

Robert J. Fulton, Consultant

97 Chudleigh Ave.  
Toronto, Ontario M4R 1T4  
telephone (416) 481 - 7803  
fax (416) 481 - 4299  
e-mail: r.fulton@home.com

## Social Indicators for Child Protection Program in Ontario

*A geographic analysis of community factors predicting CAS caseloads and costs*

## Table of Contents

<b>1.0</b>	<b>Goals</b>	<b>1</b>
<b>2.0</b>	<b>Geo-Analysis:</b>	<b>1</b>
2.1	the Empirical Evidence for linking community & disorder	2
2.11	Social Disorganization Theory	2
2.12	the Ecological Effect on Mental Health and Families	4
2.13	does Low SES cause mental disorder or is it the other way around?	8
2.14	does low SES influence the prevalence of Mild Mental Retardation?	9
2.15	Aboriginal Communities	10
2.2	Separating Fact from Fiction	11
<b>3.0</b>	<b>The Concept of Risk</b>	<b>13</b>
3.1	vulnerability factors	14
3.2	protective factors	15
3.3	Pre-morbid Risk Factors	16
3.4	Catalytic Risk Factors	17
3.5	Markers	17
	A word of caution	18
<b>4.0</b>	<b>Criteria for Counting the Social Problem</b>	<b>18</b>
<b>5.0</b>	<b>Critical Scientific Problems Estimating CAS Demand</b>	<b>19</b>
<b>6.0</b>	<b>Child Abuse and Neglect:</b>	<b>19</b>
6.1	Pre-morbid clinical risk factors and corresponding social indicators	19
6.2	other risk factors for child abuse	21
6.3	recommendations on social indicators for child abuse and neglect	21
<b>7.0</b>	<b>Escalating Emotional and Behavioural Problems</b>	<b>21</b>
<b>7.0</b>	<b>Cross-Cutting Risk Factor Themes</b>	<b>24</b>
7.1	Stress	24
7.11	Childhood mental health problems	24
7.12	Physical Abuse	24
7.13	Poor Adult Mental Health and Substance Abuse	25
7.14	Decision Rules for determining which risk factor is worse than the next	25
7.2	Social Support	27
7.3	Ability to Cope	28
7.31	developmental pathways: the way children learn how to cope	28
7.32	parent=s ability to cope with stress and conflict	30
7.33	supportive social context	31
<b>8.0</b>	<b>Conclusion</b>	<b>32</b>
	<b>Bibliography</b>	<b>37</b>

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## 1.0 Goals

The goals of this paper are:

- {1.1} a comprehensive review of literature on the use of social indicators as predictors of child welfare volumes and expenditures*
- {1.2} a comprehensive review of literature on social indicators themselves, including which ones predict key social problems related to child protection*

The literature reviews will include:

- {a} a computerized search employing Medline, PsychInfo and Socio-lit databases at the University of Toronto

key words included social disorganization theory, neighbourhoods & crime, risk factors & physical abuse or family violence or sexual abuse or neglect,

- {b} a review of the table of contents extending back several years of all publications of several key journals, including Child Welfare, Child Abuse and Neglect, Social Work Research, Social Services Review and the Journal of Interpersonal Violence
- {c} a search of Internet resources, including scholarly newsgroups and on-line publications

## 2.0 Geo-Analysis:

Geo-analysis is the global field of inquiry under which falls the study of social indicators as predictors of caseloads for social services. Geo-analysis has been used to support identification of criminals in police work, as well as to understand varying rates of crime over a large jurisdiction. The techniques are less prevalent in Child Protection applications.

## 2.1 the Empirical Evidence for linking community & disorder

### 2.11 Social Disorganization Theory

The earliest application of geo-analysis was in a sociological research project, which traced the crime rates neighbourhood-by-neighbourhood over several decades in the city of Chicago. Shaw & McKay demonstrated that certain neighbourhoods in Chicago had significantly higher crime rates over a 40-year period - even though the population, racial mix and numerous other census variables had changed dramatically. This led to the theory that *social disorganization* affecting the enduring social institutions is a key cause and predictor of the prevalence of crime location by location. The research by Clifford Shaw and Henry McKay extended from 1929 to 1942 was reviewed and retested in Sampson, 1989. The theory postulates that three structural factors: low economic status, ethnic heterogeneity and residential mobility, led to the disruption of community social organization, which in turn accounted for variation in crime and delinquency. This theory has been updated continuously, by substituting different census variables as the independent factors, although all updated versions of the theory begin with social indicators of low socio-economic status (Sampson, 1989).

The scientific problem, however, is the difficulty in demonstrating the mediating steps between the community structure and crime. This is necessary to impute a causal relation between community structure and the human behaviour, specifically crime. Obviously, if there is an empirically proven link between community structure and one type of behaviour (crime) then the evidence for a link between community variables and all types of behaviour including child rearing patterns is partially supported.

The second scientific problem with this theory (Sampson, 1989) is that reporting bias contaminates the dependent variable, *crime rates*. In a similar vein, child welfare caseloads including child abuse rates contain an unknown, but significant amount of error due to the lack of standards in the administration of child welfare. Many aspects of the Child Welfare Reform, currently underway in Ontario will greatly reduce this error factor; the remaining problem, however, is that Child Welfare caseloads are a blend of physical and sexual abuse, neglect and parents with special needs (or risk factors) and children with special needs or serious behaviour problems. Each of these groups is predicted and to some extent caused by different risk factors.

Sampson and Groves (1989) analysed the 1982 and 1984 British Crime Survey dataset. This is a large survey of communities across England and Wales. It is based on self report data about crime, victimization, the amount of local friendship networks, unsupervised teenage peer groups (hanging out on street corners and engaging in nuisance behaviour) and participation in community organizations (such as recreation, clubs, church, etc) and finally census data on economic status, ethnic heterogeneity, residential mobility, family disruption and urbanization.

The research found that the census variables were indeed highly correlated with crime whether employing the official crime rates or the self report data, but that the correlation with community variables was mediated to a large degree by the effect of community differences on the amount of unsupervised teenage peer group activities, friendships and organizational participation. In the final analysis, the research provided strong empirical evidence for social disorganization theory and evidence of the predictive power of community variables on human behaviour. More importantly, it demonstrated a causal model, showing how and why such correlations are found. I have attached a copy of Sampson's article, rather than include all of the correlational detail.

According to Sampson (1989), the mediating variable that links crime and social indicators is the degree that teens are left unsupervised and to some extent allowed to be a nuisance. If the theory is true, then we should observe higher base rates for delinquency even among middle or upper-middle class families in which the nature of community life leaves teens with insufficient structure and control. Peel Region is dominated by a high SES mix of families who commute to work and many leave their teens unsupervised after school. Over many decades Peel has displayed a higher than average base rate for juvenile crime as predicted by the theory.

For many decades, social disorganization theory has been vilified by sociologists as having little empirical support. (Burstik, 1993) However, modern research conducted during the 1990's in Britain and USA has reviewed and updated the theory. It is now the subject of three longitudinal studies in Denver, Pittsburgh and Rochester. The theory holds that social processes within the neighbourhoods themselves *cause an increase* in delinquency and crime and that the effect of the social process is greater than the sum total of individual human contributions. Testing the theory scientifically has been hard because *social processes* (e.g. power structures, quality of schools, the friendship patterns and social control of teenagers, and community feelings such as hope, anger, concern for neighbours) are hard to quantify. (Burstik, 1993)

According to Burstik (1993) in chapter 2, social disorganization theory goes beyond the obvious facts that crime rates vary: {a} by location; {b} by socio-economic class; {c} by certain ethnic groups and {d} by the psychological or personal historical differences of individuals living in an area. Social disorganization theory suggests that a person or family from a high-risk group (e.g. poor, on welfare, unemployed, black, Native American, single parent households, mentally ill, etc.) show *different base rates* for crime depending on key neighbourhood characteristics related to social control. Equally important, the theory suggests that individuals from low-risk groups (two parent households, white, middle or upper incomes) will also show varying crime rates depending on which neighbourhood they live in. Thirdly, the theory suggests that the additional risk (or protection) inherent in certain neighbourhoods continues to operate even as people move in and out of the community and even if the composite social economic class structure or ethnic mix changes. In other words, something about the neighbourhood operates independently of the individual human beings involved, either to suppress or express criminal behaviour.

In a multi-factor regression analysis of crime rates where the independent variables are social profiles drawn from the Census, the *direct cause* of crime, which is *left out of the equation* (i.e. poor supervision of teens, poor schools and poor housing), becomes the error factor in the equation - effectively lowering the correlations between the social indicators and crime.

## 2.12 the Ecological Effect on Mental Health and Families

Michael Rutter (1981) took social disorganization theory to the next level with his groundbreaking article on the impact of city life on {a} mental health outcomes for children, adolescents and adults and on {b} the quality of family life.

Rutter's research found that the prevalence of mental disorder and severe family pathology in the inner core of London, England for males and females, as well as children and adults was virtually twice as high compared to the Isle of Wight. Rutter clarified the findings on page 613, "In short, the problems most characteristic of city children were those beginning early, lasting a long time, and accompanied by many other problems in the family."

Rutter also found tremendous variability between cities and, even within London, between discrete neighbourhoods and between housing projects and different streets in the same neighbourhood. Quoting once again from Rutter (1981, page 614):

"With such a patchwork quilt pattern, one might suppose that these ecological variations have little meaning or stability, but that supposition would be wrong. Three points need emphasis in this connection. Firstly, to a very considerable extent *the pattern remains much the same over surprisingly long periods*. For example, one study showed that the high delinquency areas in London remained remarkably similar over a 40-year time span. Secondly, the variations are not random. To the contrary, the *high disorder areas tend to have rather predictable social characteristics*. Thirdly, these social correlations are not just a function of the aggregation of vulnerable families. The effect is to some extent ecological as well as individual. The finding that disorder of some kind is more common, for example, in areas with high proportions of low social status, low-income families with broken marriages could simply mean that these family characteristics predispose to disorder on an individual basis. However, the interesting thing is that *the effect seems to spread more widely so that anyone living in such an area to some extent shares the increased risk*."

Rutter also provided evidence that characteristics in the nature of housing and schools are the crucial community variables that cause the differences in prevalence by location. Moreover, the main effect, statistically, of city life is on parents and families and only indirectly (through family problems) on the child. Direct effects on children, independent of family circumstances, were quite limited and were due to differences in the quality of schools on the teenage onset of mental health problems.

The critical scientific question is whether these correlations between community and child well

being are spurious - and caused by other hidden factors in common with both the dependent and independent variable. Rutter's research ruled out a number of these competing theories.

**{a} is the culprit *urbanization and industrialization*?**

Rutter found that so much variation within and between cities that neither urbanization nor industrialization per se could be the explanation. Rutter suggests that these processes carry with them risks and hazards, but in themselves they are not necessarily harmful. Rutter suggests that there may some peripheral aspect of urbanization or industrialization that does the damage.

**{b} is the culprit *population density*?**

Comparative studies show that population density bears only a very weak and inconsistent relationship to personal or family problems. Rutter pointed to the high crime rates in Los Angeles and Atlanta. Both cities are quite spread out and have a relatively low population density, so clearly that is not the origin of their high rate of problems.

Conversely, there are many parts of the world with astonishingly high densities that seem relatively less troubled places to live in. Singapore provides a striking example.

**{c} is the culprit *overcrowding within the apartment unit*?**

The findings on personal overcrowding are also somewhat contradictory and it is obvious that there are immense cultural variations in what is regarded as an acceptable level of crowding. Nevertheless, at least in Western cultures, it does seem that this is a factor of some importance in predisposing to disorder and difficulties. Rutter suggests that overcrowding within the apartment unit presents more opportunity for interpersonal conflict to arise and for family members to lose a sense of personal efficacy that a reasonable degree of privacy supports.

Rutter reviewed the evidence for corollary supposition: that a reduction in overcrowding might help. However, studies confirm that very limited benefits have come from re-housing projects. These findings suggests that the effects of re-housing are likely to be marginal and may also mean that the way re-housing is carried out is crucial.

**{d} is it the *design of the housing and the layout of the housing estates*?**

In recent years there has been a tendency to place a lot of the blame for city stresses on high-rise apartment buildings or tower block estates. Certainly there are striking examples of such housing that have proved to be disasters. However, the available research findings suggest that it is not the height off the ground which is the most crucial feature. Moreover, although high-rise living is often disliked by the mothers of young

children (because of the difficulties in play supervision), old people have found tower block estates quite congenial.

There is evidence from studies of the effect of architecture on vandalism and juvenile crime that reducing the amount of semi-public space (long halls and stairwells) and setting up the access to apartments so that four or five door wells open up to each other, thereby increasing the opportunity for supervision of strangers, reduces crime. Therefore there is probably a direct effect on crime rates by design features that impact on privacy and neighborliness, the ease of supervision of children, the ready spotting of intruders, and the sense of pride and belonging.

**{e} is the culprit the *breakdown of community ties and of neighborhood patterns of mutual support*?**

There is a nostalgic looking back to a time when neighborhoods had a considerable stability of population and often this stability combined with an interconnectedness to generate an obvious and marked sense of local identity. It is true that this pattern is becoming increasingly less common but this does not mean that we are seeing widespread community decay. These points require emphasis. First, cohesive homogeneous communities with a substantial sharing of values, a high level of social interaction and support, and a feeling of distinctness from other areas have probably always been rather atypical of cities. They may be becoming less frequent but they have never been the usual pattern in cities.

Secondly, even within culturally distinct groups, people's attachments tend towards neighbours rather than to the population as a whole or to a locality as such. Thirdly, at least so far as families with children are concerned, even in inner London today, *social isolation is not at all common*. In Rutter's comparison of inner London with the Isle of Wight he found that the amount of contact with or support from relatives was closely similar in the two areas and the vast majority of mothers had supportive relationships with relatives or friends or both.

**{f} is *stress* the true cause of inter-city variation?**

Because there is a greater tendency for families to move out of the area, it may be that city dwellers tend to lose friends more often. Similarly, neighbours may come and go with greater frequency. Because housing is more compressed in cities there may be more opportunities for personal clashes and conflicts simply because there are more people. Patterns of work in cities may involve more changes in personnel and more competition over promotions (and hence loss of self-esteem when these do not come when they are expected). It is very plausible that such stresses and life changes might occur more commonly to city dwellers but the suggestion remains speculative in the absence of systematic empirical evidence on the point. Certainly, research over the last decade has shown that both acute and chronic stresses and life events play an important role in the

genesis of emotional and depressive disorders in adults. If these were more common in the cities, this might account for some of the problems. The issue definitely warrants further study.

**{g} is the true cause of variation the *feeling that people in the city do not have control over their environment?***

For example, much new housing in cities comes about through a wholesale demolition of an old housing estate and the dislocation of the entire population. Not only do the people have very little choice in this whole procedure but the upheaval may involve an involuntary splitting of friendship groups or extended kin networks. Similarly, the massive influx of immigrant groups of a different culture, religion, or skin colour may be stressful not because there are inherent problems in such cultural or racial intermixtures but rather because it often happens so rapidly, with changes in whole neighbourhoods over which the residents feel no control. Massive new building of business premises, hotels, or highways may also alter the characteristics of an area through what it destroys as well as what it creates. All of these changes may occur as well in small towns and rural areas, but they tend there to be less frequent, less all encompassing, more gradual, and more likely to be perceived as events over which people have some influence. Of course, once more we lack evidence on us how far these factors are in fact relevant to city problems; but they constitute issues worth exploration. Quite apart from possible increases in stresses in cities, there is also the possibility that cities may provide fewer emotional supports or protective factors.

In conclusion, Michael Rutter (1981) provided empirical evidence for the underlying premise of the effort to identify social indicators of Child Welfare concerns. The evidence Rutter presents included:

- (1) psychosocial problems are much more common in the inner cities than in areas of small towns or in rural communities. This is a real difference in the prevalence of disorder and not just an artifact of recognition or of differential migration
- (2) city living is associated with an increased susceptibility to a quite wide range of problems with different manifestations and different causes.
- (3) cities are not all alike in having high rates of problems, nor are individual cities homogeneous in this respect. The inference to be drawn is that high rates of disorder in cities are not inevitable, and that we should be able to take steps to improve matters.

- (4) the variations within cities are as great and as important as those between cities. These variations are not random but rather are systematically related to differences in living conditions, in the design of housing complexes, and in the quality of schools.
- (5) city influences seem to be of at least two very different kinds. On the one hand, the greatest effect seems to be on early onset, chronic disorders in children, which are associated with severe family pathology. In this instance, the city influences appear to act mainly on the parents and on the family, and only indirectly on the children.
- (6) On the other hand, there are also a variety of immediate and direct effects on adolescent behavior, which operate through both schools and community circumstances.
- (7) the former type of city influence on families means that we must be concerned with the variety of ways in which city living affects the quality of family life and of personal social functioning. Leads are available on some of the possible mechanisms involved and on the possible modes of effective intervention, but huge areas of ignorance remain.
- (8) the latter type of more direct city influence on adolescent behavior provides possibilities for effective preventive strategies in terms of surveillance and opportunity, community initiatives, and improvements in schooling.

Rutter concludes (1981, page 624): “The message is a basically optimistic one in that it is clear that the ills sometimes associated with city living are far from inevitable. However, if the element of hope is to be translated into something more tangible in the way of improvements for the children of tomorrow, we must both increase our base knowledge by systematic research into city influences and also act now on what little evidence is available already”.

### **2.13 does Low SES cause mental disorder or is it the other way around?**

The resistance to allocating funding for social problems according to different local prevalence rates is based on the concern that the different prevalence rates have little to do with location and more to do with the dominant explanation of social disorder, namely low socio-economic status. In the USA, this belief system led to programs aimed at helping African Americans in the ghetto by improving their education and ensuring the supply of good jobs.

Directly attacking low socio-economic status has produced positive results for many individuals when there is a large population which is under or un-employed and poorly educated. However, even in America, there remains a substantial population of people with low socio-economic status who never seem to escape from poverty and adversity. Across Canada and within Ontario

- as reflected in the data tables - the number of children growing up in poverty is increasing.

Various Census indicators of low SES have always been correlated with high levels of morbidity and mortality across a wide variety of adverse outcomes. The correlations lead to a fundamental scientific question:

Y does the correlation exist because people with cognitive, emotional and/or behavioural problems are not able to adapt successfully to work or school and therefore end up at the bottom of the socio-economic scale, OR

Y does low socio-economic status itself cause the adverse cognitive, emotional and behavioural problems so prevalent among this population?

Bruce Dowrenrend (1992) who is one of the most widely published authors in risk factor research conducted research in Israel that provided a definitive answer to this question. He and his colleagues found that schizophrenia precedes and causes the low SES among its victims, whereas low SES causes a steep increase in depression in women, antisocial conduct disorder in men and substance abuse in men. Indeed, depression in women jumps from a lifetime prevalence of about 20% for all socio-economic groups, but it doubles to 44% for women in low SES environments. (Kessler, 1994; Vondra, 1990)

The connection between low SES and child abuse and neglect is mediated through this pathway. As demonstrated by longitudinal research (Chaffing, 1996), the probability of serious child abuse and neglect increases from 4 to 7 times where the mother suffers from clinical depression or the father has an antisocial personality disorder or a substance abuse disorder. See section 6.2 for more details.

According to social disorganization theory and Rutter=s research, low SES may also have an indirect effect on severe family pathology. In the latter view, the social effects on everyone (middle class and poor) living in a community dominated by members of low SES has a separate and significant impact on parenting behaviour and family life. This is because communities dominated by low SES members have poorer schools and a poor quality of community life generally.

## **2.14 does low SES influence the prevalence of Mild Mental Retardation?**

The prevalence of mild mental retardation (MMR) is much higher among the population with low SES (Roefeld, 1997). Quoting from Roefeld, page 129

“A striking association was found between MMR and social class, race and/or parental occupation. The American Association on Mental Deficiency (AAMD) even stated that in poor rural areas and urban ghettos, 10-30% of children of school-age function in the retarded range.”

Studies of the homeless population has also found that the prevalence of mild MR among the

children is much higher under conditions that exhibit the lowest SES.

“Compared with children who have permanent homes, homeless children face particular health risks, including obesity, anaemia, injuries and burns and developmental delay ... Perhaps of most concern from a long-term perspective is the evidence of developmental delay among homeless children. Data on the mothers of homeless children consistently report low educational attainment.” (CPHA, 1997)

There is a fair amount of evidence that children with special needs and developmental disabilities have a much higher risk of child abuse & neglect. Clearly, low SES produces a wide range of adverse effects on children as they grow up.

## **2.15 Aboriginal Communities**

The idea that social indicators predicts and influences morbidity and mortality comes into sharp relief under extreme conditions. Certainly, Native Canadians on and off reserve present the worst situation in terms of both social indicators and social problems. Statistics Canada reports that aboriginal Canadians are far more likely than Canadians as a whole to have a disability. Disability refers to self-perceived limitations in sensory, mobility, agility, or other physical and psychological abilities, which had lasted or were expected to last six months or more. The age standardized disability rate among the adult aboriginal population in 1991 was more than double the national rate: 31 percent vs. 13 percent. (StatsCan cat #89-535)

The Canadian Indigenous context is described by many researchers as heterogeneous, oppressed colonialized states with high rates of poverty, and physical and social distress.

“Indigenous young people have a greater lifetime prevalence and earlier age of onset for substance abuse than their mainstream counterparts; most strikingly for smokeless tobacco and solvents.... Fetal alcohol syndrome (FAS) and the milder form, fetal alcohol effects (FAE), are at epidemic proportions.

Compared to Canadians generally, residents of Indigenous communities have a greater risk of tuberculosis, diabetes, suicide, violent death, alcohol-related traumatic injury and illness, infant mortality, high school drop-out, teen pregnancy, state care, impoverishment, incarceration, unemployment, poorer educational attainment, substance abuse, decreased life expectancy and illness due to poor housing and sewage” (Scott, 1992)

The literature, however, is very clear on one point (Scott, 1992, McShane, 1988, LaPrairie, 1992), there is tremendous variation from one group of Aboriginals to another. For example, the Natives in Western Canada, up to and including Thunder Bay have significantly higher rates of incarceration compared to the rest of Ontario and East of Ontario (LaPrairie, 1992). Secondly, the social and economic profile of Natives and their incarceration rates are profoundly different when comparing Natives living in the inner core of major cities with those living on the outer

rim (LaPrairie, 1992). Thirdly, the rates of alcoholism, accidents, suicide, infant mortality all vary profoundly reserve by reserve. Socially organized reserves have very few of these problems. An even more extreme burden of suffering is carried by some reserves. Fourthly, within some high-risk reserves, only some very dysfunctional families carry the incidence of FAS, infant mortality, suicide, etc.

The traditions, customs, and religion of each tribe create significant differences between the tribes in the incidence of psychopathology. For example, in a review of the American Indian suicide in northwestern USA, Shore demonstrated that most of the suicides occurred in only one tribe. The allegation of a high suicide rate among the tribes in northwestern USA was not true for most of the tribes in the region. (Berlin, 1986)

Within Canada, the prevalence of FAS/FAE among Native children varies widely from one reserve to the next and from 1.4 to 46 per 1,000 (Scott, 1992). The highest rate reported in the literature is 190 per 1,000 in Northern B.C. (Ashley, 1992)

Phillip May, director of a pilot project on fetal alcohol syndrome with the Indian Children=s Program of American Indian Affairs, provided early research in this area. May found that some tribes had no FAS children referred and others had frequent referrals. His experience suggested that tribes with loose, band level organization had high incidence of alcohol damage as compared to those with strict, highly structured social organization who had fewer drinking mothers and a lower incidence of fetal alcohol damage. They found that drinking norms vary substantially by community and by subgroups and that Indian tribes (like mainstream cultures) exert a strong influence on drinking norms. To quote:

“They (the tribes) dictate how much, how often, when and under what circumstances drinking can occur. Definitions of appropriate and inappropriate behaviour regarding drinking are vital considerations in the study and prevention of FAS and FAE in all human groups. How male and female roles are defined in a community, especially regarding drinking-specific behaviour, will to a great degree determine the rates of FAS and FAE. Further, how the individual is attached to or integrated to these norms is important.”

In effect, the Aboriginal community is polarized on mortality and morbidity. This, of course, makes the presentation of statistics very difficult, since the *average* profile of a Native community doesn’t exist; some are far worse and some much better.

## **2.2 Separating Fact from Fiction**

Geo-analysis is self-evident. Some communities have a higher base rate for social problems and an equally high rate of a wide variety of social indicators, such as poverty. Yet, the geo-analysis is contaminated with error as well.

Michael Rutter (1981) reviewed the common contaminants

- 2.21 the prevalence rates are full of errors at the local level because of different criteria for identifying a case (thereby contaminating the dependent variable)
- 2.22 where more services are available, more patients are identified thereby increasing administrative prevalence for reasons that are totally removed from the causes
- 2.23 where police are more active, they are more likely to arrest rather than redirect
- 2.24 there is a selective migration into and out of the high risk areas - part of the downhill course of mentally ill people is the move to lower quality neighbourhoods and part of social and economic progress for many others is buying a new home in a new town
- 2.25 city life, itself, leads to high rates of stress and satiates the family=s reservoir of support leading to mental disorder and severe family pathology including child abuse. Indeed, stress and the lack of support is a primary predictor of child abuse for parents in all communities and all cultures. The universal pervasiveness of stress concepts in developmental psychopathology makes it hard to separate out the other factors that contribute to the problem.
- 2.26 differences by location may simply reflect a different mix of ethnic and racial groups; in other words, the different prevalence rates may be related to the ethnic differences, and not the personal psychopathology or other risk factors carried by the affected population. This type of contamination is evident when studying teenage birthrates. Certain ethnic groups (such as Afro-Canadians and Native Canadians have their children at a significantly younger age overall and that fact increases the number of teen births, rather than some “risk” that the teenage girl may carry. (Portrait of Youth in Canada, 1990)
- 2.27 the differences in prevalence could be due to low socio-economic status; people who live in poverty carry the burden of mental illness and family pathology. Low SES - like the stress concept itself - is a pervasive explanation for all types of social problems. While low SES is a critical social indicator it is clearly not an adequate explanation because when you control for SES, you still find significant local variation. As Michael Rutter writes, “The question is what is it about city life that makes low SES so much more stressful there than in rural or small town communities?” (Rutter, 1981, page 612)

In almost every article reviewed, the researcher addressed the special techniques in the area of design or statistical analysis that was used to deal with the possible contamination of the dependent variable or to identify the unique contribution of different independent variables. The most common approach for dealing with possible contamination of the dependent variable was to employ a self-report measure of behaviour, rather than rely on administrative data. The other approach, strongly recommended (Tzeng, 1991) is to fit the data to a theoretical model or a causal pathway. The problems listed above will undermine the accuracy of any conclusions based on multi-factor regression analysis unless corrective steps are taken. The most powerful

corrective measure is for the researcher to “account” for the findings. It is doesn’t matter very much what is correlated with what; what matters is why?

There are many other scientific issues with which the researcher must contend. For example, in a multi-factor regression analysis involving social indicators and a dependent variable, we have to make sure that the social indicators themselves are not highly correlated with each other.

### 3.0 The Concept of Risk

The term *risk* is used in a variety of ways in the literature. Sroufe and Rutter (1984) laid out the rules for any system or body of research to predict the future with children, and by inference to quantify the risk facing any child. They observe that it is apparently easy to predict backwards - to analyse a disturbed adult and figure out how he ended up in so much trouble; however, going in the other direction is much more difficult. The presence of specific risk factors, such as a history of abuse, is highly correlated with dangerousness in very disturbed adults, but only a tiny minority of abused children end up at that extreme outcome. The risk factor, itself, is not predictive, but rather it is the *risk mechanism* or process through which the individual child transacts with his genetic endowment and social environment that produces the outcomes observed across the life span.

In a similar vein, early replicas of behaviour observed in childhood (e.g. aggression) do not predict the behavioural indicators of adult pathology (e.g. violent offenders). Rather, the strongest predictors in childhood appear to be adaptational failures, defined in age-appropriate terms. Moreover, specific risk factors vary according to whether you are predicting broadly based misery (a large universe of problems) or severe difficulties requiring urgent intervention (less than 5% of the larger universe of misery). (Costello & Angold., 1995; Tolan, Guerra & Kendall, 1995).

Rutter and Sandberg (1985) point out that children who require intensive treatment for truly debilitating disorders are very different than children who present symptoms and behaviour problems in broadly based epidemiological surveys. Rutter and Sandberg (1985) state that children who are at risk for developing enduring serious mental health problems are recognizable through the application of four criteria:

- {a} Certain behavioural symptoms are much more predictive of bad outcomes than others. The two strongest predictors are poor peer relationships and hyperactivity/inattention
- {b} Disorders that are more pervasive over situations are more persistent over time. In other words moderate problems in school, at home and in the community is more serious (risky) than even more serious problems in one place, such as school.
- {c} Disorders associated with a wide range of emotional or behavioural difficulties

are worse than a *single symptom* or narrow range of problems.

- {d} Problems out of keeping with normal developmental trends usually have a worse outcome than those problems that are severe exaggerations of age-appropriate phenomena.

Rutter (1995) states that traditional models (such as developmental theories by Piaget and Freud) which tried to explain disorder and predict its course are no longer adequate in the light of empirical longitudinal research.

Rutter (1995) and Costello & Angold (1995) reviewed a wide range of issues and research results from longitudinal studies. Their overall point is that there are many pathways to many different disorders ranging from autism, to genetic disorders, behavioural disorders, schizophrenia and familial and social problems. Predictions about a child's future success or trouble is much more accurate if the researcher incorporates a broad range of influences. For example, Rutter takes issue with the simple explanation of antisocial conduct disorder offered by theories of social learning by Patterson and others. Although, he agrees with Patterson that parental family management practices have a powerful impact for good or bad on antisocial conduct disorder, many other family processes are also powerful. These other processes include the child's attachment to his parents, triangulation effects, scapegoating, stress and resiliency. Moreover, the social context outside the family (school, peers, neighbourhoods) also play a powerful role shaping the future path of conduct disorders.

The pathways to disease and social problems can be observed from key indicators many years before the full expression of the problem; and different indicators mark the progress of pathological development as you get closer to the end point. (Costello & Angold., 1995; Rutter, 1995)

Different articles employ the term *risk* and many other synonyms for the same concept in different ways. For the purpose of this paper, I have proposed a standard set of terms for dealing with different aspects of risk. The following framework of terms was initially proposed by Dr. Naomi Rae-Grant for the MCSS policy paper on Prevention (1979).

The unifying concept that brings together all variants of the phrase, *risk factor*, is that these factors statistically predict adverse outcomes across the life span.

### **3.1 vulnerability factors**

Vulnerability factors *predispose* people to various adverse outcomes. Three criteria distinguish *vulnerability* from other variants of risk:

- {a} the vulnerability is seldom tied to a specific bad outcome; the presence of a vulnerability factor (a history of abuse, unemployment, low socio-economic class) would enable one to predict quite accurately that something bad will result, but the nature of the bad outcome

is usually not clear.

- {b} an individual may live with a vulnerability factor for quite a long time before the predicted adverse outcomes does occur. Vulnerability factors are thought of as primary or early causes of the bad outcome by initiating a chain of events; the chain, however, needs to be reinforced along the way to produce the bad outcome and the chain can be broken by adding in protectors - even if the original factor persists or cannot be altered. (Clapp, 1987)
- {c} the percentage of people that do end up with the social problem (domestic violence, violent offender, mental illness, suicide, substance abuse, child abuse and neglect, etc.) is quite small - between 5% and 30% of the group deemed at risk because of these vulnerability factors. (Thomas, 1994)

The following research findings are specific applications of the concept of *vulnerability*.

- (a) families from a low socio economic class are more likely than a rich family to have a delinquent child
- (b) children whose parent dies when they very young are likely to develop depression in adulthood

Sometimes, different vulnerability factors coexist in the same child or family and often a combination of vulnerability factors is necessary to enhance the likelihood of adverse consequences. In the first example, being from a low socio economic class is related to delinquency only when family dysfunction is also present. In the second example, only those children who experience years of inconsistent parenting following the death of one parent are at greater risk of depression. (Clapp, 1987) In both examples, the second vulnerability factor potentiates the first. In some cases the presence of a second or third vulnerability factor increases the likelihood of adverse outcomes from seven to twenty times (Rae Grant, 1979). In the literature, the terms *loading*, *adversity* and *environmental risk* are often used as synonyms for the vulnerability factor.

### **3.2 protective factors**

Protective factors are qualities of the community, family, and school or individual that insulate the person from the impact of the risk factor or pathological process and reduce the likelihood or severity of the adverse outcome. In childhood, the most powerful protective agents are the family and school. Later on, among older adolescents and adults, other agents become more important including: {a} social support from neighbours, friends and social agencies and {b} building personal competence by obtaining a job, either paid or voluntary.

The earliest and most powerful protector of all is a secure attachment throughout a significant

part of childhood. Numerous research studies have found that a secure attachment has a significant impact on the life span outcomes of children living in the context of many social & demographic risk factors. Moreover, a secure attachment improves the prognosis for change in children with symptoms of emotional disturbance or behaviour problems. (Mallincroft, 1992; Werner, 1989 & 1992, Fonagy, 1993, Rutter, 1982; Rutter, 1995; Costello & Angold, 1995)

### 3.3 Pre-morbid Risk Factors

Very few social problems such as domestic violence, sexual abuse, serious neglect, substance addictions and homelessness have a discrete or catastrophic *beginning* point; in most cases, the pathological condition starts with small problems and gets worse. Pre-morbid risk factors are an early stage in the pathological process leading up to the point when the social problem crosses a threshold of seriousness so that family, neighbours and social agencies could recognize that the person has a problem. (August, 1995; Lochman, 1995; Loeber, 1990; Loeber,1987; Loeber, 1984).

Pre-morbid risk factors for conduct disorder include evidence of cross-setting disruptive behaviour; emotional lability, hyperactivity and poor peer relations (Sroufe & Rutter, 1984). Emotional abuse by male spouses, particularly degrading name-calling, is an integral component of domestic violence; however, it precedes and enables physical assault and for this reason it is considered a risk factor. (Statistics Canada, 1993 Violence Against Women Survey) Also, most pre-morbid risk factors continue to operate after the more serious signs of the social problem have begun. In other words, the more destructive or disturbed behaviour does not replace the early warning signs, it coexists along side it. As a result, pre-morbid risk factors can be used in two ways: to predict new cases of the problem and secondly to identify current cases in which the worst aspects are hidden from view.

Unlike vulnerability risk factors, the percentage of individuals with pre-morbid risk factors who get worse and become clearly identified, is much higher, ranging from 50% to 70% (August 1995; O'Donnell, 1995). Moreover, the pre-morbid risk factors predict *specific* adverse outcomes. Finally, the time between identifying the pre-morbid risk factor and the observing the full social problem is much shorter, within two years. Some pre-morbid risk factors can be observed and quantified at the community level (such as substance abuse, injuries, violent crime, school drop-out) all of which predict that the scope of adverse outcomes is becoming wider and that the level of harm to children is intensifying.

Most pre-morbid risk factors, however, are visible only after a thorough clinical assessment. Many of the hard-to-quantify risk factors are the strongest predictors. Some examples include an attitude of hopelessness which predicts suicide, emotional abuse which predicts domestic violence, strongly ambivalent feelings about a new born baby which predicts fatal child neglect and maternal depression which predicts aggression in children and physical abuse.

### 3.4 Catalytic Risk Factors

Catalytic risk factors are causal agents that keep the chain of events moving along towards the final *worst stage* in the social problem. The catalyst interacts with the person's vulnerability and pre-morbid risk factors to accelerate and worsen the pathological process.

The number one catalyst of social problems is stress. Stress, like many catalytic risk factors, is *blind to the final outcome*. In some people, stress brings on a heart attack; in others, family violence, mental illness or substance abuse. (Guerra, 1995; Wheaton, 1983) The direction that stress takes the person depends on the person's vulnerability to specific types of problems and on the presence of any hidden pathological processes that have already taken hold. Many individuals are loaded with vulnerability and pre-morbid risk factors but the negative potential is never expressed. Time heals countless people who escape serious problems because they never encountered a catalyst.

Other powerful catalytic risk factors include a newborn child in a household with other children under five years. This catalyst predicts child abuse, but only if the parents were already vulnerable because they themselves were abused as children or were strongly ambivalent about the baby.

Couples in common law relationships are ten times more likely to display domestic violence than married couples (Intimate Partner Violence, 2000). This type of relationship may operate as a catalyst by accentuating the fears of abandonment by the male. *Fears of abandonment* is thought to be a pre-morbid risk factor for domestic violence (Dutton, 1996)

### 3.5 Markers

Markers are qualities in the community or individuals that are highly correlated with social problems or pre-morbid risk factors, but which do not play any role in expressing or amplifying the social problems. Markers are useful to identify areas or populations at risk. They are often easier to see or quantify than the pre-morbid risk factors. The correlation comes about because the pre-morbid risk factor and the marker share a common cause or source.

The best marker for social problems is the rate of teenage childbirth. Rates of teenage childbirth - location by location - are highly correlated (75% plus) with rates for suicide, juvenile delinquency, adult crime, substance abuse and accidental death. It is obvious that the teen

mother does not cause these other events to occur. Rather teen girls often become pregnant because there is a high degree of risk taking behaviour by youth in her community or school. The risk taking behaviour leads to all kinds of problems, a lot of which is hidden from public view. Childbirth, however, is almost impossible to hide and we have many legal and administrative systems in place to count teen mothers.

### **A word of caution**

The same concept (for example, school drop out) has been used in the literature, often within the same article, as a vulnerability factor, a risk factor and an adverse outcome. The reason is that each event in the life of a child or an adult becomes woven into the fabric of his/her unfolding personal story affecting other aspects of his life in all directions. This is referred to as the *chain of events across the life span*. Any bad event or condition, therefore, can be coded as a vulnerability factor, risk factor, or adverse outcome only by referring to the life span context.

## **4.0 Criteria for Counting the Social Problem**

The *criterion* is the method used to estimate the incidence and prevalence of the social problems. *Incidence* is the number of new cases appearing within any given time frame. *Prevalence* is the total number of cases meeting the criteria for the social problem within a given time frame, regardless of when the problem began.

The different types of criteria used to estimate the size of the population with the social problem include:

- 4.1 *epidemiological surveys* of a large sample of the population employing a standardized test instrument such as the SCL-90, the Achenbach CBC, the Conflict Tactics Scales or the WISC. The number of people with the specific problem (mental illness, disability, domestic violence) is determined by setting a threshold on the epidemiological instrument and it often involves multiple steps, such as a test result and a clinical interview.
- 4.2 *mortality tables* covering the number of people who died from suicide, accidents and alcohol poisoning.
- 4.3 *administrative prevalence* or the number of people on the caseloads of the service delivery system, including hospital admissions, protection openings, admissions to shelters, etc.

## 5.0 Critical Scientific Problems Estimating CAS Demand

Two methodological problems undermine the scientific validity of community assessment techniques for estimating future demand for Child Welfare service:

- (1) the dependent variable (CAS demand) is a blend of social problems (including family violence, family stress, child behavioural problems, special needs children, and child abuse and neglect).
- (2) Secondly each of these dependent variables enters into the equation as independent variables of each other and indeed are cross-represented on the Ontario Risk Scale. Confounding the independent and dependent variables in this way present the greatest challenge to a geographic analysis of community factors predicting CAS caseloads.

In order to overcome this problem, Child Welfare researchers may have to obtain separate counts of the CAS caseload according to the reason for providing service. Assuming that this is possible, I have separated out and reviewed the matrix of risk (vulnerability, protectors, pre-morbid risk, catalysts and markers) by different dependent variables.

## 6.0 Child Abuse and Neglect:

The most conservative and certain estimate of child maltreatment is that 1% to 3% of all children each year are either physically, sexually, emotionally abused or neglected with a demonstrable degree of harm - and more than half of these are neglect. (Herzberger, 1996)

In terms of the one-year prevalence rate, child maltreatment is a rare event. However, the social indicators of abuse (stress, conflict, unemployment and poverty) all exist at very high percentages (unemployment among young people, single parents, etc = 20%; poverty affects 15-50% of families some areas; single parent families across Ontario = 19%) This means that the sociocultural explanations alone cannot predict abuse at the individual case level. It is toxic combinations of factors that predict abuse; the best predictors unite both social and psychological dimensions of the child and his family. (Thomas, 1994)

### 6.1 Pre-morbid clinical risk factors and corresponding social indicators

The pre-morbid risk factors for physical abuse vary significantly by the degree of harm. (O=Leary, 1993) However, they do accumulate in potency. In other words, families that are at immediate risk for severe abuse, will often display the risk factors for lesser abuse, with a few exceptions. In the material below, I cross-referenced the *clinical* pre-morbid risk indicators, with a corresponding social indicator.

Based on a longitudinal study, Chaffing (1996) found that the odds of abuse occurring in a one-year period were increased by 6 to 1 if either of the parents were diagnosed with personality disorder, substance abuse or depression.

The *clinical factors* predicting fatal and severe abuse are:

- 6.11 father has a personality disorder (Chaffing, 1996) and has attacked non relatives in the community in a violent manner plus the father is inexperienced in child care, with little patience for the needs of babies and infants (Kasim, 1995)

The corresponding *social indicators* are as follows:

The probability that a county has a higher share of fathers described in 6.11 is much greater if there is a high rate of violent crime in the county plus a high degree of family disruption (indicated by the rate of growth in common law unions with children and lone parents)

- 6.12 paternal substance abuse, particularly amphetamines (Chaffing, 1996; Herzberger, 1996; Gelles, 1993; Kasim, 1995; O=Leary, 1993; Squires, 1995)

The rates of substance abuse by county as counted by the Addiction Research Foundation should reflect the variation in fathers with substance abuse disorder.

- 6.13 parental depression (Chaffing, 1996; Kasim, 1995; O=Leary, 1993))

Clinical depression is not counted county by county, but the suicide rate is known and variations in suicide reflect the variation in maternal depression at the county level.

Secondly, the prevalence of these disorders varies significantly and to a known degree by people with low SES and by poverty, specifically:

- ® low SES causes substance abuse to rise from 15% to 30% of males and psychopathy to rise from 5% to 10% of males and it usually takes a generation to produce the escalation in the disorder (Kessler, 1994; Dohrenwend, 1992)
- © about 25% of the women in low SES environments become clinically depressed in any given year, which is double the base rate (Kessler, 1994; Vondra 1991)
- ™ about 20% to 25% of these disturbed people will seriously injure or kill a child through abuse and neglect over the period of childhood (Chaffin, 1996)

The above three factors continue to apply to those in the next level, severe and moderate abuse:

- 6.14 high number of objective stressors plus a high degree of perceived stress plus low social support (Burrell, 1994; Chan, 1994; O=Leary, 1993)
- 6.15 maternal ambivalence about pregnancy and hostility to child. This often expresses itself as verbal abuse or complete failure to obtain prenatal care.(Ney, 1995; Vietze, 1996)
- 6.16 isolation from family and friends (O=Leary, 1993)

Teenage parents (Trad, 1995) are much more likely to display these outcomes. Although these clinical risk factors cannot be counted directly, they will be present in about 30% of teenage parents and this is the group that is at high risk of child abuse and neglect - not necessarily during their teen years, but on average 8 years later according to Crittenden (referenced in Trad, 1995). A longitudinal study of 5,000 mothers in England found that 35.3% of adolescent mothers abused and 30% neglected their children, compared with maltreatment levels of 10.7% for older mothers (Quoted in Trad, 1995) Please note: these percentages are the total after many years of observation, not the one-year prevalence rates quoted above.

## 6.2 other risk factors for child abuse

In a longitudinal study of 1,400 mothers who were registered at a prenatal clinic, the researchers were able to identify the factors which predicted who eventually *severely* abused their children (Vietze, 1996). The factors counted by Statistics Canada are in bold. Abusers were likely:

- to have lost a prior child to foster care or **preventable death**
- to have recently attacked a child or an adult violently (**violent crime rates**)
- to wish that they could terminate the pregnancy
- to report that the pregnancy was unplanned or planned for selfish reasons

In a parallel finding, Wells (1994) found that children reported to the Washington state child abuse registry were three times more likely to die from any cause than their counterparts in the general population.

## 6.3 recommendations on social indicators for child abuse and neglect

These findings above suggest four social indicators for predicting the relative prevalence of child abuse and neglect between counties . Each of these indicators increases the odds of abuse occurring from 3 to 10 times the base rate (3%)

- accidental death of children
- accumulation of children born to teen mothers
- rates of violent crime (which is a marker for antisocial personality disorder)
- heavy drinkers

# 7.0 Escalating Emotional and Behavioural Problems

The Brief Screening Interview (BSI) is in use in Children and Family Intervention agencies as an early clinical risk assessment protocol. This screening device is heavily predicated on the Achenbach Child Behaviour Checklist. The Achenbach is the instrument of choice for epidemiological surveys of Child Mental Health and was a central instrument in the Child Health Study (Offord, 1989). The Achenbach was designed in the first place to identify and distinguish between sub groups of children in the mental health system by symptom subgroups for epidemiological and longitudinal studies. (Achenbach, 1991). For the purpose it was intended, the Achenbach CBL is considered the gold standard. The Achenbach CBL was not designed a screening device for severity of risk and yet this added duty is the function of the Achenbach in the current BSI system.

Several longitudinal studies have evaluated the predictive validity of the Achenbach for severe mental illness. When using the Achenbach CBL as a screening device, caution must be observed since a majority of children whose T-score is above 65 and below 72 will not present disturbed behaviour a year later with or without intervention. High scores on these tests merely mean that the child has behavioural traits which are highly correlated with the behaviour of a population of children with proven psychiatric illness. In the case of boys, the percentage of *false positives* for conduct disorder on the Achenbach was 69%. This was reduced to 59% when both the teacher and parent version were completed. (Lochman, 1995).

When the cut off rate was set to very high levels (over  $T = 72$ ), the percentage of false positives dropped to 30%. Similar results were also reported in a longitudinal study conducted in New Zealand on 709 children tested at age 8 years and then at 15 years. (Fergusson & Horwood, 1995).

In a six-year longitudinal study in Holland, (Verhulst et al, 1994), 946 children between the ages of 4 and 11 years, were tested every two years using the Achenbach parent and teacher forms. These children, who were drawn from the total population of a province in Holland, were followed for six years. The researchers watched for any of six bad outcomes: {a} learning problems in school {b} had been expelled from school for behaviour problems {c} had received mental health services, {d} was judged by the parents as needing professional help for which he was not receiving, {e} had shown suicidal behavior and {f} had been in trouble with police.

The Verhuist study is very important, because even with a relatively benign list of bad outcomes, high scores on the Achenbach predicted bad outcomes for only 36% of boys and 56% of girls. When the *attention scale* of the Achenbach was used (which is more closely related to the Conners' Global Index), a much higher percent of boys (75%) were correctly identified. Indeed this finding suggests that we should ask fewer questions (or use an even briefer instrument) to assess long term risk of serious mental health problems (such as the ten-item Conners' Global Index which measures hyper-activity/impulsiveness and emotional lability.)

O'Donnell, Hawkins and Abbott (1995) conducted a 3.5 year longitudinal study of boys in order to study ways to improve the prediction of which boys with high scores on behaviour problems

before age 11 would get worse by the time they are teens (“worse” was defined as exhibiting drug abuse and aggression). In this study (and others referenced in the article) *more than half of boys who were aggressive before age 11 stop being aggressive by the time they are 14 years and they do not develop other behaviour problems.*

The findings of the O'Donnell study are very important for screening children for level of risk **after** they get “high scores” on behavioural measures. The high scores on behavioural measures are a Gate #1 measure in that they capture a large pool of candidates for long term risk, but additional indicators must be found to classify these children into a high-risk group, specifically, O'Donnell found that:

- {1} low socioeconomic status and single parent households **did not predict** who gets more delinquent with age

Paradoxically, white children from middle or middle upper income families and two parent families were more than twice as likely to become involved in drugs than children from visible minorities, lone parent families or poor families. Therefore, do not identify low SES as a criterion for assessing risk of delinquency. As noted in section 2 above, low SES works on parents and predicts adult criminality – but only a generation in low SES has passed. Paternal criminality predicts juvenile delinquency not the same cause operating on the father.

- {2} Once you restrict the study population to children already scoring above 70 on the Achenbach, even higher scores by teachers on the aggressive behaviour **did not predict** who get worse or cease their problem behaviour two years later. Therefore, do not place great emphasis on higher and higher scores on the Achenbach as indicative of anything long term.

- {3} The factors which **do predict** who gets **better** according to O'Donnell's longitudinal study were as follows (the absence of these positives predicts risk):

- ① *school bonding* (i.e. the children who like school),
- ② *skills for prosocial involvement* (including empathy, cooperation, engaging others, etc),
- ③ *educational achievement*,
- ④ *norms against substance abuse and*
- ⑤ *avoidance of peers and adults involved in antisocial behaviour.*

## 7.0 Cross-Cutting Risk Factor Themes

There are some classical risk factors identified both at the community level and in clinical work, which are cut across all types of bad outcomes from heart attacks to maternal depression, criminality and child abuse. These cross-cutting risk factor themes are heavily loaded into the Ontario Risk Screening Instrument for Child Abuse. The data on cross-cutting risk factors is as follows:

### 7.1 Stress

Stress is key indicator of risk for the following outcomes:

#### 7.11 Childhood mental health problems

Michael Rutter noted that there are two very distinct groups of children with disorder that are visible in standard epidemiological data:

- (a) childhood problems which are *situation specific* and
- (b) childhood problems that occur in several different situations, persist over time and are associated with a wide variety of emotional and behavioural difficulties.

*Situation specific problems*, even if they are quite severe and disabling at one point in time, respond quickly to changes in their interpersonal relationships. Many childhood disorders are situation specific. The worst prognosis and the greatest need for intervention is indicated by group (b), the children with broadly based difficulties. These children are most often associated with severe environmental stressors. (Rutter, 1985)

Researchers have found that “life events stress” and “neighbourhood violence stress” along with normative beliefs supporting violence *predicted violence* much better than poverty in a two-year longitudinal study involving 1,935 multi-ethnic elementary school age children from lower income inner city neighbourhoods. (Guerra, 1995)

#### 7.12 Physical Abuse

The sheer number of objective stressors that people self-identify has been shown to be a strong predictor of physical abuse by parents (Chan, 1994), Kasim, 1995; Kruttschnitt, 1994). Stress has long been identified as a factor in the generation of physical illness (ulcers) and mental illness, especially depression, substance abuse and antisocial conduct disorders. (Dohrenwend, 1992)

Using various instruments that measure the number and type of stress which parents were experiencing, various findings emerge which is of great interest to Child Protection. Research on families with handicapped children indicates that these families experience much higher levels of stress than other families in the community. (Perry, 1992) Research into different groups of abusing and non-abusing parents found that: (a) stress is the most important correlate of child abuse potential and other secondary factors which themselves contribute to child abuse including social support and family resources. (Burrell, 1994).

### 7.13 Poor Adult Mental Health and Substance Abuse

In a study of the separate effects of different types of stress, Blair Wheaton compared life events, chronic stress, nonevents, daily hassles and childhood traumas. The study concluded that each separate category of stress made an *independent contribution to mental health problems*. He found that

- {1} no single stress concept was sufficient to capture the full predictive power of stress; each category of stress makes a separate and independent contribution to the bad outcome
- {2} life events stress (family moving, parents splitting up, etc) does not have a smaller contribution to bad outcomes, simply by adding in the other concepts; the other concepts of stress *add to* the predictive power;
- {3} the explained variance attained by adding the other stress concepts was three to five times greater than using life events stress alone and at times it approaches 50%, meaning that the full continuum of stress explains half of the factors leading to mental illness;
- {4} nonevents and daily hassles played a generally weak role in predicting mental health outcomes, but their effects were not simply absorbed by the other stressors - they made a separate contribution; and
- {5} estimation of the true role of stressors clearly demands a model of the effects of cumulative stress exposure over time. Sources of stressors which persist over a longer period of time are more toxic, partly because of the chain of events flowing from a serious stressor. In studies of adult mental health, childhood trauma had the second greatest total impact on adult mental health after current chronic stressors. (Wheaton, 1996)

In the light of Blair Wheaton's research the universe of potential stressors on human beings is almost infinite. How then can a child protection social worker identify how much stress a mother is coping with; how can a clinician assess the "stress" component in mental health problems presented by either a child or an adult; how can a community researcher identify *communities under greater stress* compared to their neighbours?

### 7.14 Decision Rules for determining which risk factor is worse than the next

Valid and useful risk assessment for either a clinician or a community researcher is a matter of data reduction – filtering out unimportant data and focussing on the crucial variables predicting onset and severity. This is the exact opposite of amassing a vast quantity of scary information about a person or a community.

Kazdin and Kagan (1994) reviewed the literature on risk factor research. They concluded (page 45) that:

- {a} no single risk factor may be essential (in producing a disorder), but rather a combination of factors is pathognomic, for example, marital discord, criminal behavior of father, harsh child-rearing practices, early signs of aggressive behavior, and lack of parent supervision predict *when occurring together* the onset of conduct disorder.
- {b} the presence of only one of these (as itemized above) risk factors does not increase the risk for later conduct disorder, if the others are not present.
- {c} when two of these risk factors co-occur, the probability of conduct disorder increases fourfold.
- {d} when three or four factors are present, the risk increases several times more.

Many risk factors identified in the literature have a limited shelf. If the active period for that risk factor has expired, the data about this issue must be dropped from the equation. Some risk factors are active only during the early childhood years (eg difficult temperament, birth weight under 2500 grams, low Apgar score, duration of breastfeeding, maternal smoking during pregnancy, and childhood lead intake). These risk factors are of great importance in primary prevention, but have little discriminating power in assessing the clinical significance of a referral for clinical services. (Dishion, 1995; Fergusson, 1995; Kazdin, 1995; O'Donnell, 1995; Rutter, 1985; Andrews, 1992).

Other risk factors are notoriously unstable. They seem to predict onset of mental health problems in one case (or one community) but not the next. Examples of unstable risk markers include age of onset, (Tolan, 1995), single parent, family income level and urban residence (Dishion, 1995; Guerra, 1995; Vaden-Kiernan, 1995) and finally, family dysfunction and reading problems (Rutter, 1980).

In contrast to this list, physical and sexual abuse and learning problems starting at elementary school - which are persistent and reliable risk markers of conduct disorders in children. (Tremblay, 1995).

Sameroff (1995) reviewing 14 longitudinal studies as well as his own research found that the *continuity* of risk factors, such as:

- ✓ abusive and unemotional parent-child interactions
- ✓ family conflict and distorted levels of communication
- ✓ lack of social support
- ✓ stressful life events
- ✓ poverty
- ✓ disorganized neighbourhoods
- ✓ inadequate school systems

in the context of a child is much stronger than the *continuity* of any behavioral domain within the child. (Page 688) Whereas the correlations for adaptive behavior scores at 4 and 18 years of age was .40, the correlation for environmental risk across the same 14 - year period was .80.

Given the transactional nature of the risk mechanism between the child and his context, the overwhelming continuity of risk factors is what drives the correlations between early adaptive failure and adult psychopathology. This means that high scores on the Achenbach CBL are not as predictive of continuity of mental health problems or eventual severity – rather it is the continuity of stress and adversity which predicts the children who will grow up as adults with severe mental health problems.

This has enormous implications for ensuring good outcomes with our child mental health interventions. Successful interventions (in terms of reducing life span bad outcomes) will be those that *break the chain of adversity* driving the aggressive and antisocial behaviour in the first place.

All of this suggests that we need less “treatment” for aggression and delinquency per se and more energy directed at the social context supporting aggression and delinquency. This finding has been identified by researchers at the National Institutes of Mental Health who have identified community based social interventions with good quality empirical evidence of their power to change children who have serious mental health problems. (Community Treatment ... 2002)

## 7.2 Social Support

The presence of social supports is an obvious antidote to high levels of stress and adversity. This leads to the question, is the entire problem of stress simply a reflection of insufficient resources at the community level.

One of the most important studies of the effect of social support was conducted by Brent Mallinocroft (1992) at the University of Oregon. Counsellors often assume that the clients’ social support deficits are due to insufficient resources in their environment. This study examined the hypothesis that poor parental bonds in childhood lead to adult social competency deficits that are

in part responsible for low social support. Results indicated that poor parental bonds were related to low levels of self-efficacy especially social self-efficacy, which in turn - as demonstrated through multiple regression statistics - leads to poor support. Indeed this pathway from poor parental bonds to poor social support accounts for minimally 30% of the variance in perceived social support.

This finding suggests that sufficient social support cannot be assured through community development alone. Unfortunately, many parents on CAS caseloads have a very poor history of attachment to their own parents. Their own internal psychological makeup (especially self-efficacy) prevents them from accessing the social support that already exists in their community.

Furthermore, as evident in Cameron's book on child maltreatment, low levels of social support (whether it exists because of internal or external social deficits) predict many of the "bad life span outcomes" associated with families referred to CAS agencies (Cameron, 1997).

### **7.3 Ability to Cope**

We know that stress and adversity is a potent risk factor for many problems. We know that social support is an antidote to stress if we can marshal community resources to bear on the problem or we can build up the self-efficacy of parents to access these social supports.

The final question that must be addressed concerns the concept of ability to cope. No two individuals will react to the same amount of stress and adversity in the same way even if they live in the same community or even the same family (Offord, study of siblings).

#### **7.31 developmental pathways: the way children learn how to cope**

Children are the wild card in science. They continually wreck out theories to understand human behaviour and its surprising potential to cope with terrible times and even worse lives. Children refuse to live by the rules we invent to predict their future outcomes. All of us know children who have overcome the risk factors listed in this paper and accomplished things that science taught was not possible. During the primary developmental period from birth to 20 years, children display a remarkable capacity to heal. This capacity for change has been studied by a group of researchers known as *developmentalists*.

According to this relatively new science, the nature of developmental changes seen in childhood are at best relatively plastic, and not absolutely plastic (Lerner, 1984). In turn, relative plasticity means that change is a probabilistic phenomenon. (Ford, 1992, page 39). This is a sophisticated way of saying "your guess is as good as mine" when it comes to predicting what will happen to our children.

Relative plasticity and probabilistic change means that developmental change is multidirectional in nature (Lerner, 1984; Ford, 1987). Indeed, because multiple end points of development are possible, there is no single, normative change trajectory - no one universal developmental format for change that necessarily must apply to every component structure and function of each person over time as he or she is enmeshed in the complex flow of intraperson and person-context transactions that comprise human life. On the other hand, the propositions that multiple and changeable developmental pathways are possible for each person does not mean that “anything goes”. The developmental possibilities for each person are both constrained and facilitated by: (a) their personal characteristics (e.g., genetic endowment); (b) their contexts (e.g., their family circumstances); and (c) their current states (e.g., their health and skills).

Every person’s developmental pathway inherently has the potential for multi-directionality and, therefore, individual differences are the rule in life. For each person, there are several pathways through life that may serve each person's healthy or positive functioning, and these pathways may differ between persons or for the same person as they progress through life.

Physics makes it clear that forces that occurred a year ago cannot influence the motion of objects today. Only current forces can influence current motion. Analogously, how could events that occurred a year ago influence a person’s behaviour today? The answer is they cannot! In human behaviour, just as in physics and chemistry, what existed last year cannot directly influence what happens now, just as what may exist next year cannot directly influence what happens now. Past and future events cannot directly influence the present; only present events can directly influence present events. Yet it is apparent that human behaviour is a function of past events and potential future ones. How is that possible? The only way the past and the future can have any influence on present development and functioning is through surrogates that represent them in current circumstances.

Schneiria (1957) labelled the effects of past experiences on current circumstances “trace effects”. The past is gone, but the traces it left can influence present development and functioning. For example, it is not the parental treatment received when a child that directly causes an adult’s current dysfunctional behaviour; rather, patterns of cognition, emotion, and action developed because of that treatment (i.e., the past’s traces), and that are manifest in current behaviour cause dysfunction. Similarly, the future has not yet arrived, but possible futures can be imagined and this influences the present. For example, it is not the potential future treatment by a probable spouse that influences the development of a person’s present relationship with his or her fiancé; instead, the person's current thoughts about such future possibilities (i.e., present surrogates for the future), and the interaction of such thoughts with observations about his or her fiancé’s current behaviour, affects the relationship.

The utility of studying a person's past experience is that it provides one basis for inferring the *trace effects* that may operate as influential surrogates of the past to influence the present. Similarly, studying a person's hopes, expectations, and goals for the future provides information about currently influential surrogates for possible futures. Thus *traces* of the past, present events, and surrogates representing possible futures can exist simultaneously in the here and now,

making it possible for humans to deal with the flow of life and the world and to rise above the moment. (Ford, 1992, page 46)

This theory has two critical applications in clinical work and community needs assessment:\

- (1) In clinical work, we do not have to change the past to undo the damage done to people when they were children. All we need to do is to identify the trace effects (inner working models) of that past still operating today, which are patterns of thinking, skills in dealing with emotions, and embedded strategies for coping with adversity. Once identified numerous evidence based interventions exist to access and redesign these inner working models – including cognitive-behavioural methods, narrative therapy, therapeutic foster care, mentoring, coaching and modelling better working models.
- (2) In community needs assessment, we need to see beyond the stressors and identify evidence of new coping strategies appearing in the social context; once identified, we need to build on these emerging strengths and use them to open the door to a better future that one could possibly imagine from looking at the history of adversity alone.

One example of the latter approach is to look at how women in female-led lone parent households have radically redefined their approach to work and family. They have entered the workforce in large numbers and doubled or tripled their family income. This is a solution to the bad outcomes associated with this sub group – but health care and social agencies also have to change their organizational behaviour with women to complement and support their ability to cope. We need to provide more affordable and better childcare and we need to have more flexible hours and make other changes to ensure equitable access to these women.

### **7.32 parent=s ability to cope with stress and conflict**

Statistics Canada has identified a number of family problems that are increasing as evidenced by the growth of female-led lone parents, marriage breakdown and the increase in common-law unions. The question is, do these statistics mean that outcomes are children are worse today than in the past? The results of research into this question is surprising:

Family dysfunction specifically marital conflict, divorce, problems in cohesiveness and parental irritability of the child, are much less strongly associated with new disorders arising during adolescence, but affect children under the age of 10 years. (Rutter, 1980) In fact, if you selected children from the total population where the parents are in conflict or divorcing or score poorly on psychometric scales of cohesiveness and responsiveness to children, the vast majority of these children would have no disorder or social problems. Two longitudinal studies by Hetherington & Camara and Wallerstein & Kelly (reviewed in Clapp, 1988) of children in divorcing families found that two thirds of children adjust successfully within two years of the divorce. Moreover, it is the persistence of problems in the area of marital conflict which causes disorder and child

abuse, not episodic dysfunction. Some difficulties in marital conflict, cohesiveness, adaptability, control and responsiveness to children exist in every family on a continuum and there are only two conditions of family dysfunction which consistently produce disorder in children:

- [a] extremely poor cohesiveness, adaptability, parental control or responsiveness
- [b] very rigid who families who never move along this continuum (Clapp, 1988; Factor, 1990)

Nevertheless, family difficulties in marital conflict, communication, cohesiveness, adaptability etc. are very important clinically and are primary targets of intervention, especially for young offenders (Andrews, 1992) and in the treatment of child abuse (Factor, 1990). The presence of these qualities in a positive sense is very supportive to children and a worthwhile strength to celebrate and reinforce in treatment.

### **7.33 supportive social context**

Qualities in the neighbourhood and school also have a powerful independent effect on children=s psychopathology and child maltreatment. (Guerra, 1995; Rutter, 1981; Rutter, 1980) These qualities include:

- # schools with high turnover of teachers and students, uninviting atmosphere, sense of failure and uncaring attitudes
- # apartment complexes with large semi-public areas
- # socially disintegrating neighbourhoods

The importance of the indicators under *a supportive social context* are evident from the child's point of view (see the research by Tremblay); however, by placing these indicators within the social context, where they exist, the workers are able to target their interventions more exactly.

A Montreal study, which followed children from grade one to age 14 years, found that early school failure was linked to later psychological distress and deviant attitudes in adolescence, although not delinquency per se. These negative results from early school failure may be a function of the breakdown in the emotional bond between the child and the school and in setting up peer rejection. (Tremblay, 1995) Early school failure, however, is not indicated by reading problems or lower IQ; rather it refers to the child=s adjustment to kindergarten and the primary grades.

## 8.0 Conclusion

The purpose of this paper was to search the professional literature on ways to identify strategies and principles for conducting community needs assessment that would explain and predict variations in CAS caseloads and expenditures. It was important to link this literature to direct social work practice in the field and to the risk factors identified in the Province's Risk Screening tools.

The scientific basis for linking community variables from the Census and other databases to social problems, such as crime, child abuse, substance abuse, psychiatric disorder and family breakdown is the theory of *social disorganization*. The theory holds that social processes within the neighbourhoods themselves *cause an increase* in delinquency and crime and that the effect of the social process is greater than the sum total of individual human contributions. Testing the theory scientifically has been hard because *social processes* (e.g. power structures, quality of schools, the friendship patterns and social control of teenagers, and community feelings such as hope, anger, concern for neighbours) are hard to quantify. (Burstik, 1993)

According to Burstik (1993) in chapter 2, social disorganization theory goes beyond the obvious facts that crime rates vary: {a} by location; {b} by socio-economic class; {c} by certain ethnic groups and {d} by the psychological or personal historical differences of individuals living in an area. Social disorganization theory suggests that a person or family from a high-risk group (e.g. poor, on welfare, unemployed, black, Native American, single parent households, mentally ill, etc.) show *different base rates* for crime depending on key neighbourhood characteristics related to social control. Equally important, the theory suggests that individuals from low-risk groups (two parent households, white, middle or upper incomes) will also show varying crime rates depending on which neighbourhood they live in. Thirdly, the theory suggests that the additional risk (or protection) inherent in certain neighbourhoods continues to operate even as people move in and out of the community and even if the composite social economic class structure or ethnic mix changes. In other words, something about the neighbourhood operates independently of the individual human beings involved, either to suppress or express criminal behaviour.

The following is a matrix of community variables that have been demonstrated through longitudinal research to predict and in some cases cause an increase in the prevalence of specific social problems.

Table of Risk Factors and Census indicators

Line #	Risk Factor theme	Clinical process	Community based risk factor	Social problem	Census variable or proxy for risk factor
1.0	Quality of housing	Over-crowding in large apt complexes	No privacy – intensification of conflicts	Psychiatric disorder	Number of large apt complexes
1.1		Poor supervision of teens or intruders	Large semi-public areas (stairwells)	crime	Number of small apt complexes under 5 stories – likely to afford better supervision
1.2		Social isolation vs. social support	Breakdown of relationships	Family breakdown, psychiatric disorder	Migration patterns – high % suggest broken friendship ties
1.3		No control over their life	Macro social forces – big government/ corporations force resettlements	psychiatric disorder	Massive influx or migrants – large change in mix of cultures and language groups
2.0	Quality of Schools	Hopelessness for future prospects – low self esteem and lower social competence	Failed opportunity of key social institution (schools) to structure time and build character	Adolescent psychiatric disorder and crime	Low percentage of young people attending school
2.1		Stigmatizing and ejecting young children with serious developmental or adaptational problems presented in primary grades	Insensitive, powerful and punitive social system (in the schools) escalates developing pathology rather than turning early around	Child mental health and conduct disorder Increasing severity of developmental disorders, such autism, Tourettes syndrome	No data available
3.0	Low SES	More stress, feelings of hopelessness, anger, poor health	Social inequality builds resentment in men, fear and despair in women – also poor access to health care and social supports	Crime, substance abuse in men, depression in women Physical abuse of children Higher levels of developmental disabilities	Unemployment, low educational achievement, % of blue collar jobs, % of poverty, family income levels
3.1		Cascading and	Social disintegration of	Suicide, substance	Localities with every social

Line #	Risk Factor theme	Clinical process	Community based risk factor	Social problem	Census variable or proxy for risk factor
		overwhelming stress immobilizing all personal resources	whole communities – especially on Native reserves	abuse, psychiatric disorder, complete family breakdown FAS/FAE Severe Child abuse & neglect	indicator in bad column – high levels of morbidity, crime, substance abuse, infant mortality, suicide
3.2		Maternal depression	Health care and social systems are passive and do not reach out to people who withdraw	Early & severe Physical abuse and neglect  Early onset of aggression in children	Increasing percentage of female led sole parents and increasing stress on this subgroup  Low participation rates for this subgroup
3.3		Paternal psychopathy	A pattern of lies, intimidation and violence by large sub group of men in society leads to increased misery and stress	Domestic assault Physical abuse and neglect Crime Adolescent criminality	High rate of violent crime in community,  high rate of substance abuse,  high levels of family breakdown, common-law unions and lone parents
3.4		Parental substance abuse	Complete breakdown of crucial family functions necessary for safe care of children	FAS/FAE Domestic violence Child neglect	ARF surveys and Federal Health data on substance abuse
4.0	Early onset of developmental and behavioural problems	Hyperactivity, impulsiveness and emotional lability  Plus early adaptational failures in school and with friends	Social isolation, stress and poor access to health care and developmental assessments Poor quality schools that escalate early problems rather than mobilize	Conduct disorder	Availability of health care and social services

Line #	Risk Factor theme	Clinical process	Community based risk factor	Social problem	Census variable or proxy for risk factor
			resources		
5.0	Teenage risk taking behaviour		Increasing competition and hopelessness between teenagers, poor supervision of teens,	Unsafe sex, teenage pregnancy, adolescent substance abuse, juvenile crime	Sharp increase or higher % of teenagers in pop, high levels of stress on this pop, high unemployment, low participation low attendance in school High levels of teen pregnancy ARF data on substance abuse among high school students
6.0	Correlated of severe or fatal child abuse	A history of losing children to foster care & accidental death A history of attacking children and strangers  A wish to terminate pregnancy during gestation (or keeping pregnancy secret & poor prenatal care)  Unwanted children	Parents have many breaks in continuity of care of children – lacking attachment to them  Poor self efficacy in population of teenage girls  Social attitudes of entitlement combined with social disadvantage leads to angry unsocialized young males	Severe or fatal child abuse and neglect	Mortality tables esp accidental death of children  Rates of violent crime  Rates of heavy drinkers  Accumulation of children to teen mothers over many years  A history of high rates of CAS care provided to a community
7.0	Stress	Too many stressors acting simultaneously	Persistence and volume of stressors maintain emergency response behaviour patterns that are dysfunctional in building health and strength	Psychiatric disorder Child abuse	Social and economic stressors
7.1		Too little social support  Poor self efficacy leading to	Inadequate network of formal social support Social isolation leading to	Child abuse and neglect	None

Line #	Risk Factor theme	Clinical process	Community based risk factor	Social problem	Census variable or proxy for risk factor
		inability to access supports	breakdown in informal support		
7.2		Reduced ability to cope because of family dynamics Poor development of social competencies in children	Social institutions that support competency building are shrinking in favour of those that support reaction to failure	Child abuse and neglect	Evidence of increased family breakdown – esp common law union and lone parents

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