variables in the family environment which could have influenced the mental health status of 306 children (age 6 1/2 to 15 years old, mean 10) whose parents had a mental health problem. Trained social workers, blind to the parents' mental health history, conducted the interviews which consisted of standardized questions about parents' health, interpersonal relationship, family structure, demographic data, the children's behaviour, social competence, school behaviour and achievement. The Achenbach Child Behaviour Checklist, with a test-retest reliability of $r = .93$, also was completed by the guardians. The "proportion of family members with mental health problems," "discord in the mother-child relationship," "activity competence," and "school competence" were all related to child behaviour problems; however, "family size," "family structure," and "the socioeconomic status of the family" were not related to child behaviour problems.

This is a fairly good study; however, there could be differences in the results between the different age groups as the children's ages range from 6 1/2 to 15 years. This was not taken into consideration. A convenience sample was used so that the results cannot be generalized to other groups.

In these two studies the economic status was not found to be related to behaviour problems in the children whereas smaller families were related to fewer problems for the boys but not for

the girls in the studies by Werner and Smith (1980; 1982). Stiffman et al. (1986) did not find family size to be related to behaviour problems; however, sex differences were not examined.

In a different type of study Berg, Butler, Fairbairn, and McGuire (1981) compared three groups of adolescents of which 19 were suffering from school phobia, 29 from other psychiatric disorders and 12 were from a normal school population. The data were gathered through standardized interviews with the mothers in their own homes. The reliability was evaluated at $r = 0.96$. Although the author found no significant differences between the groups on family size, social class, sex of the child, care of children, social activities, support from friend and relatives, and time worked by parents, does not mean that these variables could not be related to phobia or some psychiatric disorders. The 19 adolescents suffering from school phobia might not be representative of all school phobic adolescents and the 29 adolescents suffering from other psychiatric disorders might not be representative of all adolescents suffering from psychiatric disorders.

Kosky (1983) compared a group of 20 suicidal students to a group of 50 psychiatrically ill non-suicidal students, admitted at the same hospital, on 17 different variables. Medical records were used to gather the data. The families of the psychiatrically ill adolescents had either physical or psychiatric illnesses present while in the suicidal group both types of illnesses were present together in the families. The

psychiatric illness in the families of the suicidal adolescents was always depression. More children in the suicidal group came from families with 4 or more children and more lived with only one natural parent. The data obtained might not be comparable from one child to another as it was gathered from the medical charts only.

Thirty male delinquents age 12 to 16 were compared to 30 male non-delinquent volunteers from the local educational system matched for age and socioeconomic status, (Martinez, Hays, and Solway, 1979) on self-concept, perception of family environment, attitudes toward school and their level of aspiration. They were administered: The Piers-Harris Self-Concept Scale, the Family Environment Scale, the School Attitude Scale and four questions measured their expected level of achievement. The reliability and validity of the scales are not given. The non-delinquent volunteers scored higher on self-concept, school attitude and level of aspiration; however, no significant differences were found between the groups on their perception of family environment. The value of the study was decreased by the fact that the reliability and validity were not given.

The sampling and measurement problems of the latter three studies decreases their credibility and do not add any variables to those found related in the studies by Werner, and Smith (1980, 1982) and by Stiffman et al. (1986) which are: the sex of the child, biological status, family instability, family size, mental health problems in family members, parent-child relationship,

activity competence, and school competence.

Socioeconomic Status

Rockwell and Elder (1982) studied more specifically the relationship between the socioeconomic status of the family and mental health problems in children. Their study was based on data previously collected on a cohort of 248 children born just prior to the Great Depression. Several research tools such as reports provided by mothers during annual interviews, reports of income and asset loss during the period 1929-1933, and a measure of parental compatibility derived from an index of marital relationship were used to evaluate the effect of income loss on child behaviour at each of three age periods: 5-7, 8-10 and 11-13. They suggested that the economic deprivation by itself, appears not to have dramatically increased the level of total problem behaviour among children. The reliability of the data which were gathered through interviews with the mother and father is not known. The results cannot be generalized to other populations as the sample consisted only of middle class families.

Although this study's sample selection limits its generalizability and although a very special event is used to look at the effect of economic deprivation on the children's behaviour; it still supports the findings in the studies by Werner and Smith (1980, 1982) and by Stiffman et al. (1986). If the socioeconomic status of the family is related to the

children's mental health it is probably fairly weak.

Sex of Child

The sex of the child in relation to children's adjustment problems was studied by Emery and O'Leary (1982). The children's perception of marital discord and non-acceptance was examined as to their relationship with behaviour problems in 25 boys (mean age; 11 years and 4 months) and 25 girls (mean age; 12 years and 4 months) treated at the Child and Adolescent Unit of the Psychological Center at the State University in New York. Questionnaires on marital discord and child non-acceptance were administered to parents (Short Marital Adjustment, O'Leary-Porter Scale, Behaviour Problem Checklist) and to children (the Children's Perception of Marital Discord and Non-Acceptance). The author reports a high test-retest reliability and internal consistency for the O'Leary-Porter Scale but does not report the reliability of the other instruments. The strength of the correlations between the mothers' marital ratings and the children's perception of marital discord and non-acceptance were about the same for boys and girls. For the boys, significant relationships were found between the children's perception of marital discord and conduct disorder, immaturity, and delinquency whereas delinquency alone was related to the boys' perception of non-acceptance. For the girls, conduct disorder and delinquency were significantly related to their perception of non-acceptance but their perception of marital discord was not related to any

behaviour problem. The reliability is available only for one of the questionnaires used and since the author used a convenience sample it cannot be generalized to other populations.

These results appear to support the findings reported in the studies by Werner and Smith (1980, 1982) indicating that boys and girls respond differently to environmental factors.

Family Structure

The family structure was examined in relation to children's mental health by several authors. Children's self-concept in relation to family structure and family conflict was examined by Raschke, and Raschke (1979) in a survey of 289 students (115, 3rd graders; 109, 6th graders; and 65, 8th graders). The children were administered the Piers-Harris Children's Self-Concept Scale and a questionnaire developed by the investigator to measure family conflict and family structure. The reliability of the instruments was not reported and since a convenience sample was used it cannot be generalized. A significant relationship between children's self-concept and family conflict for both intact and single-parent families was reported; whereas, no relationship was reported between children's self-concept and family structure.

Dancy and Handal (1980) examined whether separation or conflict in the family affects the black adolescent's perception of the family climate, in 30 black adolescents from divorced families living with their mothers (19 females, 11 males) and 30

black adolescents from intact families (16 females, 14 males) matched for age, grade, ordinal position, number of children in the family and educational level of the parents. The data were gathered using: the Family Environment Scale - Form Real and Form Ideal (test - retest reliabilities of subscales scores ranging from .69 to .86), The Familial Relationship Questionnaire - Form Real and Form Ideal (reliability not given) developed by the investigator and a demographic questionnaire. The study revealed no significant differences between the adolescent's perception of the family climate in divorced or intact families. Even if the two groups were matched on several variables; they still might not be comparable as they might have been different on other variables. Although the small sample size might have influenced the result of the study, it supports the results found in the study by Raschke, and Raschke (1979).

Using a different method of investigation Woody et al. (1984) surveyed 87 parents either divorced or in the process of divorcing; recruited from divorce records, referrals to workshops and through advertisement, who had a total of 181 children (age 1 to 17), to examine the children's adjustment following divorce. The parents filled out questionnaires regarding demographic data, background data about the marriage, family history, divorce, parent and child mental health, parents' communication and contact, current family relationship, and the Schedule of Recent Experience. The author did not provide any details about how the questionnaire was developed or about its reliability and

validity. High levels of parental stress, parental symptomatology, and spouse-type relationships predicted a greater number of child symptoms. Here again the family structure was not found related to the child's mental health status.

More recently in a survey of students 17 to 23 years of age (34 males, 21 females) Farber et al. (1985) examined the relationship between current adjustment as related to demographic, personal and situational factors after divorce. Several scales were used to obtain the data: State-Trait Anxiety Index, Multiple Affect Adjective Checklist, Demographic Information Sheet, Coping Response Repertoire, Survey of Social Support, Hassles of Divorce and the Family Environment Scale. The reliability and validity of the scales were not given. The stress associated with family reorganization and conflict proved to be the most important predictor of poorer post-divorce adjustment. The convenience sample and the small sample size might have biased the results of the study.

Kagel, White, and Coyne (1978) examined the role mother's attitude and behaviour play in mediating the effect of the father's absence on adolescent psychopathology. The author compared a group of 24 families formed by 22 families gathered from the Good Samaritan Mental Health Center in Dayton, Ohio and 2 families from the Miami University Psychological Clinic in Oxford, Ohio, to 24 families drawn from high schools and junior high schools in Dayton. Although the two groups were matched on the boy's age (age range 12 - 15 years old), mother's age and

socioeconomic status, they might not be comparable. Each group contained 12 father-absent families and 12 father-present families. The child completed two questionnaires: encouragement of freedom and the Family Environment Scale, the mother completed the Family Environment Scale, the Marital Roles Inventory and sociodemographic data, and the father completed the Family Environment Scale. The reliability was reported only for the Family Environment Scale which ranged from .68 to .86 and the internal consistency varied from .64 to .79. Members of families with a nondisturbed adolescent son, in both father-absent and father-present homes, viewed their families as more committed to warm, supportive and expressive intrafamilial relationships, and exhibited greater emphasis on the family member's personal growth and active extrafamilial involvement. The mother's attitude toward the absent father in the disturbed group did not differ from that of the normal group. The small sample size might have biased the results of the study.

Although there are sampling problems and measurement problems in all these studies; they appear to indicate that family structure is probably not very strongly related to children's mental health status. These results were supported by Stiffman et al. (1984) in their multidimensional study. An association between mental health problems in parents and the adolescents' mental health status was reported (Woody et al. 1984) as well as an association between better adjustment in adolescents and personal growth and active extrafamilial

involvement (Kagel et al. 1978). Stiffman et al. (1984) had found mental health problems in family members and activity competence to be related to adolescents' mental health status. In the multidimensional studies, adolescents' mental health status was related to biological stress, family instability, sex of child, family size, discord in mother-child relationship and school competence, whereas in the studies examining the family structure, it was associated with family conflict, parental stress and spouse type relationship.

Mental Illness in Parents

Mental disorders in parents were related to psychiatric problems or to adjustment problems in adolescents in the following studies: Famularo, Stone, and Popper (1984), Hudgens (1974); August, and Stewart (1984); Weissman, Prusoff, Gammon, Merikangas, Leckman, Kidd (1984 b); and Weissman, Leckman, Merikangas, Gammon, and Prusoff (1984 a). In a case study Famularo, et al. (1984), reported that of 10 adolescents between 11 and 13 years of age who met the criteria of the American Psychiatric Association (1980) for a diagnosis of alcohol abuse or dependence, seven had a family history of manic-depression, five a family history of depression, and seven had a family history of alcohol abuse. One adolescent had been adopted and the family history was unknown.

Hudgens (1974) examined the relationship between mental

health in family members, adolescents' physical health and adolescents' mental health in 110 adolescents hospitalized on a nonpsychiatric ward. The data were gathered through interviews with the parents or guardians, from hospital records and school records. Twenty-two adolescents had symptoms of depression, 78 were psychiatrically well and 10 had other psychiatric diagnosis. Of the depressed group 55% had at least one sick parent compared to 22% of the well group and among the depressed 68% had a probable outcome of chronic disability or death compared to 37% of the well group. The depressed patients were in the nonpsychiatric hospital almost twice as long as the well control group. Twenty of the 22 depressed patients had experienced marked stress prior to the onset of psychiatric symptoms. The use of a convenience sample prevents the results of this study to be generalized.

The family history of 72 boys, age 5 to 13 admitted to a child psychiatric clinic who met the diagnosis of attentional deficit disorder was investigated by August, and Stewart (1984). The data were gathered through the Weschler Intelligence Scale for Children - Revised, medical records, and interviews with each parent which covered their childhood, adolescence, occupational, marital and medical histories, a review of psychiatric symptoms, symptoms of behavioral disturbance of childhood, birth history and medical history of childhood. The author reported in a previous study (Stewart, M.A., DeBlois, C.S., and Cummings, S. 1980) that the interviewers agreed 90% of the time in their

recording. The test-retest reliability of the mothers' answers to the questionnaires done 2 to 4 weeks apart varied between .61 and .81. In 125 pairs of questionnaires the correlation coefficients for fathers' and mothers' ratings of fight, compliance, poor concentration and overactivity were .66, .64, .65 and .65. The children who had a family history of some type of antisocial behaviour not only had signs and symptoms of hyperactivity, but also showed signs and symptoms of conduct disorder whereas those whose parents did not have such disorders showed signs and symptoms of attention deficit, impulsivity, and tended to have intellectual and academic deficit. Although the background variables such as age, family size, economic status, WISC-R, IQ, were similar for the two groups, they differed on broken home and they might have differed on a third variable which could explain the results found.

Weissman, et al. (1984 b) looked at the mental health of children in depressed and normal parents. The data were gathered on 133 children (age 6 to 18) of depressed subjects and 82 children (age 6 to 18) of normal subjects. The family history of mental illness was gathered through interviews, from patients, spouse, first degree relatives, children over 18 years of age, and from medical records. Symptoms of psychopathology in the children were obtained through interviews with the parents and first degree relatives using a general probe about problems with the child; then a symptom list was read to the informant. A psychiatrist not involved in the data collection used all the

information available to make a best estimate diagnosis. Reliability of the tool used was not given. A linear relationship was found with the children with two ill parents having the most problems and the children with no ill parent having the least problems. In a similar study Weissman, et al. (1984 a) compared five groups of children (82 children of normal parents, 56 children with a parent suffering from depression without anxiety disorder, 10 children with a parent suffering of depression plus agoraphobia, 22 children with a parent suffering from depression plus panic disorder, and 45 children with a parent suffering from depression plus generalized anxiety disorder). In general, the children's diagnosis tended to follow those of the parents. The results of these two studies might be biased by the fact that the two groups might not be comparable although they were matched for age and sex. It would be possible for younger children, between 6 and 10 years old, to react differently from older children especially if the diagnosis was recent. Although the authors established the criteria for the diagnosis of depression they do not mention how long these people suffered from the disease. Friedman, Corn, Hurt, Fibel, Schulick, Swirsky (1984) examined the family history of illness in 16 seriously suicidal adolescents and 18 depressed non suicidal adolescents (mean age 16.2 and 16.7 respectively). The adolescents were interviewed using the Schedule for Affective Disorders and Schizophrenia and the diagnoses were made according to the Research Diagnostic Criteria. The family history of

mental illness was obtained by social workers using the Family History-Research Diagnostic Criteria. The reliability of the instruments was not reported. There was no difference between the two groups in family history of psychiatric disorder. Chronic illness was significantly more prevalent among the suicidal patients before they reached 14 years of age. The two groups might not have been comparable and the sample size might have influenced the result of the study. The two groups might have been too similar for any differences between groups to be seen.

In a case control study Hirsch, Moos, and Reischl (1985) examined the effect of having a physically ill or a psychologically ill parent on the children's mental health status. The data were gathered on 16 adolescents of a depressed parent, 16 adolescents with a parent suffering from rheumatoid arthritis and 16 adolescents of normal parents using the following tools: Hopkins Symptoms Checklist, Self-Esteem Scale, Life Event Checklist, Satisfaction with School Life, School grades, and the Family Environment Scale. The reliability of the scales was not reported. The children with a depressed parent were found to have significantly more symptoms and poorer self-esteem than children of normal parents whereas the children with an arthritic parent had significantly poorer self-esteem than did the adolescents of normal parents but there were no differences in symptomatology between the two groups of children. The three groups in this study might not be comparable as the depressed

group comes from five psychiatric facilities, the arthritic group was recruited from three medical centers and the normal group was recruited from larger studies of community members. Although the authors established the criteria for the diagnosis of depression, they did not mention whether their clients suffered from chronic depression or whether it was the first time they had been diagnosed as having depression. The duration of the disease in itself might be a factor in the importance of its impact on the adolescent. If the parent was diagnosed for the first time the adolescent from 12 to 14 years of age could react differently from those who are between 15 and 18 years of age. However, the results obtained are supported by the studies previously examined.

In a longitudinal study, Quinton and Rutter (1985) examined different variables in the family environment which could explain the process by which parental mental illness affect the children's mental health. Over a ten month period, two families in five were randomly selected among a consecutive sample of English speaking patients living in the borough of Camberwell, England, who attended the National Health Service hospitals or clinics. These families had had no other psychiatric contact in the previous year and had one child at home younger than 15 years of age. Due to low numbers of males and of psychotic patients, all patients in these groups were included in the sample over a further period. For each child in the total sample of patient families, two children of the same sex nearest on the school

class register who spoke English at home were chosen as controls. The sample included 137 families with 292 children. In the last year of the study, a sample of families with 10 year old children was drawn from the general population of Camberwell. The data were gathered the first year of the study, one year later and again three years later using teacher questionnaires, parental questionnaires and interviews with both parents. The interview used non-schedule standardized techniques. The reliability for the different measures varied between .60 and .91. The children with a mentally ill parent were found to have an increased risk of developing psychiatric disorders during childhood. In the association between parental disorder and psychiatric disturbance in the children, family discord and hostility constituted the chief mediating factors. An association between major depressive conditions in the parents and depression in the children was also reported.

Emery, Weintraub, and Neale (1982) investigated the impact of marital discord and parental psychopathology on children's school behaviour in 38 families with a schizophrenic parent. Sixty-four families with a unipolar depressed parent, 47 with bipolar depressed parent and 57 with normal parents. None of the families were separated or divorced. Several tools were used to obtain the data: structured interviews, teachers' rating on the Devereux Elementary School Behaviour Rating Scale, peer rating on the Pupil Evaluation Inventory and the Short Marital Adjustment Test completed by both parents independently. The author

reported that the Devereux Elementary School Behaviour rating scale has demonstrated reliability and validity whereas the Pupil Evaluation Inventory and the Short Marital Adjustment Test have demonstrated reliability and have respectively demonstrated concurrent validity and predictive validity. Concomitant marital discord accounted for much of the association between behaviour disorder in the children of parents with bipolar or unipolar depression but not for the children of schizophrenic parents. This is a very good study. However, it is impossible to know whether the group of patients would be representative of all patients with schizophrenia, unipolar depression, and bipolar depression. Therefore, it cannot be generalized to other groups. Nevertheless, the results reported are supported in Quinton and Rutter's (1984) study who said that family conflict is the main mediating factor in the association between parental disorders and psychiatric problems in children.

In a similar study Kauffman, Grunebaum, and Cohler (1979) examined the competency of 18 children with a schizophrenic mother, 12 children with a mother suffering bipolar depression and 22 children of normal mothers. The three groups of children were similar in age, in verbal intelligence and in the proportion of boys and girls. A semi-structured interview with the mother was used to establish children's competency; whereas, the rating of maternal and paternal functioning was based on the Strauss-Carpenter interview. The author reported that the scales on the Strauss-Carpenter interview have been shown to be reliable. The

competent children of psychotic mothers were reported to have an extensive contact with an adult outside the home, to have moderately close friends, and to enjoy a warm and affectionate relationship with their mother. The children of severely depressed mothers who had little energy to invest in a helping relationship, appeared disadvantaged compared to the children of schizophrenic mothers. The sample selection for the patient with a psychiatric problem is not explained and it is not known whether they were representative of patients with schizophrenia and bipolar depression. The normal group being selected through advertisement in local newspapers might not be comparable to the patients group; the results could therefore be explained by other variables. Having used a convenience sample, the results cannot be generalized.

The association between competent children and a warm and affectionate parent-child relationship appears to corroborate Quinton and Rutter's (1985) results that hostility is an important factor in mediating the effect of parental mental illness. As reported in the multidimensional studies and in those examining the family structure, the association between mental illness in parents and psychiatric symptomatology in adolescents was sustained in the studies the main purpose of which was to examine this relationship. In the last three studies, the process by which mental illness in the parents affect the adolescents' mental health was examined. The mediating factors appeared to be family discord and poor parent-

child relationship. Kauffman et al. (1979) also reported that the competent child had extensive contact with an adult outside the home and had moderately close friends.

Parent-Child Relationship

Some studies were done in the general population examining the association between family relationship and children's mental health status (Loeber and Dishion, 1984; Rich, and Rothchild, 1979; Nihira, Mink and Meyers, 1984). In a survey of 210 students, 74 fourth-grade boys (age 9-10), 78 seventh-grade boys (age 12-13) and 58 tenth grade boys (age 15-16), and their parents, Loeber and Dishion (1984) compared families with a boy who fights at home and at school, with families with a boy who fights either at home or at school, and to families with a boy who does not fight, on problem-solving, marital distress, and rejection of the child. Several instruments were used to gather the data: teacher report, peer nomination, interviews with parent and child, home observation, Child Behaviour Checklist, Marital Interaction Scale, Delinquent Lifestyle Scale, and the Juvenile Court Records. The test-retest reliability ranged from .61 to .86 for the different scales. There was more marital conflict in the families of the boys who fought at home and at school and they were accepted less by their mothers and fathers. Those not identified as fighting experienced the best management practices. As a convenience sample was used, it cannot be generalized to other groups. In a similar survey,

Rich, and Rothchild (1979) found the well behaved Youth Center pupils to have more positive self-concept and to have more positive family relations than those who misbehaved. The reliability and validity of the tool used in this study is not reported and since a convenience sample was used, it cannot be generalized. However, the results reported support the findings in the previous study that the adolescents with behaviour problems felt least accepted by their mothers and fathers.

Nihira et al. (1984) explored the relationship between child development and the home environment from the interactive perspective. The data were collected from 148 slow-learning children and their families randomly selected from 15 school districts in California. The following instruments were used to gather the data: Henderson Environmental Learning Process Scale (coefficients of congruence between Year I and Year II administrations for the three factors varied between .88 and .95), Family Environment Scale (test-retest reliabilities varied from .68 and .86), Home Quality Rating Scale (internal consistency reliabilities for each of the five factors were reported to be .83, .78, .76, .71, and .56), the AAMD Adaptive Behaviour Scale (interrater reliabilities of the factor scores varied from .95 and .97 for Part I whereas the internal consistency reliabilities of the factor scores are .94 and .75 for Part II), About You and Your Friends (the reliabilities were reported to vary between .75 and .80), the Coopersmith's Self-Esteem Behaviours and Other Environmental Status Variables

measured demographic characteristics (reliability was not reported for the last two instruments). The main effects on adjustment behaviour appeared to be harmony, quality of parenting and the psychosocial climate of the home, more specifically, family control and family cohesion versus family conflict. This is a good study using a random sample and instruments with good reliability. The results reported support the findings that children with more behaviour problems felt least accepted by their mothers and fathers.

In the general population, the factors identified as related to adolescents' adjustment problems were family conflict, felt rejection and quality of parenting.

Schaughency, and Lahey (1984) surveyed the families of 61 children (age 5 to 14) consecutively referred to the University of Georgia Psychologic Clinic to examine the variables which contributed to the parents' labelling of their child as deviant. Forty-one of the children were from intact families. The Marital Adjustment Test, The Beck Depression Inventory, the Conners Parent Rating Scale were filled out by the parents whereas the Conners Teacher Rating Scale was answered by the teachers. The author reported adequate to good reliability for all the scales and good validity for the Marital Adjustment Scale and the Beck Depression Inventory. No relationship was found between the teachers' rating of child behaviour and parents' rating of marital satisfaction and depression. Only the correlations significant at $r = .001$ level were considered significant by the

author because of the large number of variables and the fairly small sample size. No significant relationship was found between child behaviour as rated by the parents and parents' marital satisfaction and parents' depression scores.

Having used a convenience sample, the results of the study cannot be generalized and the small sample size might have influenced the results of the study. If family conflict and parent-child relationship had been measured rather than marital satisfaction, a relationship might have been found. Marital dissatisfaction does not necessarily mean that there is family conflict and poor parent-child relationship. The measure of mental health, limited to depression, might have been too restrictive to reveal a relationship between mental health problems in parents and the labelling of their child as deviant.

Forty-six adolescents (age 12 - 18) who went to the Children's Hospital Emergency Room, Columbus, Ohio, for a suicidal attempt were compared (McKenry, Rishler, and Kelley; 1982) to 46 adolescents who went to the same emergency room for physical problems. The two groups were compared on family conflict, family cohesion, and parental maladaptive behaviour. The reliability and validity of the questionnaires used (demographic questionnaire, Dyadic Adjustment Scale, SCL-90 Brief Symptom Inventory and various Guttman and Likert Scales) were not given. The suicidal attempters were significantly more likely to view the time spent with their parents as less enjoyable, their parent's marriage as less well adjusted, their mothers as less

interested in them and to report greater parental pressure to do well in school. Both mothers and fathers of suicidal attempters perceived the time spent with their families as significantly less enjoyable, scored significantly lower on marital adjustment and rated their spouse parenting less favourably than parents of non-attempters. Fathers of attempters were more depressed whereas mothers of attempters were more anxious. Adolescent attempters reported significantly more suicidal behaviour by family members. The results of the study cannot be generalized since a convenience sample was used. Still, the results are in agreement with those previously examined in the general population.

The impact of exposure to family violence on boys in comparison to physically abused boys and nonabused boys was assessed by Jaffe, Wolfe, Wilson, Zak, (1986). Thirty-two children (age 4-16) exposed to violence were recruited from shelters for battered women in Ontario, 18 physically abused children (age 6-16) were recruited from a welfare agency and 15 children from the community were recruited through newspaper advertisements. A Child Behaviour Checklist answered by the parents was used to assess the children's behaviour and social competence. The reliability and validity of the tool were not reported. The boys exposed to violence showed the same adjustment problems as the abused child and these two groups differed significantly from the normal group. Although the results are believable, because the reliability and validity were

not given and because the three groups of children were selected from three totally different environments precluding any comparison, confidence is lost.

Gantman (1978) explored the family interaction pattern in 10 families with a normal adolescent, 10 families with a drug-abusing adolescent and 10 families with an emotionally disturbed adolescent. The data were gathered by three observers placed behind a one way mirror who rated the families while performing four of the tasks in the Structured Family Interview. The observers' reliability on the scales ranged from 0.78 to 0.91. There was significantly more scapegoating of the adolescent by the parents in the drug abusing and in the emotionally disturbed group than in the normal group. The normal families produced significantly more positive communications, had more freedom of expression, cooperated more and the parents consulted the adolescent more. As the method of sample selection was not given, the three groups of families might not be comparable. Confidence is thus reduced even if the results correspond to those reported in previous studies.

The Family Environment Scale was administered to 17 students attending a special school for students with behaviour problems and their perceptions of their family environment were compared to the scale's normative data (Fox, Rotatori, Machklin, Green, and Fox, 1983). The reliability and validity of the Family Environment Scale was not reported. The maladjusted students scored significantly lower on "cohesion," "independence,"

"achievement orientation," "intellectual-cultural orientation," "active-recreational orientation," "moral-religious orientation," and "organization."

Since a convenience sample was used, it cannot be generalized. The results reached correspond to those of family conflict and activity competence revealed in previous studies, although it examined the student's perception rather than the parent's perception of the family environment.

Blotcky, Tittler, and Friedman (1982) examined the communication pattern in 15 families participating in the Family Assessment Project who had a child enrolled in a short-term residential treatment program for emotionally disturbed children. There were 9 one-parent families. The 15 symptomatic children (13 boys and 2 girls) were compared to 17 nonsymptomatic siblings (7 boys and 10 girls). Using video tapes of the families performing "the Family Interaction Tasks" and "the Felt Figure Task," three trained individuals served as judges to evaluate the nonverbal communication and the verbal messages. The reliability between judges varied between 70% to 88% on the different measures. The mothers communicated significantly more conflicting messages to the symptomatic child than to their siblings but the father did not. A greater portion of symptomatic children were sending a high rate of conflicting messages to their mothers while sending an equal rate of conflicting messages to their fathers when compared to their siblings.

These communication problems would probably affect the quality of parenting which was previously related to adjustment behaviour.

In this last series of articles, the factors related to the adolescents' mental health status were felt rejection, quality of parenting, mental health problems in parents, time spent with family less enjoyable and communication problems. When the study examined the students' perception of their family environment the factors identified as related to their mental health problems were family conflict versus family cohesion and different factors of personal development.

In the multidimensional studies, the factors identified as related to the psychiatric problems in adolescents were: sex of the child, biological stress, family instability, family size, mental health problems in family members, parent-child relationship, activity competence and school competence. When a specific variable was examined, the economic status of the family was not identified as being an important variable and boys and girls appeared to respond differently to environmental factors. Family structure in itself was not strongly related to adjustment problems in adolescents but the following factors: family conflict, parental stress, spouse-type relationship, mental health problems in parents, personal development, appeared more important. Mental illness in the parents was associated with psychiatric problems in their children. However, when the process by which it influenced the adolescents' mental health was

examined, the mediating factors identified were family discord and poor parent-child relationship. When the parent-child relationship was examined, the variables related to adolescents' mental health status were: quality of parenting, family conflict, mental health problems in parents, time spent with family less enjoyable, communication problems, and feeling rejected. When the relationship was examined from the adolescents' perception, family conflict and personal development, were identified as being important.

The factors which appeared to be the most important for adolescents' mental health status from these studies were:

- a) the parent-child relationship which include the quality of parenting, feeling accepted, and support for personal development.
- b) family cohesion versus family conflict, discord or family instability and
- c) the possibility for personal development.

Boys and girls also appeared to respond differently to environmental factors.

School Environment

Few studies have looked at the quality of school life in relation to mental health. More has been done in relation to

antisocial behaviour or delinquency. Gath, Cooper, and Gattoni (1972) examined the effect of the neighbourhood and of the school in determining referrals to a child guidance clinic in a borough divided into 20 electoral wards with an average population of about 15,000. In the borough there were 58 primary schools, 39 secondary schools, and three special schools. During the five-year period 1962-1968, the case record of 963 children who attended the clinic were traced, another 11 could not be traced. During the same five years a total of 526 children had been dealt with by the probation service. Demographic, social and clinical data were abstracted from each child's record. Rates of child guidance referral and probation were calculated for each primary and secondary school in the borough. In the wards, the rate for child guidance referral and delinquency varied greatly with the wards high in child guidance referral also high in delinquency. The schools followed the same pattern as the wards but there was no relationship between the rank order of the wards and that of the schools. Gath concluded that, to some degree, the schools may be a determinant of child guidance referral and delinquency. Similar results were reported by Reynolds, Jones, and St. Leger (1976) who found the schools to differ in the rate of delinquency although the students came from a similar background. The boys in 9 secondary modern schools were assessed during a six-year period on attendance, academic success, (defined as going on to the local technical college after leaving school), and delinquency, (defined as being found guilty before a court or

officially cautioned by age 15). The schools with a high delinquency rate achieved relatively little academic attainment and also tended to have low attendance; whereas, the schools with low delinquency rate had higher rates of attendance and higher rates of academic attainment. Over the years, the nine schools remained fairly constant in their relative performance on these three variables. In these two studies, although the neighbourhood was taken into account in explaining child guidance referral and delinquency, other social factors and/or other variables in the family environment might be responsible for at least part of the difference found.

The influence and duration of influence of primary school on children was investigated (Heal, 1978). A random sample of 470 pupils in their final years at 4 primary schools were administered questionnaires about misbehaviour, their perception of the helpfulness of staff, clarity and fairness of rules, friendliness of other pupils and emphasis on school work. One year later, when the children from the four feeder schools had transferred to their parent secondary school, 130 students randomly selected were administered the same questionnaires. A pilot study had been done to verify the validity of the misbehaviour questionnaire with police. Pupils known to police had significantly higher misbehaviour scores which was taken as evidence of the scale's validity. The reliability and validity of the other scale is not reported. Information also was obtained from staff and local education authority on the physical

structure and staff resources of the school; and, from head teachers and senior staff, on the school organization. In the present study, the primary school attended was regarded as an important variable in explaining differences in levels of misbehaviour among children. More misbehaviour was reported by students attending larger schools and in the schools that had a formal punishing system and where punishment was more severe. The influence of the primary school on the behaviour of its pupils is not perpetuated once the children have entered secondary school.

The strength of the study would have been enhanced if the reliability of the questionnaire concerning the students' perception of the helpfulness of staff, clarity and fairness of rules, friendliness of other pupils and emphasis on school work had been reported. In this study, only the school environment is taken into consideration; whereas, other social factors and other variables in the family environment which could explain some of the relationship, are not taken into account.

The results of this study not only correspond to those of the studies previously examined in obtaining a relationship between the school and misbehaviour; it identifies some variables which appear to influence the students. There are: larger schools, formal punishing system, and more severe punishing system.

Looking at the school environment from a different perspective, Finlayson, and Loughran (1976) examined the pupils'

perceptions of the pupil/teacher relationship in high and low delinquency schools. Two schools with high rates of delinquency were matched with two schools with low rates of delinquency on type of school, numbers on roll, age and type of buildings, internal organization into streams and comparable catchment areas. A questionnaire was administered to all the boys (total of 166) who were in their final years of compulsory schooling. The reliability and validity of the questionnaire were not reported. No difference was found in the way delinquents and non-delinquents perceived the behaviour of their teachers and peers. In the high delinquency schools, the teachers were perceived as being more hostile in their behaviour toward pupils than in the low delinquency school. The high delinquency schools were perceived as lower on task orientation than the low delinquency schools. In the high delinquency schools, the boys tended to perceive their peers as deriving less social and emotional satisfaction from school than the boys in the low delinquency school. In a similar study, Eato and Lerner (1981) examined the social and physical environment of the school in relation to adolescent's self-esteem. For both boys and girls, self-esteem was related to peer perception, teacher perception, building perception and classroom perception. The major predictor of self-esteem in both sex group was the teacher perception score.

The value of these two studies is decreased by the fact that the reliability and validity of the questionnaires are not

reported. As in the previous studies, only the school environment was taken into account; whereas, other variables in the social environment or in the family environment could have influenced the results.

Although the studies were done from the students' point of view, the results are in agreement with those of previous studies. The factors related to delinquency or to the students' self-esteem were: peer perception, teacher perception, building perception and classroom perception.

Marjoribanks (1981) investigated 250 twelve year old Australian children (120 girls, 130 boys) on measures of the family learning environment and school environment in relation to the student's school self-concept, educational expectations, and attitudes to school. The children answered the Otis Intermediate Test - Form AB (author reported acceptable reliability), the Children's Personality Questionnaire, Form A (reliability and validity were not reported), School Environment Questionnaire developed by the author (each scale had a theta reliability estimate greater than 0.75), and a questionnaire developed by the author to measure educational expectations, school self-concept, and attitudes toward school (The theta reliability for these scales varied between .72 and .80). A semistructured home interview with the parents was used to measure the family learning environment. Questions about the parents' aspirations, importance of English, achievement orientations and the activities shared by parent and child were asked. The boys'

attitudes toward school were influenced by their parents' aspirations and the boys' perception of the instructional and imaginative context of school. The boys' self-concept was more positive if they perceived their school to be academically oriented; whereas, the girls' self-concept was affected by their perception of the school's interpersonal environment. Even when the family influence was taken into consideration, children's perceptions of their school environment were related to school outcome. This study cannot be generalized to other groups or schools as a random sample was not used. Although some aspects of the family environment were measured, other aspects such as family conflict, parent-child relationship and other variables in the child's social environment might explain part of the association. Even then, the results correspond to those previously examined; however, in this study, boys and girls appear to be influenced by different factors in the school environment.

The reasons why differences exist between schools in terms of various measures of pupil behaviour and attainment was investigated by Rutter, Maughan, Mortimore and Ouston, (1979). They conducted an extensive survey of 12 non-selective schools serving an ethnically and socially mixed inner London area. Semi-structured interviews were used to gather information from 219 teachers (randomly selected, one in four) on classroom management, teacher experience, teacher turnover, general conditions and facilities in the school, policy and practice

within the schools. A questionnaire was administered to 2730 pupils about their behaviour and about the school process. The replies in each school were divided in two halves to calculate the reliability, which the authors reported as being acceptable. Information was gathered through observations, focusing on the teachers, the pupils, and the class as a whole, using a time sampling technique. Recorded attendance and results of public examinations were obtained. The reliability for the interviews and observations was not reported. In the secondary schools studied, marked differences existed in the behaviour and attainments shown by the pupils. The proportion of behaviourally difficult or low achieving children admitted did not explain all of the difference in variation, between the schools in their pupils' later behaviour and attainment. Schools where the children behaved better tended to have less delinquency and more examination success, and, the schools' performance tended to be reasonably stable. The factors found related to the schools' outcome were the degree of academic emphasis, teacher actions in lessons, the teachers seeing students at any time, the availability of incentives and rewards, good conditions for pupils, and the extent to which children were able to take responsibility. The schools with a good proportion of students with at least average intellectual ability tended to have better examination success; whereas, the schools with a preponderance of the least able tended to have higher rates of delinquency. The association between the combined measure of overall school

process and each of the measures of outcome was stronger than any of the relations with individual factors.

This is a good study. However, only the school environment was taken into account and other variables in the family environment could have modified the results. The findings not only are in agreement with those of previous studies; they identified several variables which influenced student behaviour.

These studies suggest, on one hand, that schools have an impact on student behaviour and on achievement; on the other hand, the student perception of school influences their behaviour and their commitment to school. The schools might have an impact on the mental health of the attending students. The factors identified as having an influence on the students' behaviour were: a) peer perception - which includes social and emotional satisfaction which peers are perceived to derive from school and the school interpersonal orientation, b) teacher perception - which includes teachers' actions in lesson, teachers' seeing students at any time and teachers more hostile, c) classroom perception - which includes academic emphasis, availability of incentives and rewards, extent to which students were able to take responsibility, formal punishing system and more severe punishing system, and d) building perception - which includes school size and good conditions for pupils.

Life Events

A relationship between illness and a life event is suggested

when the latter is outstanding and when it shortly precedes the illness. The event which is of importance to the individual is distinguished from the usual life course in that it demands a psychological readaptation or a relational reorganization. These important life events have been seen as psychological stressors and have thus been related to mental and physical illness. Usually, it is the recent life events which have been related to illness and not events which happened in the past or which have been internalized.

It has been suggested that, to explore the pathogenic effect of life events, not only outstanding or extraordinary events should be taken into account but all the events, globally. Here it is assumed that the stress produced by each of the events accumulates and that it is this total quantity of stress that would be related to symptoms or illness in the individual and not the qualitative aspect of the event. This position has been held by Holmes and Rahe (1967) in developing their instrument: "The Social Readjustment Rating Scale." They estimated the value for each event on the scale from a large sample of average citizens. The total readjustment for a given time span can be obtained by adding the values assigned to each event that has occurred during that period. Many studies have used this method to calculate the total amount of stress experienced by individuals while others only added the number of events experienced. Some authors report results using both methods of calculation. The reliability and validity of the scale have not been established.

Coddington (1972 a) adapted Holmes and Rahe's "Social Readjustment Rating Scale" for use with children. Statistically significant relationships between total life events or total life change scores and mental health problems in children and adolescents were obtained. Vaux and Ruggiero (1983) surveyed 531 grade 10 and grade 11 students attending one of four high schools in Orange County, California, to examine the relationship between delinquency and recent life events. A questionnaire on delinquency and a modified 20 - item version of Coddington's scale for the senior high school group was administered to the students who were asked to recall the life events experienced in the year preceding the start of the school year. The reliability and validity of the questionnaires were not reported. The author found a significant relationship between delinquency and life events. The strength of the correlation was not reported. The value of the study is greatly reduced by the fact that the reliability of the questionnaires is not available. It could be argued that items such as "I broke up with my girlfriend/boyfriend" and "I was suspended from school" in the Life Event Checklist are confounded with items such as "Threatened to hit or actually hit teachers or student" and "took part in gang fight" in the Delinquency Questionnaire. Other variables in the family environment, such as conflict, might explain the relationship between life events and delinquency.

The studies by Rangaswamy and Kamakshi (1983), Vincent and Roesenstock (1979), Duncan (1977), Tyerman and Humphrey (1983),

and by Dooley and Fitzgerald (1984), which follows, all have the same problems as the study by Vaux and Ruggiero, (1983) just examined. The groups chosen for comparison in these studies might not be comparable. Rangaswamy and Kamakshi (1983) examined the occurrence of life events in 30 adolescent hysterics (6 males, 24 females) age 13 to 17, attending the adolescent Guidance Clinic of the Institute of Mental Health, Madras. These adolescents were found to have a high incidence of life events as measured by Coddington's Readjustment Rating Scale.

Sixty adolescents, age 12 to 18, admitted to a private psychiatric inpatient service, were compared to Coddington's normal population on the occurrence of stressful life events (Vincent and Rosenstock, 1979). School truancy, familial stresses, involvement with illicit drugs, and other antisocial acting out were the main reasons for hospital admissions. Each adolescent was given a full psychological battery (no detail was given as to what was included in the full psychological battery) and an interview was used to gather data on life events which occurred in the year prior to admission using a combined junior high school and senior high school form of Coddington's life event scales. The reliability and validity of the instruments were not given. More life events were reported by the adolescents admitted to the psychiatric inpatient services than by the adolescents in Coddington's normal population. In similar studies, Duncan (1977) compared a group of 31 adolescents age 14 to 21 admitted to a halfway house for adolescent drug abusers to

Coddington's normal adolescent population; whereas, Bruns and Geist (1984) compared 55 adolescents in residential treatment for drug abuse to 566 high school students. In both studies, significantly more life events were reported by the drug abusing group.

Another group of 24 adolescents (12 males, 12 females) aged 12 to 16 referred to psychiatric outpatient services were compared to 24 adolescents from neighbouring schools matched for age, sex, race, socioeconomic status, family size and number of parents in the family, on life stress, social support and psychological health (Tyerman and Humphrey, 1983). All the adolescents were visited at home, and, as part of a structured interview, were asked to complete a) a 30-item version of the General Health Questionnaire, b) a 48-item life event questionnaire (developed by the author from four life event scales: Holmes and Rahe, 1967; Coddington, 1972; Gersten et al., 1977; and Paykel, Prusoff and Uhlenhuth, 1971), c) to rate from 1 (very poor) to 5 (very good) the support received for each life event experienced and d) to complete the Cohesion dimension of the Family Environment Scale. The recall period for the life events was two years. The reliability and validity of the instruments used were not reported. The number of life events experienced by the patients was significantly higher than the number of life events experienced by the control group. The same results were found in a similar study (Dooley and Fitzgerald, 1984) when 50 children (33 males, 17 females) referred to a child

psychiatric outpatient center were compared to 50 children randomly selected from local schools.

Cohen-Sandler, Berman, and King (1982) compared the life stress and symptomatology of 76 children, aged 5 to 14, consecutively discharged from an inpatient psychiatric unit who were assigned either to the suicidal group (20), the depressed but non-suicidal group (21), or a psychiatric control group (35). The data were obtained from medical charts and recorded on a life stress inventory and the Achenback Symptom Checklist. The suicidal group was found to experience significantly more life events than the other two groups. In this study, a bias might be introduced when all the data are obtained from the medical charts. The information obtained by the physicians might not be comparable from one chart to another because it would be natural to try harder to find an explanation to a child's problem especially if the child is thought to be suicidal.

Some authors not only examined the effect of the total stress in relation to symptomatology or illness; they also examined the effect of the qualitative aspect of the event. The events were usually judged as bad events or negative events if they were intrinsically disvalued (death, divorce, unemployment, illness, failing in school, increased arguments between parents, increased arguments with parents) or as good events or positive events if they were intrinsically valued (making new friends, getting along with teacher, involvement in extracurricular activities). Some authors considered certain events, as

ambiguous (family move, new birth in the family, sibling leaving home, and changing school).

To find out whether a standard measure of stressful life events would distinguish adolescents with somatic complaints from various other patients, Greene, Walker, Hickson, and Thompson (1985) administered the life event scale, developed by Johnson and McCutcheon, to 172 adolescents (11 to 19 year olds) attending Vanderbilt University Medical Center Adolescent Clinic for the first time, while they were waiting to be seen. The adolescents were classified into six diagnostic groups (1 - routine physical examinations, 2 - acute minor illness, 3 - acute abdominal or chest pain, 4 - recurrent abdominal or chest pain, 5 - behavioral problems, 6 - stable chronic illness) after a structured history and physical examination by the investigators, but prior to seeing the life event questionnaire. Significant negative life change scores were reported by group 4 and 5. The author did not report the results for the total life change score. In this study, recurrent abdominal or chest pains and behavioral problems are confounded with items in the life event scale such as: "problems with classmates," "teacher problems," "failed grade," "increased arguments with parents," "problems with siblings," "broke up with boyfriend or girlfriend," and "making failing grades on report card." The groups might not be comparable as the author does not convey any information regarding the number of adolescents in each group, their age, sex and socioeconomic background.

Kaplan, Robbins and Martin (1983) examined the additive and interactive effects of self-rejection, deprivation of social support and life events, upon psychological distress in a survey of 1,633 respondents, who had completed the 1971 interview, while they were in grade 7 and attending the Houston Independent School District, and who completed the other survey ten years later. This represents 54% of the 1971 respondents. Self rejection was measured by a "Self-Derogation Scale" giving a weighted sum of self-devaluation responses to seven items. The authors reported good internal consistency ($\alpha = .58$) and said that the reliability of the scale is somewhat better. The other tools used were: Perceived Rejection by Peers, Perceived Rejection by Family (authors reported good internal consistency; $\alpha = .65$ for felt rejection by peers; $\alpha = .74$ for felt rejection by family), a 22 item Life Event Scale and a 22 item questionnaire reflecting dysphoric affect, psychophysiological correlates of anxiety or depression and inability to cope (authors reported good internal consistency: $\alpha = .82$). A ten year recall period was used to measure life events. Life events were significant predictors of psychological distress net of the other main effect. However, felt rejection by the family predicted each of the life event measures (Main effect $R^2 = .16$, between bad events and psychological distress; $R^2 = .18$, between failure to meet expectation events and psychological distress). The ten-year recall period is rather long making it difficult if not impossible to remember with accuracy events which happened

several years before. Psychological distress might be confounded with the following events: "Were you fired because of your work performance or because of not getting along with the people on the job?", "Did you get a divorce or separate from your wife/husband or break off a relationship with someone of the opposite sex you had been living with for a long time?", "Did you move out of your parents' home or apartment?", "Were you arrested?", and "Did you leave the armed forces?"

Gersten, Langner, Eisenberg, and Orzech (1974) examined the relationship of different measures of stressfulness of life events and a number of dimensions reflecting different types of impairment in children and young adults (age 11 to 23). A stratified systematic cluster of 8 dwelling units in a health area was randomly selected and every thirtieth cluster thereafter was considered. Six hundred seventy four Manhattan children and young adults (56% White, 14% Black, 29% Spanish and 1% Other) participated. At time I and time II the information about child behaviour was obtained through an interview with each mother. At time II a 25 item life event checklist was used to measure the life events which occurred in the five year period between the two data collection times. The total life change score was related to all the mental health measures (The correlation coefficient ranged from .10 to .18 and the same holds true for the undesirable life events (The correlation coefficient ranged from .4 to .25). In another study, Gersten, Langner, and Eisenberg, and Simcha-Fagan (1977) examined whether the

qualitative aspect of the life event score would be superior to total life change score in predicting disturbed behaviours. The sample was obtained as in the previous study and the same tools were used. Here again, the life events which occurred in the 5 year period between the two times of data collection were measured. The reported associations of event scores with measures of psychological disturbance prior to (Time I) and after (Time II) the events were as follows: a) at time I, the correlation coefficient for the total change scores and measures of psychological disturbances ranged from .05 to .18; b) at time II it ranged from .08 to .18; c) at time I, the correlation coefficient for undesirable events and measures of psychological disturbances ranged from .04 to .18; d) at time II it ranged from .09 to .19. No event score measure showed a significant difference between its Time I and Time II correlations with any measure of impairment. When reporting on the effect of the quality of the life events compared to the effect of the total score, the authors said (p 235) that: "when the correlations of the undesirable scores (given above) were equal to or greater than the correlation found for the former correlations resulted in each of the undesirable scores showing a significantly greater correlation than the total change scores." However, the variables comprising the sociocultural milieu and initial pathology were found to account for a significant and substantial amount of the variance; whereas, life event scores did not add 1% of variance to the multiple regression for any of the 8

variables of later psychological disturbances. The later two studies had a recall period of five years which is rather long to be able to remember events with accuracy. Psychological disorders and child behaviour could be confounded with items such as "Child didn't get along with a new teacher", "Other incident or event occurred that affected child badly", "Made him sad, angry, unable to study or work, see friends", "or otherwise interfered with his life".

Although statistically significant correlations between life events and mental health measures were found, the strength of these associations has not been very strong with a median of approximately .15. In most studies, no attempt was made to eliminate the confounding variables. An association between life events and mental health might exist but it is probably fairly small.

It has been argued that Daily Hassles and Uplifts may be a better way than life events to measure stress (Kanner, Coyne, Schaefer, and Lazarus, 1981). The hassles are the irritating, frustrating demands that characterize everyday life; whereas, the uplifts are the small daily joys. However, we organize our days and probably set them up in such a way that we can bring the hassles or uplifts on ourselves. This would probably increase the number of events to be confounded with mental health symptoms. It was therefore decided not to use this scale.

Child's Health

In three studies previously examined, children's physical health was related to the children's mental health. Werner, and Smith (1980) reported that children who had survived moderate perinatal stress had three times the incidence rate of mental health problems than did the total cohort at age 18. Hudgens (1974) found that among the depressed adolescent hospitalized on a non-psychiatric ward, 68% had a probable outcome of chronic disability or death compared to 37% of the well group. These findings were supported by Friedman et al. (1984) who reported that chronic illness was significantly more prevalent among the suicidal patients before they reached 14 years of age compared to a group of depressed but non-suicidal adolescents.

Children's physical health appears related to their mental health adjustment.

Conclusion

From this literature review, the most important set of factors for child mental health seems to be the family environment with family conflict and the parent-child relationship as two important variables. Family conflict appeared to be more important than family structure and appeared to explain part of the association between psychiatric illness in parents and psychiatric problems in children. Support for personal growth and active extrafamilial involvement might be important factors in enhancing the children's mental health.

Boys and girls appear to respond differently to environmental factors.

The school environment has been related to delinquency and guidance referral. Is the school environment related to mental health problems in children? Could there be an interacting effect between the school environment and the family environment? Some studies found that the students' perceptions of their school influence their behaviour and their commitment to school. Are children's perceptions of their environment an important factor?

Life events might be related to mental health but the association is probably fairly small. Could part of the relationship be explained by other variables in the family environment or the school environment?

CHAPTER III

PROCEDURES OF INVESTIGATION

After reviewing the literature, the most important factors in relation to child mental health appear to be the family environment, the school environment, the child's physical health, and life events. The way the child perceives these factors appears to be more important in influencing her/his mental health than the way parents perceive the family environment and the way teachers perceive the school environment. Thus, this study was designed to examine the relationship between the family environment, the school environment, the life events, as perceived by the students, and mental health, controlling for physical health.

Design of the Study

The sampling frame was 409 grade eight students attending Francophone schools in Manitoba. After some refusal at the division level, the school level, the parents and the students, 59 students participated in the study. Of the 59 students, 8 students had to be dropped from the study because they could not understand the questions. The final sample consisted of 51 students, 28 girls and 23 boys. Self-administered questionnaires were answered in two sessions of 40 minutes each.

Based on the literature review, the following research hypothesis was formulated:

Adolescent mental health will have the strongest relationship to the family environment followed in order by the school environment and lastly, life events.

Instruments

Since children's perception of their social environment appeared to be contributing significantly to their mental health status it was decided to focus this study on information derived from children's responses only. Six questionnaires were used to collect the data. The Family Environment Scale and the Child's Report of Parent Behaviour Inventory were used to measure the family environment. The Classroom Environment Scale was used to measure the school environment and the Social Readjustment Rating Scale was used to measure the life events. The Symptom Check List-90-R was used to measure the child's mental health and an investigator developed check list was used to investigate the child's physical health and gather demographic data.

A - The Family Environment

To measure the family environment, the only instrument found were The Family Environment Scale developed by Moos and Moos (1981) and The Children's Report of Parent Behaviour Inventory (CRPBI) developed by Schaefer (1965). The Family Environment Scale includes ten subscales; each measured by nine statements to

which the respondents answer true or false. Three subscales: cohesion; expressiveness; and conflict, assess the relationship dimensions. The personal growth dimensions are measured by five subscales: independence; achievement; orientation; intellectual-cultural orientation; active-recreational orientation; and moral-religious emphasis. The system maintenance dimensions are measured by two subscales: organization and control. As reported earlier, family conflict and personal growth appeared to be important factors for the children's mental health. Whereas the system maintenance, which is the type of discipline practised, is an integral part of the parent-child relationship.

Scoring:

Each subscale is scored separately resulting in a subscale raw score. The raw scores can be converted to standard scores using Appendix A of the manual.

Reliability:

In the manual Test-retest reliabilities reported for an 8-week interval for 47 family members in 9 families varied from .68 to .86 for the ten subscales.

Intercorrelation between the subscales:

The subscales were found to measure distinct aspects of the family environment although they are somewhat related.

B - Children's Report of Parent Behaviour Inventory (CRPBI)

Schludermann and Schludermann (1970) developed a shortened version of (108-item scale) the original scale (260-item scale)

developed by Schaefer (1965). In both studies, the same three factors emerged: Acceptance versus Rejection, Psychological Control versus Psychological Autonomy and Firm control versus Lax Control. The CRPBI consists of 18 scales of which six contain eight items per scale and the other 12 scales consisting of five items per scale. The student indicates whether the item is "Like" or "Somewhat Like" or "Not Like" his/her mother and his/her father separately. This scale is used to measure the parent-child relationship. It was decided to use The Family Environment Scale and the CRPBI as they measure different aspects of the family environment but to use the CRPBI shortened version because of time needed to complete all the questionnaires used in the study.

Scoring:

The scale score is obtained by adding up the scores on the items that compose the scale and by multiplying this score by the coefficient 1.25 or 2.00 depending on whether there are 5 or 8 items in a given scale. A score for the factor Acceptance versus Rejection can be obtained by adding the scales scores constituting acceptance and by adding the reversals of the scale scores constituting rejection. This total is then divided by the number of scales contained in the factor. A score can be obtained for Psychological Control versus Psychological Autonomy and Firm Control versus Lax Control in the same way.

Reliability:

Schaefer (1961) obtained a median of .77 for the internal consistency reliabilities for the 26 parent behaviour scales when administered to 85 normal boys, 80 normal girls, and 81 delinquent boys with parallel forms for description of mothers and fathers.

C - Classroom Environment Scale

Three questionnaires were found to measure the school environment: The Classroom Climate Questionnaire developed by Walberg (1966), The Quality of School Life by Epstein and McPortaldn (1976), and The Classroom Environment Scale by Moos and Trickett (1974). The Classroom Climate Questionnaire measures two dimensions of the classroom climate: the structural and affective dimensions. The Quality of School Life measures three dimensions: satisfaction with school in general; commitment to school work; and attitudes toward teachers whereas the Classroom Environment Scale measures four dimensions: relationship; personal development; system maintenance and system change. It was decided to use the Moos scale since the dimensions measured are those that were shown to be related to better behaviour in the classroom and to be important in the family environment. The scale contains nine subscales and each of them is measured by ten statements to which the student answers true or false. Three subscales measure the relationship dimensions of: involvement; affiliation; and teacher support.

The personal development dimensions are measured by two subscales: task orientation and competition. The system maintenance dimensions are measured by three subscales: order and organization; rule clarity; and teacher control. One subscale measures the system change dimension or innovation.

Scoring:

Each subscale is scored separately resulting in a subscale raw score. The raw score can be converted to standard scores using Table C in the Appendix of the manual.

Reliability:

It is reported in the manual that with a six week interval, the test-retest reliabilities of individual scores calculated for 52 students in four classrooms varied from .72 to .90 for the nine subscales. The overall stability of the classroom environment scale profile over two weeks, four weeks and six weeks, of test-retest administration was high with the correlation coefficient varying between .72 and .95.

Intercorrelations between subscales:

The nine subscales were found to measure distinct aspects of the classroom environment although slightly related.

D - Life Events

The most often used measure of child and adolescent life stress are the scales by: Coddington (1972a), Social Readjustment Rating Questionnaire; Yeaworth, York, Hussey, Ingle, and Goodwin (1980), the Adolescent Life Change Event Scale;

Sarason, Johnson, and Siegel (1978), The Life Experiences Survey; Holmes and Raye (1967), The Social Readjustment Rating Scale; Swearingen and Cohen (1984), The Junior High Life Experience Survey; McCubbin and Patterson (1983), The Family Inventory of Life Events and Changes, or a modified version of one or more of these scales.

Dohrenwend, Dohrenwend, Dodson, and Shrout (1984) found both the Hassles Scale and Life Event Scales to be confounded with measures of psychological distress. Thoits (1981) study indicates that health related events are responsible for a large portion of the relationship between life events and psychological distress and the same probably applies to the Hassles Scale.

The rating for each event on the Junior High Life Experiences Survey and on the scales developed by Coddington were obtained from a sample of different professionals while on the Adolescent Life Change Event Scale the rating was obtained from the adolescents' evaluation of each event. Yamamoto, and Felsenthal (1982) and Tolor, Murphy, Wilson, and Clayton (1983) found a difference in ratings of different events by children and adults. The children rated some sociofamilial and school events as more stressful than the professionals did while such things as "having a new baby sibling," "going to the dentist," or "picked last on a team," were rated more stressful by the professionals than by children.

Most studies investigating stress in young children required the parents to fill out the life event check list while in the

studies looking at stress in older children it was the children themselves who filled out the life event scale.

Funch and Marshall (1984), using two different techniques to calculate the monthly forgetting rate, estimated it to be 4.9 and 5.1 respectively. They recommend keeping the recall period short. In their study, the major life transition showed no decline in recall while events which did not happen to the respondent himself or herself showed the greatest and most rapid decline. The fall-off for the major events was about half that of less salient events.

Because of all the measuring problems associated with life events, it was decided to use Coddington's event scale and to eliminate the following 12 events: unwed pregnancy of child; fathering an unwed pregnancy; having a visible congenital deformity; becoming involved with drugs or alcohol; change in child's acceptance by peers; failure of a grade in school; serious illness requiring hospitalization of child; suspension from school; not making an extracurricular activity he/she wanted; breaking up with a boyfriend or girlfriend; increase in number of arguments with parents; and decrease in number of arguments with parents, which could be the result of either mental or physical ill health. To minimize forgetting, a six month period is used and a one-unit measure is used to calculate total stress. After eliminating 12 items from the Social Readjustment Rating Scale, 28 events were listed to which the

respondents answered whether or not they happened in the last six months.

Scoring:

Scoring is done by adding the number of events which happened in the last six months.

Reliability and Validity:

The length of the recall period can affect the reliability of the instrument.

The problem of confounding measures puts the validity of the stress measures into question. It also is difficult to talk of validity when there are still some problems of reliability.

E - The Symptom Check List-90-R

The Symptom Checklist-90-R (Derogatis, 1977) which is an inventory of the symptoms experienced in the last week was used, since one objective of the scale is to detect symptomatology in apparently normal individuals. The symptoms dimensions measured by this scale are: somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism. This scale contains 90 statements to which the respondent states her/his degree of agreement by placing a check mark on a five-point likert type scale.

Scoring:

The score of each symptom dimension is the average rating given to the symptoms comprising that dimension. Three global scores can be obtained as follows: Global Severity Index is the average rating given to all 90 items; the Positive Symptom Distress Index is the average rating given to the symptoms complained of; and the Positive Symptom Total is the number of symptoms complained of. To define a case of mental health disorder, Derogatis (1977) recommended a T-score greater than or equal to 63 on the Global Severity Index or on any two primary dimension scores.

Reliability:

As reported in the Eight Mental Measurement Yearbook by Buros, the correlation coefficient of test-retest done one week apart range from .78 to .90 and the coefficient for internal consistency varied from .77 to .90 in a psychiatric population.

Validity:

According to the review in the Eight Mental Measurement Yearbook, the SCL-90-R appears valid to measure mental health disturbance but the convergent and discriminant validity appears doubtful at present. This scale appears suitable for the present study as the investigator is interested in the global scores only.

F - The Child's Physical Health and Sociodemographic Data

Part of the System of Multi-Cultural Pluralistic Assessment (SOMPA) developed by Mercer (1973) measures the child's physical health; however, it has to be answered by a parent. Another instrument developed by Saucier to measure physical health can be answered by the students but it is much too long to be used in this study. A check list has been developed by the investigator to measure physical health and to obtain some sociodemographic data. It consists of six questions, of which, two are related to sociodemographic data and four investigate their general health since birth. They respond by checking the appropriate answer.

Scoring:

Each question is scored independently.

Pilot Study

Since the questionnaires used for this study are in English and the population for the study is Francophone, a pilot study was done to verify whether the students who are bilingual would understand the vocabulary used in each questionnaire and to verify the length of time needed to answer them. The questionnaires were administered to a group of grade 7 students in two sessions of 40 minutes each; in one session the Symptom Check list 90, the Family Environment Scale and the Social Readjustment Rating Scale were administered while in the second session the students had the time to complete only the Child's Report of Parent Behaviour Inventory. In responding to the

latter, the students were asked to describe both parents on separate forms given in a counterbalanced order. Since the statements on the father's form and mother's form are identical, the questionnaire was reorganized so that the students could respond to a statement for both mother and father simultaneously on the same form. These changes having been made, the Child's Report of Parent Behaviour Inventory, the Classroom Environment Scale and the Child's Physical Health and Demographic Data check list were administered to another group of grade 7 students who had no problem answering all of them in 40 minutes. All questionnaires could be answered in two sessions of 40 minutes each.

In all the questionnaires some words needed clarification. The words giving problems on the Child's Report of Parent Behaviour Inventory and the Social Readjustment Rating Scale were reworded. For example, "Isn't very patient with me" was changed to "Has little patience with me"; "Is always getting after me" for "Is always bugging me" and "Often praises me" for "Often tells me I am doing well."

Research Population

From a preventive point of view, it would be important to identify the most important factors influencing mental health in very young children. Since children's perception was found to be important, it was decided to have the children answer the questionnaires. To do so, the children had to be able to read and

write. The instruments, measuring the parent-child relationship, the family environment and child mental health, are designated for youth thirteen years and older, at a time according to Piaget's theory when they have achieved the formal operational stage of cognitive development which permits them to conceptualize their environments and respond to the questions. The adolescents are more likely to be affected by their family environment, school environment and life events than younger children because of the dramatic biological-psycho-social changes they are experiencing. As the school was the most natural environment to do the study, grade eight students were chosen because of the level of reading comprehension required to answer some of the questionnaires. Thus, the sampling frame was all 409 grade eight students attending a Francophone school in Manitoba.

After some refusals at the division level, the school level, the parents and the students, 59 students participated in the study. Of the 59 students, 8 students asked so many questions that they answered little of the questionnaires and had to be deleted from the study. The final sample consisted of 51 students, 28 girls and 23 boys. Since 51 students constitute a small sample and no random sampling was used the results are limited in their generalizability.

Procedure

Phone calls and/or a visit were made to the different superintendents responsible for Francophone schools in Manitoba

to explain the study. Upon their approval the principal of each school was contacted and an explanation of the study was given either by phone or through a personal meeting. Grade eight students were given a simple explanation of the study by the principals except in one classroom where the principal asked the investigator to do the presentation. A letter of consent for students' parents was distributed to the students. The questionnaires were answered in two sessions of 40 minutes each. All questionnaires were administered by the investigator.

The superintendents were told that a copy of the study would be sent to those participating and that the principals would receive the results of the study from whom parents could obtain a copy. They also were told that the investigator would be available to present the results if requested. The same information was given to the principals.

Statistical Analysis

The data were coded and prepared for computer analysis. Frequency distributions and cross tabulations were used to profile the students, whereas, means and standard deviations were used to examine students' mental health. Pearson correlations were performed to examine the relationship between mental health and family environment, school environment and life events, for the total group and for boys and girls separately. A level of significance of .05 was used to examine the relationship between the variables in the study. Because of the small sample size, it

was not possible to use a multivariate multiple regression and R2 necessary to answer the hypothesis. The large number of variables examined in the study increases the chance of accepting a relationship as significant when it should be rejected (Type I error). Since it was not possible to answer the hypothesis of the study, the level of significance of .05 was kept to look for possible directions for future studies.

CHAPTER IV

RESULTS

Results

This chapter reports on the statistical analysis of the data collected from 23 boys and 28 girls in grade 8 in Manitoba Francophone schools. Statistical analysis was used to examine the following hypothesis:

Adolescent mental health will have the greatest relationship to the family environment followed in order by the school environment and then life events controlling for physical health.

Adolescent Mental Health

To define a case of mental health disorder, Derogatis (1977) recommends a handwritten T-score greater than or equal to 63 on the Global Severity Index or on any two primary dimension scores.

As can be seen from the means and standard deviation on the CL-90-R (Table 1), the subject of this study has few mental health problems with none of the boys reaching caseness whereas three girls who had a T-score of 63 or above on the GSI would be considered to have mental health problems.

TABLE 1

Means and Standard Deviation on the
SCL-90-R Scale for Boys and Girls

Boys	Mean	Standard Deviation
GSi	46.52	7.74
PST	46.17	8.02
PSDi	49.39	9.07
 Girls		
GSi	48.57	14.72
PSi	49.61	10.44
PSDi	47.07	12.98

GSi = Global Severity index, PST = Positive Symptom Total,
PSDi = Positive Symptom Distress index

Results of the 51 Participants

The cross-tabulated frequencies of demographic and physical health information are presented in tables II to VI.

TABLE II

Frequency of Age by Gender for all Students

Age	Male	Female
13	21	26
14	1	2
15	1	0

TABLE III

Frequency of Boys and Girls Living Either with
Both Parents or With One Parent

Gender	Both Parents	Mother	Father
Males	22	1	0
Females	26	1	1

TABLE IV

Frequency at which Students Felt They Were Sick
Up to Age 8 or 9

Family Structure	Frequency of Illness		
	Nearly Never	From Time to Time	Very Often
Both Parents Present	26	19	3
Mother Only	1	1	0
Father Only	1	0	0

TABLE V

Frequency at which Students Who Live with Either
Both Parents or One Parent Perceived Their
Health in the Last Year

Family Structure	Frequency of Ill Health in Last Year		
	Very Good	Moderate	Very Bad
Both Parents Present	31	17	0
Mother Only	1	1	0
Father Only	1	0	0

TABLE VI

Frequency at which Students who Qualified themselves as Nearly Never Sick, or as Sick from Time to Time, or as Very Often Sick up to the Age of 8 or 9, Qualified their Health as Very Good or as Moderate in the Past Year.

Frequency of illness up to age of 8 or 9	Frequency of illness in past year	
	Very Good	Moderate
Nearly Never	23	5
From Time to Time	8	12
Very Often	2	1

Of the twenty-six possible correlations between the family environment, the school environment, life events and mental health, only one reached statistical significance (Global Severity Index was positively related to Innovation in the Classroom Environment) as can be seen in tables VII to X.

TABLE VII

Correlations Between Mental Health Variables and the
Variables on the Family Environment Scale

Mental Health	Family Environment Scale									
	COH	EX	CON	IND	AO	ICO	ARO	MRE	ORG	CTL
GSI	0.15	0.06	-0.07	0.10	-0.01	0.04	-0.21	-0.21	-0.04	-0.25
PST	0.00	0.01	0.10	-0.10	-0.15	0.05	-0.17	-0.25	0.04	-0.09
PSDi	-0.03	0.06	0.21	-0.14	0.01	-0.07	-0.11	-0.13	-0.13	-0.10

COH = cohesion, EX = expression, CON = conflict, IND = independence, AO = achievement orientation, ICO = intellectual-cultural orientation, ARO = active-recreational orientation, MRE = moral-religious orientation, ORG = organization, CTL = control, GSI = global severity index, PST = positive symptom total, PSDI = positive symptom distress index

- None of the correlations was statistically significant at the .05 level.

TABLE VIII

Correlations Between Mental Health Variables and the Variables on the Children's Report of Parent Behaviour Inventory

Mental Health	Father	Child	Relationship	Mother	Child	Relationship
	AR	PC	FC	AR	PC	FC
GSI	0.06	0.03	-0.00	0.06	-0.00	-0.07
PST	0.02	0.04	0.06	-0.11	-0.04	-0.09
PSDi	0.02	0.18	0.06	0.06	0.21	-0.02

AR = acceptance versus rejection, PC = psychological control versus psychological autonomy, FC = firm control versus lax control.

- None of the correlations were statistically significant.

TABLE IX

Correlations Between Mental Health Variables and the
Variables on the Classroom Environment Scale

	Mental Health				Classroom Environment Scale				
	I	A	TS	TO	C	OO	RC	TC	INN
GSi	-0.10	-0.08	0.07	-0.19	0.11	0.04	-0.06	-0.05	0.30*
PST	-0.19	-0.08	-0.00	-0.15	0.22	0.00	-0.15	-0.00	0.18
PSDi	-0.09	-0.22	-0.08	-0.17	0.03	0.03	-0.09	-0.09	0.24

I = involvement, A = affiliation, TS = teacher support, TO - task orientation, C = competition, OO = order and organization, RC = rule clarity, TC = teacher control, INN = innovation.

* Statistically Significant at $p = 0.03$

TABLE X

Correlations Between Mental Health Variables and Life Events

Life Events	Mental Health		
	GSi	PST	PSDi
	0.15	0.27	0.12

GSi = Global Severity index, PST = Positive Symptom Total, PSDi - Positive Symptom Distress Index

- None of the correlations is statistically significant.

Few statistically significant correlations were obtained because very few students had mental health problems.

The Family Environment

For the boys, no relationships were found between any of the variables on the Family Environment Scale and the three mental health scores whereas several relationships were found between variables on the Children's Report of Parent Behaviour Inventory and the mental health scores. For the girls, moral-religious emphasis and control on the Family Environment Scale were negatively related to the Global Severity Index whereas no relationships were found between the mental health scores and the variables on the Children's Report of Parent Behaviour Inventory. The responses for both boys and girls on the Children's Report of Parent Behaviour Inventory were very similar for the father and mother (See Table XI).

TABLE XI

Correlations between mental health variables and the variables on the Family Environment Scale.

FOR BOYS	COH	EX	CON	IND	AO	ICO	ARO	MRE	ORG	CTL
GSi	0.14	0.06	-0.04	0.00	-0.09	0.18	-0.16	0.38	0.21	0.16
PST	-0.01	-0.02	-0.00	0.04	-0.02	0.17	-0.02	0.27	0.30	0.23
PSDi	0.40	0.12	0.01	-0.17	-0.18	0.12	-0.34	0.39	-0.18	-0.07
FOR GIRLS										
GSi	0.16	-0.04	0.14	-0.14	0.01	-0.04	-0.19	-0.43*	-0.16	-0.38*
PST	0.02	-0.06	0.18	-0.17	0.21	-0.06	-0.18	-0.55*	-0.09	-0.17
PSDi	-0.17	-0.14	0.32	-0.13	0.11	-0.17	-0.11	-0.136*	-0.13	-0.15

COH = cohesion, EX = expressiveness, CON = conflict, IND = independence, AO = achievement orientation, ICO = intellectual-cultural orientation, ARO = active-recreational orientation, MRE = moral-religious emphasis, ORG = organization, CTL = control, GSi = global severity index, PST = positive symptom total, PSDi = positive symptom distress index.

* These relationships were significant at $p=0.05$ or greater.

TABLE XII

Correlations between mental health variables and the variables on the Children's Report of Parent Behaviour Inventory.

	Father	Father	Father	Mother	Mother	Mother
	AR	PC	FC	AR	PC	FC
FOR BOYS						
GSi	0.54*	-0.04	0.45*	0.45*	-0.12	0.51*
PST	0.39	-0.04	0.39	0.29	-0.10	0.46*
PSDi	0.59*	0.20	0.30	0.56*	0.15	0.26
FOR GIRLS						
GSi	-0.16	0.11	-0.19	-0.02	0.07	-0.21
PST	-0.21	0.19	-0.14	-0.21	0.05	-0.29
PSDi	-0.35	0.14	-0.08	-0.12	0.23	-0.10

AR = acceptance vs rejection, PC = psychological control vs psychological autonomy, FC = firm control vs lax control, GSi = Global Severity index, PST = Positive Symptom Total, PSDi - Positive Symptom Distress Index.

* These relationships were significant at $p = .05$ or greater.

The School Environment

Affiliation and teacher support were negatively related to the Positive Distress Index whereas innovation was negatively related to Global Severity Index for boys. For girls, task orientation was negatively related to Global Severity Index and to Positive Symptom Total whereas innovation was positively related to the three mental health scores (see Table XIII).

TABLE XIII

Correlation Between Mental Health Variables and the
Variables in the School Environment for Boys and Girls

	Mental Health				Classroom Environment Scale				
	I	A	TS	TO	C	OO	RC	TC	INN
GIRLS									
GSi	-0.09	-0.02	0.19	-0.41*	0.02	0.03	0.06	-0.05	0.54*
PST	-0.18	-0.04	0.03	-0.47*	0.15	-0.02	-0.07	-0.02	0.43*
PSDi	-0.16	-0.07	0.13	-0.34	-0.03	-0.03	-0.03	-0.01	0.39*
BOYS									
GSi	-0.13	-0.23	-0.21	0.26	0.28	0.07	-0.27	-0.07	-0.41*
PST	-0.19	-0.06	-0.05	0.28	0.23	-0.01	-0.24	-0.02	-0.37
PSDi	0.04	-0.41*	-0.51*	0.10	0.24	0.17	-0.19	-0.30	-0.01

I = involvement, A = affiliation, TS = teacher support, TO = task orientation, C = competition, OO = order and organization, RC = rule clarity, TC = teacher control, INN = innovation, GSi = Global Severity index, PST = Positive Symptom Total, PSDi = Positive Symptom Distress index

* Statistically significant $p = \text{ or } > .05$

Life Events

No significant relationships were found between life events and any of the three mental health measures for either boys or girls (see Table XIV).

TABLE XIV

Correlations Between Mental Health Variables and Life Events
for Boys and Girls

Life Events	Mental Health Variables		
	GSI	PST	PSDi
Girls	0.15	0.26	-0.04
Boys	0.19	0.29	-0.24

GSI = Global Severity Index, PST = Positive Symptom Total, PSDi = Positive Symptom Distress index

Physical Health

When looking at the frequency distribution by gender, about half the girls perceived their health in the past year to be moderately good whereas a majority of the boys perceived their physical health as being very good. It was not possible to use the chi square to examine the relationship between the students' physical health and their mental health because too few students had mental health problems (see Table XV).

TABLE XV

Frequency at which the Students Qualified their Health
in the Last Year as Very Good and Moderate

	Very Good	Moderate
Males	18	5
Females	15	13

Interactions

The small sample size did not permit examining interactions between the variables on the Family Environment Scale and the school environment and between the parent-child relationship and the school environment nor between any other sets of variables.

With only one variable reaching statistical significance for the total group it was not possible to use further statistical analysis which would have permitted to either accept or reject the hypothesis. The small sample size did not permit the use of further statistical analysis separately for boys and girls. The statistically significant correlations for boys and girls, all occurred between mental health and the family and school environment. This does not mean that life events are not important in influencing mental health, however in this study the family and school environment appear to be more important.

CHAPTER V

DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

Discussion

Few significant correlations were found in this study. The expected relationship between conflict on the Family Environment Scale and mental health problems as reported by several authors (Farber et al., 1985; Quinton, and Rutter, 1985; Raschke and Raschke, 1979; Nihira et al., 1985; Emery, Weintraub, and Neale, 1982) was not found. This may have been due to the small number of students in this investigation who had severe enough mental health problems to be considered a case. Cohesion and expression also were expected to be related to mental health. In the studies by Nihira et al., 1985; Kagel et al., (1978); Fox et al., (1983) and Quinton and Rutter (1985), children with mental health or behavioral problems perceived their families as low in cohesion and expression. In this study, no relationships were found. Fox et al. (1983) had found maladjusted adolescents to score significantly lower on the following seven subscales of the Family Environment Scale: a) cohesion; b) independence; c) active-recreational orientation; d) achievement orientation; e) intellectual-cultural orientation; f) moral-religious; and g) organization, whereas Kagel et al. (1978) reported better adjustment in families who showed a greater emphasis on family members' personal growth and on active extrafamilial involvement. On the personal growth dimension only moral-religious emphasis

was related to mental health for girls whereas no relationships were found on this dimension for boys. In this study, few significant correlations were found between the variables on the Family Environment Scale and mental health; more significant correlations might have been found with a larger sample size including a larger number of students with mental health problems.

The similarity in the students' response on the Children's Report of Parent Behaviour Inventory for their father and mother may be due to the fact that the questionnaire was answered simultaneously for both parents. If the questionnaire had been given in a counter-balanced order more differences might have been found in student responses.

For the boys, the significant correlations found between the mental health variables and the variables on the Children's Report of Parent Behaviour Inventory were all in the opposite direction to that expected. The higher scores on the acceptance versus rejection scale mean more acceptance, on the psychological control versus psychological autonomy scales mean more psychological control, and on the firm control versus lax control scale mean more firm control. A warm, affectionate relationship between mother and child, and, between father and child were associated with better adjustment in children (Kauffman et al., 1979; Gantman, 1978; Rich and Rothchild, 1979; Kagel et al., 1978) whereas maternal or paternal criticism toward the child (Loeber and Dishion, 1984), and quality of parenting (Nihira et

al., 1984) were associated with behaviour problems or mental health problems. The results in this study might be explained by the fact that no one in this group had mental health problems and by the fact that they felt accepted, they could be very honest in saying how they felt. If the group had been larger including a number of students with mental health problems more significant correlations at .05 level and more positive relationships might have been found.

For the girls, no significant correlations were found and again a larger sample size with more individuals having mental health problems might have revealed many significant relationships.

Few significant correlations were found between the school environment and mental health probably because of the small sample size. The relationship between teachers' support and mental health appears to support Rutter's et al., (1979) finding that in the school where "teachers saw children at any time," the students behaved better. In this study, the boys had fewer mental health problems when high on affiliation and innovation; this was not previously reported. From this, it would appear, that boys experience less psychological distress when they are encouraged to be creative and when unusual and varying activities are planned; that the severity of the symptoms is reduced when there is an atmosphere of friendship in the classroom and students support and help one another. For the girls in this group, the relationship found between task orientation and mental

health supports Rutter's et al., (1979) finding that the time spent on subject matter was related to better behaviour whereas the correlation between innovation and mental health was not previously reported. For the girls, more innovation was related to more mental health problems, whereas for the boys more innovation was related to less mental health problems. The boys and girls in this sample might react differently to change or another factor might be responsible for the direction of the association.

Contrary to most studies no relationship was found between life events and mental health. Several authors obtained statistically significant but small relationships between life events and mental health problems in children and adolescents (Duncan, 1977; Bruns and Geist, 1984; Cohen-Sandler et al., 1982; Green et al., 1985; Rangaswamy and Kamakshi, 1983; Tyerman and Humphrey, 1983; Vaux and Ruggiero, 1983; Vincent and Rosenstork, 1979). The results of this study might be due to the small sample size or to the fact that few students had mental health problems.

Summary

The purpose of this study was to determine how much of the variance in mental health problems could be explained by the family environment, the school environment, and life events as perceived by the students. After receiving the permission of superintendents and principals as well as parental and student

consent, six questionnaires were answered by grade eight students, in Francophone schools, in two sessions of 40 minutes each. The final sample consisted of 51 students, 28 girls and 23 boys from a total of 8 schools.

Life events as a measure of stress, is now considered an important variable in relationship to child mental health status. Several variables in the children's family environment, school environment and the children's own physical health have been related to behaviour problems or some aspects of mental health; however, these factors had not been explored conjointly with life events. Children's perception appeared to be more important than the parents' or teachers' perception of their respective environment.

The research question was as follows:

How much of the variance can be explained by the family environment, the school environment, and life events as perceived by the students.

The review of literature indicated that:

- 1 - Life events were significantly related to mental health although the strength of the correlation was small.
- 2 - The most important variables in the family environment related to children's mental health were: family conflict, personal development, and good parent-child relationship.
- 3 - In the school environment the variables related either to better behaviour and more positive mood were: task

orientation, teacher support, affiliation, punishing system, and order and organization.

- 4 - Children's physical health was related to their mental health.

In this study few students had mental health problems. Of the 26 possible correlations only one reached statistical significance (Global Severity Index was positively related to Innovation in the Classroom Environment) for the total group. No relationship was found for the boys between any of the variables on the Family Environment Scale and the three mental health scores; whereas, a negative relationship was found between the three mental health scores and Moral-Religious Emphasis and between Global Severity Index and Control for the girls. Several significant correlations were found for the boys between the three mental health scores and the variables on the Children's Report of Parent Behaviour Inventory but in the opposite direction to that expected, whereas, no significant correlations were found for the girls. In the school environment, Affiliation and Teacher support were negatively related to Positive Distress Index and Innovation was negatively related to Global Severity Index for boys. For girls, Task Orientation was negatively related to Global Severity Index and to Positive Symptom Total whereas Innovation was positively related to the three mental health scores. No relationship was found between life events and any of the three mental health measures for either boys or girls.

Conclusion

The small sample size did not meet the conditions for statistical analysis necessary to answer the hypothesis, namely multivariate multiple regression and R^2 , however, significant correlations were found between a) the family environment, (i - For girls: Moral-Religious Emphasis was related to Global Severity Index, Positive Symptom Total, and Positive Distress Index; Control was related to Global Severity Index. ii - For boys: Acceptance by father was related to Global Severity Index and Positive Symptom Distress Index; Firm control by father was related to Global Severity Index; Acceptance by mother was related to Global Severity Index and to Positive Symptom Distress Index; Firm control by mother was related to Global Severity Index and to Positive Symptom Total.) b) the school environment (i - For girls: Task Orientation was related to Global Severity Index and to Positive Symptom Total; Innovation was related to the three mental health scores. ii - For Boys: Affiliation and Teacher Support were related to Positive Distress Index; Innovation was related to Global Severity Index.) and mental health whereas no relationship was found between life events and mental health.

Limitations

Since this is a correlational study, a cause and effect relationship is excluded between the dependent variable and the

independent variables. The data being based on self administered questionnaires were the subject's perspective without being corroborated by data from other relevant sources, such as parents, teachers, and trained observers. The life event measure is retrospective and therefore subject to recall error.

The large number of variables looked at in this study increases the chance of Type I error occurring so that the results should be considered only as suggesting a relationship although most correlations found are supported in the literature.

The small sample size with very few students who could be considered to have mental health problems is probably responsible for the few significant relationships found and for the direction of some of the significant correlations. The small sample size and the nonrandom sampling procedure do not permit generalization to the entire grade 8 French student population in Manitoba.

The fact that the parent-child questionnaire was answered simultaneously for the father and mother might have increased the similarity in the students' response. If the questionnaire had been given in a counter-balanced order more variability might have been found in students' responses.

Recommendations for Further Research

Since the family environment, the school environment and the child's physical health had appeared to be the most important variables along with life events in explaining mental health, and had not been explored conjointly, it would be important to repeat

the study with a larger random sample to enable testing of the hypothesis. The fact that boys and girls appeared to be influenced by different variables within these environments should be taken into consideration in deciding on the sample size and balancing for gender.

The sequence in which the parent-child questionnaire is administered should be reconsidered due to the similarity of response when administered simultaneously for father and mother.

BIBLIOGRAPHY

- American Psychiatric Association. 1980. Diagnostic and Statistical Manual of Mental Disorders, Third Edition. Washington, D.C.: APA.
- August, G.J. and Stewart, M.A. 1984. Familial subtypes of childhood hyperactivity. Journal of Nervous and Mental Disease, 171(6), 362-368.
- Berg, I., Butler, A., Fairbairn, I., and McGuire, R. 1981. The parents of school phobic adolescents: a preliminary investigation of family life variables. Psychological Medicine, 11, 79-83.
- Blotcky, A.D., Tittler, B.I., and Friedman, S. 1982. The double-bind situation in families of disturbed children. The Journal of Genetic Psychology, 141, 129-142.
- Coddington, R.D. 1972a. The significance of life events as etiologic factors in the diseases of children: A survey of professional workers. Journal of Psychosomatic Research, 16, 7-18.
- Coddington, R.D. 1972b. The Significance of life events as etiologic factors in the diseases of children - II: A study of a normal population. Journal of Psychosomatic Research, 16, 205-213.
- Cohen-Sandler, R., Berman, A.L., King, R.A. 1983. Life stress and symptomatology: Determinants of suicidal behaviour in children. Journal of the American Academy of Child Psychiatry, 21, 3, 178-186.
- Commission on Emotional and Learning Disorders in Children. 1969. One million children. The CELDIC report. Leonard Crainford.
- Dancy, B.L., and Handal, P.J. 1980. Perceived family climate of black adolescents: A function of parental marital status or perceived conflict? Journal of Community Psychology, 8, 208-214.
- Derogatis, L.S. 1977. SCL-90-R; Administration, Scoring and Procedures Manual - II. Clinical Psychometric Research, Towson, MD. 21204.

- Derogatis, L.R., Lipman, R.S., Rickels, K., Uhlenhuth, E.H., Covi, L. 1974. The Hopkins Symptom Checklist: A Self-Report Symptom Inventory. Behavioral Science, 19, 1-15.
- Derogatis, L.R., Lipman, R.S., & Covil. 1973. SCL-90: An outpatient psychiatric rating-scale preliminary report. Psychopharm. Bull., 9, 13-28.
- Dohrenwend, B.S., Dohrenwend, B.P., Dodson, M., Shrout, P.E. 1984. Symptoms, hassles, social supports, and life events: Problem of confounded measures. Journal of Abnormal Psychology, 93, 2, 222-230.
- Dooley, E., Fitzgerald, M. 1984. Life events and psychiatric referral in children: Comparison with a general population. I.J.M.S., 153, 9, 310-315.
- Duncan, D.F. 1977. Life stress as a precursor to adolescent drug dependence. The International Journal of the Addictions, 12, 8, 1047-1056.
- Eato, L.E., and Lerner, R.M. 1981. Relations of physical and social environment perceptions to adolescent self-esteem. The Journal of Genetic Psychology, 139, 143-150.
- Emery, R., Weintraub, S., and Neale, J.M. 1982. Effects of marital discord on the school behavior of children of schizophrenic, affectively disordered and normal parents. Journal of Abnormal Child Psychology, 10(2), 215-228.
- Emery, R.E., and O'Leary, K.D. 1982. Children's perceptions of marital discord and behavior problems of boys and girls. Journal of Abnormal Child Psychology, 10(1), 11-24.
- Epstein, J.L., McPortland, J.M. 1976. The concept and measurement of the quality of school life. American Educational Research Journal. 13, 1, 15-30.
- Famularo, R., Stone, K., and Popper C. 1985. Preadolescent alcohol abuse and dependence. American Journal of Psychiatry, 142(10), 1187-1189.
- Farber, S.S., Felner, R.D., and Primavera, J. 1985. Parental separation/divorce and adolescents: An examination of factors mediating adaptation. American Journal of Community Psychology, 13(2), 171-185.

- Finlayson, D.S., and Lougran, J.L. 1976. Pupils' perceptions in high and low delinquency schools. Educational Research, 18(2), 138-145.
- Fitts, W.H. 1965. Tennessee Self-Concept Scale. Nashville: Counselor Recordings and Tests.
- Fox, R., Rotatori, A.F., Macklin, F., Green, H., and Fox, T. 1983. Socially maladjusted adolescents perceptions of their families. Psychological Reports, 52, 831-834.
- Friedman, R.C., Corn, R., Hurt, S.W., Fibel, B., Schulick, J., and Swirsky, S. 1984. Family history of illness in the seriously suicidal adolescent: A life-cycle approach. American Journal of Orthopsychiatry, 54(3), 390-397.
- Funch, D.P., Marshall, J.R. 1984. Measuring life stress: factors affecting fall-off in the reporting of life events. Journal of Health and Social Behavior, 25, 453-464.
- Gantman, C.A. 1978. Family interactions patterns among families with normal, disturbed and drug-abusing adolescents. Journal of Youth and Adolescence, 7(4), 429-440.
- Gath, D.G., Cooper, B., and Gattoni, F.E.G. 1972. Child guidance and delinquency in a London borough. Psychological Medicine, 2, 185-191.
- Gersten, J.C., Langner, T.S., Eisenberg, J.G., Simcha-Fagan, O. 1977. An evaluation of the etiologic role of stressful life-change events in psychological disorders. Journal of Health and Social Behavior, 18, 228-244.
- Gersten, J.C., Langner, T.S., Eisenberg, J.G., Orzeck, L. 1974. Child behavior and life events: Undesirable change or change per se. In Dohrenwend, B.S., Dohrenwend, B.S., (Eds) Stressful Life Events: Their Nature and Effects. John Wiley & Sons, New York.
- Greene, J.W., Walker, L.S., Hickson, G., & Thompson, J. 1985. Stressful life events and somatic complaints in adolescents. Pediatrics, 75, 1, 19-22.
- Heal, K. 1978. Misbehaviour among school children: The role of the school in strategies for prevention. Policy and Politics, 6, 321-332.

- Hirsh, B.J., Moos, R.H., Reischl, T.M. 1985. Psychosocial adjustment of adolescent children of a depressed, arthritic or normal parent. Journal of Abnormal Psychology, 94, 2, 154-164.
- Holmes, T.H., Rahe, R.H. 1967. The social readjustment rating scale. Journal of Psychosomatic Research, II, 213-218.
- Hudgens, R.W. 1974. Personal catastrophe and depression: A consideration of the subject with respect to medically ill adolescents, and a requiem for retrospective life event studies. In Dohrenwend, B.S., Dohrenwend, B.P., (Eds.) Stressful Life Events: Their Nature and Effects. John Wiley & Sons, New York.
- Jaffe, P., Wolfe, D., Wilson, S., and Zak, L. 1986. Similarities in behavioral and social maladjustment among child victims and witnesses to family violence. American Journal of Orthopsychiatry, 56(1), 142-146.
- Kagel, S.A., White, R.M., Coyne, J.C. 1978. Father-absent and father-present families of disturbed and nondisturbed adolescents. American Journal of Orthopsychiatry, 48(2), 342-352.
- Kanner, A.D., Coyne, J.C., Schaefer, C., Lazarus, R.S. 1981. Comparison of two modes of stress measurement: daily hassles and uplifts versus major life events. Journal of Behavioral Medicine, 4, 1, 1-39.
- Kaplan, H.B., Robbins, C., Martin, S.S. 1983. Antecedents of psychological distress in young adults: Self-rejection, deprivation of social support, and life events. Journal of Health and Social Behavior, 24, 230-244.
- Kauffman, C., Gruncbaum, H., Cohler, B., and Gamer, E. 1979. Superkids: Competent children of psychotic mothers. American Journal of Psychiatry, 136(11), 1398-1402.
- Kosky, R. 1983. Childhood suicidal behaviour. Journal of Child Psychology and Psychiatry, 24(3), 457-468.
- Loeber, R., and Dishion, T.J. 1984. Boys who fight at home and school: Family conditions influencing cross-setting consistency. Journal of Consulting and Clinical Psychology, 52(5), 759-768.
- Manitoba Department of Health. 1986. Annual Report 1985-86. Winnipeg: Department of Health.

- Manitoba Department of Health. 1987. Information given upon request. Child and Adolescent Mental Health Services.
- Manitoba Department of Health. 1987. Information given upon request. Manitoba Health Services Commission.
- Marjoribanks, S.K. 1981. Ecological correlates of children's subjective school outcomes. Contemporary Educational Psychology, 6, 323-333.
- Martinez, M.E., Hayes, J.R., Solway, K.S. 1979. Comparative study of delinquent and non-delinquent Mexican-American youths. Psychological Reports. 44, 215-221.
- McCubbin, H.I., & Patterson, J.M. 1983. Stress: The family inventory of life events and changes. In Filsinger, E.E. (Ed). Marriage and family assessment: A sourcebook for family therapy. Sage Publications, Beverly Hills.
- McKenry, P.C., Tisheler, C.L., and Kelley, C. 1982. Adolescent suicide: A comparison of attempters and nonattempters in an emergency room population. Clinical Pediatrics, 21(5), 266-270.
- Mercer, J. 1973. The pluralistic assessment project: Sociocultural effects in clinical assessment. School Psychology Digest, 2, 4, 10-18.
- Mikhail, A. 1981. Stress: A psychophysiological conception. Journal of Human Stress, June 9-15.
- Moos, R.H., and Moos, B.S. 1981. Family Environment Scale. Consulting Psychologists Press, Inc. Palo Alto, California.
- Moos, R.H., Trickett, E.J. 1974. Classroom Environment Scale. Consulting Psychologists Press, Inc. Palo Alto, California.
- New York State. 1984. Comprehensive plan for children and youth mental health services. Office of Mental Health.
- Nihira, K., Mink, I.T., and Meyers, C.E. 1985. Home environment and development of slow-learning adolescents: Reciprocal relations. Developmental Psychology, 21(5), 784-794.

- Quinton, D., and Rutter, M. 1985. Family pathology and child psychiatric disorder: A four-year prospective study. In Nicol, A.R. (Ed) Longitudinal Studies in Child Psychology and Psychiatry. John Wiley and Sons Ltd.
- Rangaswamy, K., Kamakshi, G. 1983. Life events in hysterical adolescents. Child Psychiatry Quarterly, 16, 1, 26-33.
- Raschke, H.J., and Raschke, V.J. 1979. Family conflict and children's self-concepts: A comparison of intact and single-parent families. Journal of Marriage and the Family, 367-374.
- Reynolds, D., Jones, D., and St. Leger, S. 1976. Schools do make a difference. New Society, July 29th, 223-225.
- Rich, Y., and Rothchild, G. 1979. Personality differences between well and poorly behaved adolescents in school. Psychological Reports, 44, 1143-1148.
- Rockwell, R.C., and Elder, G.H. 1982. Economic deprivation and problem behavior: Childhood and adolescence in the great depression. Human Development, 25(1), 57-64.
- Rutter, M. 1970. Autistic children: Infancy to adulthood. Seminars in Psychiatry, 2, 4, 435-448.
- Rutter, M., Maughan, B., Mortimore, P., Ouston, J., and Smith, A. 1979. Fifteen thousand hours: Secondary schools and their effects on children. London: Open Books Publishing Limited.
- Sarason, I.G., Johnson, J.H., Siegel, J.M. 1978. Assessing the impact of life changes: Development of the life experiences survey. Journal of Consulting and Clinical Psychology, 46, 5, 932-946.
- Saucier, F.J. Health Questionnaire. Unpublished document, University of Montreal.
- Schaefer, E.S. 1961. Multivariate measurement and factorial structure of children's perceptions of maternal and paternal behaviour. American Psychologist, 16, 345-346.
- Schaefer, E.S. 1965. Children's reports of parental behavior: An inventory. Child Development, 36, 413-424.

- Schaughency, E.A. and Lahey, B.B. 1985. Mothers' and fathers' perceptions of child deviance: Roles of child behavior, parental depression and marital satisfaction. Journal of Consulting and Clinical Psychology, 53(5), 718-723.
- Schludermann, S., Schludermann, E. Children's Report of Parent Behaviour Inventory. Department of Psychology, University of Manitoba, Winnipeg, Manitoba, Canada, R3T 2N2.
- Schludermann, S., Schludermann, E. 1970. Replicability of factors in children's report of parent behaviour. Journal of Psychology. 76, 239-249.
- Selye, H. 1976. The stress of life. McGraw-Hill, New York.
- Serot, N.M., and Teevan, R.C. 1961. Perception of the parent-child relationship and its relation to child adjustment. Child Development, 32, 373-378.
- Speilberger, C.D., Gorsuch, R.L. and Lushene, R.E. 1970. Speilberger State-Trait Anxiety Inventory. Palo Alta., CA: Consulting Psychologists Press.
- Statistics Canada. Mental health statistics 1982-83, 1983-84. Catalogue 83-204.
- Stewart, M.A., Deblois, C.S., and Cummings, S. 1980. Psychiatric disorder in the parents of hyperactive boys and those with conduct disorder. Journal of Child Psychology and Psychiatry, 21, 283-292.
- Stiffman, A.R., Jung, K.G., and Feldman, R.A. 1986. A multivariate risk model for childhood behavior problems. American Journal of Orthopsychiatry, 56(2), 204-211.
- Swearingen, E.M. & Cohen, L.H. 1985. Measurement of adolescents' life events: The junior high life experiences survey. American Journal of Community Psychology, 13, 1, 69-85.
- Tache, J., and Selye, H. 1978. On stress and coping mechanisms. In Spielberger, C.D., Sarason, I.G., (Eds). Stress and Anxiety, Vol. 5, John Wiley & Sons, New York.
- Thoits, P.A. 1981. Undesirable life events and psychophysiological distress: A problem of operational confounding. American Sociological Review, 46, 97-109.

- Tolor, A., Murphy, V.M., Wilson, L.T. & Clayton, J. 1983. The high school social readjustment scale: An attempt to quantify stressful events in young people. Research Communications in Psychology, Psychiatry and Behavior, 8, 1, 85-111.
- Tyerman, A. & Humphrey, M. 1983. Life stress, family support and adolescent disturbance. Journal of Adolescence, 6, 1-12.
- Vaux, A., Ruggiero, M. 1983. Stressful life change and delinquent behavior. American Journal of Community Psychology, 11, 2, 169-183.
- Vincent, K.R., Rosenstork, H.A. 1979. The relationship between stressful life events and hospitalized adolescent psychiatric patients. Journal Clinical Psychiatry, 40, 262-264.
- Walberg, H.J. 1968. Structural and affective aspects of classroom climate. Psychology in the Schools. 5, 247-253.
- Waldron, S. 1976. The significance of childhood neurosis for adult mental health: A follow-up study. American Journal Psychiatry, 133, 5, 532-537.
- Weissman, M.M., Leckman, J.F., Merikangas, K.R., Gammon, G.D., and Prusoff, B.A. 1984. Depression and anxiety disorders in parents and children. Archives of General Psychiatry, 41, 845-852.
- Weissman, M.M., Prusoff, B.A., Gammon, G.D., Merikangas, K.R., Leckman, J.F. and Kidd, K.K. 1984. Psychopathology in the children (ages 6-18) of depressed and normal parents. Journal of the American Academy of Child Psychiatry, 23(1), 78-84.
- Welner, A., Welner, Z., Fishman, R. 1979. Psychiatric adolescent inpatients: Eight-to ten-year follow-up. Arch Gen Psychiatry, 36, 698-700.
- Werner, E.E., and Smith, R.S. 1980. An epidemiological perspective on some antecedents and consequences of childhood mental health problems and learning disabilities. Journal of the American Academy of Child Psychiatry, 2, 292-306.
- Werner, E.E. and Smith, R.S. 1982. Vulnerable but invincible: A longitudinal study of resilient children and youth. McGraw-Hill Book Company.

- Woody, J.D., Colley, P.E., Schlegelmilch, J., Maginn, P. and Balsanek, J. 1984. Child adjustment to parental stress following divorce. Social Casework: The Journal of Contemporary Social Work, 405-412.
- Yamamoto, K. & Felsenthal, H.M. 1982. Stressful experiences of children: Professional judgements. Psychological Reports, 50, 1087-1093.
- Yeaworth, R.C., York, J., Hussey, M.A., Ingle, M.E. and Goodwin, T. 1980. The Development of an adolescent life change event scale. Adolescence, 15, 57, 91-97.
- Zuckerman, M., Lubin, B. 1965. Multiple Affect Adjective Checklist. San Diego, CA: Edits Publishers.

APPENDIX A**THE CHILD'S PHYSICAL HEALTH AND SOCIODEMOGRAPHIC DATA**

Please provide the following information.

1. Your birthdate ____ day ____ month ____ year SEX M ____ F ____

2. During your childhood, up to the age of 8 or 9, at what frequency were you sick?

very often ____ from time to time ____ nearly never ____

3. In the last year, how has your health been?

very bad ____ moderate ____ very good ____

4. If you had any of the following diseases place a check beside it.

Asthma ____ Eczema ____ Other Allergies ____

Diabetes ____ Heart Problem ____ Cancer ____

Ear Infection ____ Eye Problem ____ Other specify ____

5. Do you have a physical handicap? Yes ____ No ____

Is it visible? Yes ____ No ____

6. With whom do you live presently?

____ with mother and father ____ with my father only

____ with my mother only ____ with my grandparents

____ with an uncle, an aunt, a brother or sister

____ in a foster home ____ other specify

APPENDIX B

A copy of the letters presented to the superintendents, the principals and the parents are presented on the following pages.

Dear Superintendent,

I am Carmen Lorand, student in Health Education at the University of Manitoba. To fulfill part of the requirements for the master's program I am planning to do a research project in mental health under the supervision of Dr. Dexter Harvey Ph. D. at the Faculty of Education number 474-9013.

I would appreciate your collaboration and your permission to ask the principals to participate in this study.

A description of the study including the purpose, method and a copy of the instruments can be found hereupon.

I think that this study could be useful to you as it will help us understand what elements in the family and school environment can influence the adolescents.

If further information is required you can contact me at 255-0578.

Thank you for your collaboration.

Sincerely yours,

Carmen Lorand.

Cher/e Directeur/trice Général(e),

Je suis Carmen Lorand, étudiante en éducation sanitaire à l'Université du Manitoba. Pour répondre aux exigences de la maîtrise je me propose de faire une étude des influences de l'environnement scolaire et familial sur la santé mentale chez les étudiants francophones de la huitième année, sous la supervision du Dr. Dexter Harvey Ph.D. de la Faculté d'Education que l'on peut rejoindre au numéro 474-9013 (Winnipeg).

Votre collaboration et votre permission pour demander aux principaux de participer à cette étude serait appréciées.

Vous trouverez ci-inclus une description de l'étude, ses buts, les méthodes employées et une copie des questionnaires.

Je suis persuadée que les résultats de cette étude pourraient être un apport pour le milieu scolaire en nous faisant mieux découvrir les influences qui peuvent entraver ou aider le développement de la santé mentale chez l'adolescent.

Pour de plus ample renseignement vous pouvez me rejoindre au numéro 255-0578 (Winnipeg).

Je vous remercie de votre collaboration.

Sincèrement votre,

Carmen Lorand.

Stress has been seen as a factor in the etiology of physical and emotional illness. According to Seyle's (1956) Readaptation Theory a high degree of stress over a relatively long period of time could bring the individual to exhaustion and bring about adverse health changes.

The clustering of life events in large numbers in the recent past was therefore seen as stimuli producing an increasing magnitude of stress with the increase in number of events. Life events have thus been related to ill health but the strength of the relationship has been fairly small. Other factors are therefore important in mediating their effects.

In the family environment, family discord and the parent-child relationship have been related to mental health problems in children while the school environment has been shown to have an impact on the children's behavior.

It appears that the child's perception of his environment might be more important in predicting adjustment than his parent's or teacher's perception of their respective environment.

The child's perception of his family and school environment are therefore seen as more important in explaining mental health problems in children than life events.

Purpose:

The purpose of this study is to examine the relationship between the family environment and mental health, the school environment and mental health and between life events and mental health.

Sample:

The research population would include all Francophone eighth graders who agree to participate and for whom parental consent is received.

Instruments:

Six questionnaires will be used to gather the data.

The family environment will be measured on the following dimensions:

a) family relationship and personal growth as by the Family Environment Scale developed by Moos, R.H. (1981).

b) parent-child relationship as by the Children's Report of Parent-Behavior Inventory developed by Schludermann, E. (1970)

The school environment will be measured on the following dimensions: relationship, personal development, system maintenance, and system change as by the Classroom Environment Scale developed by Moos, R.H. (1974).

Life events will be measured using the Social Readjustment Rating Scale adapted for children by Coddington, R.D. (1972).

The children's mental health will be measured using the symptom check list SCL-90-R developed by Derogatis, L.R. (1973) whereas demographic data and the children's physical health will be measured through a check list developed by the writer.

Procedure:

With the principal's permission, grade 8 students will be given a simple explanation of the study and if they agree to participate a letter of consent for their parents will be handed out. The questionnaires will be answered in two sitting sessions of 40 minutes each; by classroom for the students whose parental consent was returned.

Data Analysis:

The data will be analyzed globally using a multivariate multiple regression and R^2 .

A copy of the complete study will be given to the participating school divisions whereas a summary of the study with the results will be sent to each participating principal.

Dear Principals,

I am Carmen Lorand, student in Health Education at the University of Manitoba. To fulfill part of the requirements for the master's program I am planning to do a research project in mental health under the supervision of Dr. Dexter Harvey Ph.D. at the Faculty of Education number 474-9013.

The aim of this study is to examine the relationship between the family environment and mental health, the school environment and mental health, and between life events and mental health in Francophone eighth graders.

I think that the results of this study would be of value to the school in helping us understand what can influence the adolescent.

I am therefore requesting the participation of your school in this research. The questionnaires for the study can be completed by grade eight students in two sitting sessions of 40 minutes each. It is understood that the questionnaires are filled out anonymously by the students who agree to participate and for whom parental consent is received, and that the name of your school will not be used.

Upon completion of the study, a summary will be forwarded to you and a complete copy of the study may be obtained from the superintendent if desired.

If further information is required you can contact me at 255-0578.

Thank you for your collaboration.

Sincerely yours,

Carmen Lorand.

Chère Madame, Cher Monsieur,

Je suis Carmen Lorand, étudiante en éducation sanitaire à l'Université du Manitoba. Pour répondre aux exigences de la maîtrise je me propose de faire une étude des influences de l'environnement scolaire et familial sur la santé mentale sous la supervision du Dr. Dexter Harvey Ph.D. de la Faculté d'Education au numero 474-9013.

Le but de cette étude est d'examiner la relation entre les événements biographiques, l'environnement familial, scolaire et la santé mentale chez les étudiants francophones de huitième année.

Je suis persuadée que les résultats de cette étude pourraient être un apport pour le milieu scolaire en nous faisant découvrir les influences qui peuvent entraver ou aider le développement de la santé mentale chez l'adolescent.

Je viens donc solliciter la participation de votre école à cette recherche. Cette étude demande la participation des élèves de huitième année francophone et comprend deux sessions de 40 minutes chacune pour répondre aux questionnaires. Il est entendu que les questionnaires seront remplis de façon anonyme et que le nom d'aucune école ne sera mentionné.

L'étude terminée, une copie complète sera envoyée au directeur/directrice générale de la division scolaire et un résumé aux écoles participantes.

Pour de plus ample renseignement vous pouvez me rejoindre au numéro 255-0578 (Winnipeg).

Je vous remercie de votre collaboration.

Sincèrement votre,

Carmen Lorand.

Dear Parents,

I am presently studying in health education at the University of Manitoba. To fulfill part of the requirement for the program I am doing a research study in mental health. The aim of this study is to examine the relationship between life events, the family and school environment and mental health in Francophone eighth graders.

I am therefore requesting your permission for your adolescent to participate in this study. The questionnaires will be completed at school in two sitting sessions of 40 minutes each. The questionnaires to be completed by your child include questions regarding his/her perception of the school and family environment, his/her general health, and life events which happened in the last six months. It is understood that your child does not sign his/her name on any of the questionnaires and that he/she remains free to refuse to participate.

Upon completion of the study, a copy of the summary may be obtained from the school principal and I will be available to present the results if so desired.

For further information you can contact me at 255-0578.

Thank you for your collaboration.

Sincerely yours,

Carmen Lorand.

.....

I _____ permit my

child _____ to participate in this research.

Date _____ Signature _____

Chers Parents,

Je suis étudiante en éducation sanitaire à l'Université du Manitoba. Pour remplir une partie du programme d'étude, je fais une recherche en santé mentale. Le but de cette étude est d'examiner la relation entre l'environnement scolaire, l'environnement familial, les événements de la vie et la santé mentale chez les étudiants francophones de huitième année.

Je viens vous demander la permission pour votre enfant de participer à cette recherche. Les questionnaires seront remplis à l'école en deux sessions de 40 minutes chacune. Les questionnaires devant être remplis par votre enfant comprennent des questions sur sa santé en générale, sa perception de son environnement scolaire, familial et les événements qu'il/elle peut avoir vécus dans les derniers six mois. Il est entendu que votre enfant n'a pas à signer son nom sur aucun des questionnaires et qu'il ou elle demeure libre de refuser de participer. Le nom d'aucune école ne sera mentionné dans l'étude et une copie des résultats sera disponible à l'école; les parents intéressés pourront en prendre connaissance et je serai disponible pour présenter les résultats.

Pour de plus ample renseignement vous pouvez me rejoindre au numéro 255-0578 (Winnipeg).

Je vous remercie de votre collaboration.

Sincèrement votre,

Carmen Lorand.

.....

Je _____ permet à mon enfant

_____ de participer à cette recherche.

Date _____ Signature _____