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# Childhood Determinants of Adult Mental Illness

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## 1. Introduction.

William Wordsworth wrote "The child is father of the man", and in our meeting this year we focus on the inter-relationship between childhood and adulthood. I am concerned with childhood factors associated with mental illness in adult life. Psychiatry in children has a somewhat different profile from adults, but shares many features, and we have become increasingly aware of the reality of depression and anxiety in children and adolescents. It is often not recognised, but needs treatment every bit as much as adults, but here the focus is on later illness. First, however, what do we mean by mental illness?

## 2. Dissidence, deviance, difference, delinquency, disease.

In all societies there are people who do not conform to conventions of belief or behaviour to such a degree that they stand out in their community. Some are consciously driven by conviction that their society is morally wrong in certain respects and must be challenged and changed. Such social and political **dissidents** will be tolerated in some societies but not in others. Many have suffered, and many still suffer for their activities and beliefs; some, such as William Tyndale, Mahatma Ghandi, Nelson Mandela, Martin Luther King, have gone on to change the world in significant ways.

Similarly, people who challenge conventions of religion, sexual values or other behaviours, may be at risk of being ostracised, outcast, punished as criminals, or even, in some societies, killed. We might interpret such **social deviance** as rational even where we disagree with it, but in some rigid cultures or political systems they may be perceived as irrational and equated with 'madness'. 'Madness', of course, also arises from physical and psychological causes not under the control of the person. But whatever the type and cause, it has often been met by ignorance and fear, or given a spiritual interpretation, sometimes 'spirit filled' or 'ecstatic', but sometimes an 'evil spirit' or 'witchcraft'.

Before the dominance of rationalism, this was common throughout Europe as elsewhere, but increasingly liberal cultures have tended towards much more tolerance, and even some celebration of '**difference'**. It is quite recent that scientific medicine has encouraged the view of 'madness', or 'strange behaviour' as 'illness' or '**disease'**, which legitimates difference and deviance and permits care and treatment under health services. It is a hugely important

development, but it is not complete in the general population, within whom fear, stigma, prejudice and intolerance can still readily be found.

However, even perfect tolerance and sympathy would not solve all problems of what mental illness is. The overtly bizarre behaviour and demonstrably irrational beliefs characteristic of serious psychosis are easily interpreted as illness, as are those conditions consequent upon physical pathology such as dementia or epilepsy, but what are the boundaries discriminating depressive illness from normal reactions to life's vicissitudes? Is self-inflicted drunkenness mental illness, or only alcoholic psychosis? Of the 40% of people attending general medical care who are said to have psychological problems, which should we treat as illness?; which are contributary causes of physical illness?; which are normal variations of the human condition? And if, as widely reported, an excercise programme is often as effective in relieving anxiety and depression as our modern drugs, should we still perceive these persons as 'mentally ill'?

## 3. The challenge for research.

All this inevitably prejudices taxonomy and diagnosis, which remain challenging for epidemiologists who ideally require clearly recognisable and discriminated entities to measure and count. The long-term cohort studies largely used in the research reported in this paper are able to examine features of childhood and relate them to later manifestations of illness in the best way possible, but cannot escape the ambiguities of definition and measurement unavoidable in all generations of data. In research over the last 50 years or so, what has emerged is that mental ilness is not well defined; categories overlap and merge with normal reactions to life events, features of personality, and normal variations in behaviour. Not surprisingly, (and like 'physical illness' not otherwise specified) mental illness is very diverse.

Birth cohort studies, following up thousands of children from birth througout life with repeated collection of current data, provide the best evidence linking childhood and adulthood. They are mostly found in the UK, Finland and New Zealand, but there are others. Their purpose is to improve understanding of the cause and course of illness, but the situation is complex, encompassing genetic constitution, trauma, childhood experience, personality, significant life events, the quality of relationships, economic and social situation, and aging. Concerning mental illness, some factors are generally acknowledged to increase the risk of mental illness, specific or in general, such as familial genes, relative poverty, stressful life-events, poor educational achievement, and long-term unemployment. Others emerge from the research.

But not all are *'determinants'* of adult mental illness, that is part of a *causal process*. Some are *precursors*, or *early manifestations* of mental illness – the prime example is childhood mental health problems. Others may be merely *indicators* of underlying problems which might or might not be true determinants - for example, neurological deficits in childhood. Some may be true *determinants*, but require other factors for expression - for example, certain gene combinations. Some may increase the risk of later mental illness

to only a small degree when examined separately, but, in combination with others, they may be part of an important causal process - for example the individual components of *'multiple childhood disadvantage'*.
From 250 selected papers, mostly from birth cohort studies, relevant data were extracted and collated in relation to the ten variables discussed below, and the evidence of association with adult psychiatric disorder assessed. In addition we undertook some new analyses of data from UK cohorts. Not all ten variables are independent as some obviously interact. One obvious known risk factor was largely missing - mental disorder in parents. This is available in other published reviews.

## 4. Ten variables in childhood.

### A. Psychological disturbance and psychiatric illness in childhood.

This is the best-established precursor of adult psychiatric disorder, though not a cause. There is strong evidence of *continuity of morbidity*; that is, mental illness in adults is often first manifested in childhood or adolescence, though not necessarily in the same form. Compared with adolescents in general, those with persistent depression have up to ten times greater risk of persistent depression as adults. Children with mental health problems need to be identified and treated appropriately for their own sake, requiring wider recognition, more and better trained professionals and more resources. And we would expect it also to reduce mental illness in these individuals as adults.

Of course, depression and anxiety in childhood also have causes, and there is clear evidence linking a range of childhood adversities, including parental conflict and physical and sexual abuse, with later childhood and adolescent anxiety and depression. These have an impact on capacity for relationships and school performance which may predispose to adult psychiatric disorder.

What can be done? Girl India 2007

### B. Genetic contributions to psychiatric disorder.

It has long been known that there are *genetic factors* in the causation of psychotic illness, and heritable risks in both the schizophrenias and bipolar disorder, but the risks are not necessarily specific within DSM category boundaries, which raises interesting questions about the nature of these illnesses. The life-time risk of psychosis if one parent has schizophrenia is probably around 10%, compared with 1% for the general population.

More general genetic factors may also confer either relative *vulnerability* or *resilience* to stressors throughout life, and predispose to or protect from adult mental illness. In some cases an increased susceptibility may reside in clinically detectable disorders of the central nervous system (CNS).

Schizophrenic?

C. Neurological deviance in childhood; brain damage and disorder.

There is very strong evidence for demonstrable *brain damage or disorder*, incurred before, during or soon after birth, being associated with a greatly increased risk of psychosis, possibly as much as five times. This is likely to be a prime cause. Damage may arise also in CNS infections (*meningitis and encephalitis*) somewhat later in childhood. There are many indicators of neurological deviance which are susceptible to identification in children, including delayed developmental milestones, speech problems, cognitive defects, and poor motor function. There is no evidence of a similar association with *anxiety and depression.*

Can anything be done? In particular individuals is their psychotic illness unavoidable, or will early intervention in childhood reduce the risk? I don't think we know, but loving family care, emotional and practical support of families, the best education appropriate to the child's capabilities, and continuing warm and supportive relationships are the things most likely to help if anything, and are also important in themsleves.

Egypt family + CBR; New Dis 34

D. Features of Personality; Neuroticism.

Personality measures have always been somewhat controversial, but where standard instruments have identified *'Neuroticism'*, it has usually emerged as a precursor of adult psychiatric symptoms and disorder, but in a very non-specific way. Perhaps it is an indicator of increased *vulnerability* in people with poor coping skills, or is an early manifestation of various disorders. It may also increase the likelihood of stressful life events precipitating mental illness in adult life. It is interesting that when study instruments identify 'extraversion', there appears to be a reduced risk of later psychiatric symptoms and disorder.

Can anything be done with features of personality? Can people with tendencies to neuroticism be helped to learn coping strategies, or to avoid certain stresses, or to seek appropriate help early when feeling stressed?

E. Behaviour in childhood and adolescence.

Unusual behaviour in children does not stand alone. It may be associated with, and possibly caused by, genetic factors or earlier traumatic neurological or psycho-social experiences. Abnormal behaviour may be provoked by negative events in the life of a child, such as parental conflict, but may also itself provoke negative life events such as school failure, which then have an impact on later mental health. But certain types of behaviour, especially *inattention and hyperactivity (ADHT)*; *withdrawn and overtly deviant behaviour,* and *aggressive, disruptive,and anti-social behaviour*, consistently show associations with later depression and anxiety, as well as with later delinquent and criminal behaviour.

A rather special type of behaviour (though often associated with others) relates to alcohol and other drug abuse. It is, not surprisingly, related to later abuse and addiction and a variety of mental health problems. There has been a gradual accumulation of evidence linking cannabis use in childhood and adolescence with later psychosis, perhaps doubling the risk. The earlier the use of cannabis, the greater the risk appears to be.

F. Poor school performance and educational achievement.

Poor school performance and educational achievement by the end of formal schooling may seem vague measures, but the key factor appears to be lower achievements than expected or considered possible. Children who fail to live up to expectations, have an increased risk (probably two or three times) of anxiety and depression as adults, confirmed by cohort studies. Deviant and disruptive behaviour, and neurological deficits of any type, are likely to have an impact on school performance and achievements, and these may partially explain the higher risk. School performance is unlikely to be a primary causal factor, but it may be a contributory cause of later mental health problems, as well as delinquent and criminal behaviour, which has clear associations with non literacy. There is a group of high risk adolescents which is relatively easy to identify for preventive intervention.

G. Childhood adversity; life events; multiple disadvantage.

The experiences studied can be subsumed under *'adverse situations'* and *'negative life events'.* These obviously include many different experiences, provoking diverse individual responses. Not surprisingly, few have been specifically measured and studied, so generalisation is inescapable. However, it is possible to say that a wide range of adverse experiences and negative life events in childhood have been shown to increase the risk of psychiatric disorder in adulthood, generally by about two to three times.

More importantly than these modest individual effects, it is commonly found that children who experienced *'multiple adversities'* have a significantly increased risk for anxiety and depression, suicidal behaviour, and hospital admission for serious psychiatric disorder, as adults. One reliable cohort study with appropriate measures has calculated that the 5% most disadvantaged children had 100 times greater risk than the 50% least disadvantaged children

It does not require proof of later adult mental illness to justify interventions to reduce childhood adversity, poverty, and family dysfunction, which should be high priorities in themselves for any civilised society, but there is evidence that reducing gross and multiple disadvantage will reduce later psychological distress and psychiatric disorder, and the need for treatment of adults.

What can be done? Young people in Mostar & Zenica; New Dis 4$^{th}$ & 6$^{th}$ & 7$^{th}$.

H. Child abuse, neglect and mal-treatment.

It is now generally accepted that *'child abuse'* is relatively common, probably in all societies, and it has in the past been ignored, hidden, and dismissed as false accusations. It is not easy to define, measure or study to produce reliable figures. Good research suggests that *overall abuse* before age 18 may be at least 15% of children, and *contact sexual abuse* at least 10% in girls and 3% in boys, but the reality could be much greater. Not surprisingly, those subject to serious abuse have a relatively high risk of later serious psychiatric disorder of many types, including personality disorders, self-destructive and violent behaviour, physical illness, teenage pregnancy, and problems raising their own children. The most dramatic effects are probably related to father - daughter incest.

It is inevitably difficult to give precise estimates of increased risks for different types of abuse and different outcomes, and cohort studies have given figures for major psychiatric disorder from 1.5 to 12, depending on the seriousness of abuse. However, studies following up victims of serious abuse proven in the law courts, give extremely high rates of serious problems throughout life.

Treatment is possible; cognitive behaviour therapy is generally favoured, but for some people other psycho-therapeutic approaches may be be more effective. Generally, they are not sufficiently available. Prevention should be our goal, but there seems to be a dearth of ideas. Politicians and the general public, as well as professionals, need to be engaged with this issue if present and future generations of children are to be adequately protected.

I. Parenting and parent-child relationships.

The style and quality of *parenting* has only recently been much studied, and reliable measures are limited. Inadequate parenting may be related to poor material circumstances, conflictual family relationships, or parental mental illness. Studies have necessarily simplified the focus, mostly to degrees of *care and control* by parents, and data, even from most of the cohorts, are retrospective when children have reached adolescense or adulthood. Poor parenting, indicated by low levels of care, and/or high levels of control, seems to be associated with a higher risk of depression and anxiety in adults, even in the absence of abuse or neglect, though the increased risk may only be 1.5 to 3 times. Importantly, there is evidence that high levels of care and low levels of control are associated with lower risks of later mental health problems.

The evidence also links parenting style and quality with the social behaviour of children and their capacity for relationships, including their capacity for parenting their own children. Much more research is needed to tease out the details if preventive action is to be undertaken, but intervention in parenting with vulnerable parents would seem a sensible and important strategy in the light of current knowledge. There are already evaluated intervention studies.

*[Recent analysis of data from UK National Birth Cohorts (not yet published).*

*Results:* In the1958 cohort, poor relationships with either mother or father predicted mental health problems in adulthood; the worse the relationships had been in childhood, the greater were the mental health problems experienced by the age of 42. In the 1970 cohort, using the Parental Bonding Instrument (PBI), positive items predicted a reduced risk of mental health problems; negative items predicted an increased risk by the age of 30.

*Conclusions:* Results support the hypothesis that problems in parent-child relationships that fall short of abuse and neglect, may still help to determine adult mental health. Programmes to support parents in 'at risk' situations are being evaluated in many parts of Europe in the hope that we can reduce the prevalence of mental illness in adulthood.]

What can be done? One of the g-children; suggest groups discuss.

J. Divorce and separation of parents; disrupted and dysfunctional families.

We might expect *divorce* of parents to be an obvious factor for study, but it is not as simple as it seems and it cannot stand alone in its effects on children. Divorce is often preceded by *separation* or multiple separations, and will often be the culmination of inter-parental conflict, sometimes violence and a very unsatisfactory situation for children. Parental divorce or separation at any time of childhood or adolescence is strongly associated with later anxiety and depression, anti-social behaviour and other outcomes, but there is evidence suggesting that *inter-parental conflict* before separation takes place may be a more important determinant. The evidence for divorce from large cohorts suggests only a moderately increased risk of depression in early adult life of about times two, but usually more in women. And this is increased if they themselves then suffer marital breakdown. It is interesting that research generally shows none of these associations with the death of a parent.

At the very least, divorce or separation is an indicator of vulnerability or high risk status for children, and may present an opportunity for intervention. But intervention in family conflict situations before separation would be better where appropriate experienced people and practicable options are available.

## 6. Current Conclusions.

1. Evidence for generalisable associations inevitably remains incomplete, and most conclusions are necessarily provisional. But longitudinal studies, especially birth cohorts, have already provided good evidence to relate factors in childhood with adult psychiatric disorder. Their unexploited potential is great if they can continue to be funded. The nature of the data encourages a whole person approach considering each person's experience throughout life.

2. The most clearly established association is between psychological disturbance or *mental health problems in childhood and adolescence*, and mental health problems or psychiatric disorder in adulthood, which is likely to represent a continuity of morbidity. This provides an opportunity for early intervention by identifying and treating children seriously and thoroughly.

3. *Heritable genetic factors* are important in psychosis, but usually require later factors for expression. Genes partly determine a person's vulnerability and resilience, and thus their coping skills and resistance to stressors.

4. *Abnormalities of the central nervous system* arising at any time increase vulnerability and risk of recurrent psychiatric illness. Prevention is already a high priority before, during and after birth.

5. *Neurotic personality* features, deviant child behaviour, and poor school performance are important indicators of risk, or early manifestations of psychiatric disorder. Early identification might permit preventive measures.

6. Serious *childhood adversity* increases the risk of recurrent psychiatric disorder throughout life. The most serious is probably *child abuse*, especially child *sexual abuse*. *Parental conflict*, often leading to divorce or separation appears to be an important causal factor. Inadequate parenting is probably important but is difficult to isolate from major intra-family adversities. Counselling, support and treatment for affected children and families is important but it is not clear how we can prevent or reduce child abuse.

7. There is strong evidence for *multiple adversity* as a cause of serious social and psycho-social problems affecting individuals, families and communities. This may be the most important preventable cause of recurrent psychiatric disorder. It seems to be cumulative; children with the highest levels of multiple adversities should be a very high priority for early identification and relief.

Medicine of the person is particularly appropriate to these issues; all aspects of a person's life: birth, early childhood, school, family, relationships personality, gifts, disabilities, social and economic situation, are all interwoven to produce the person we see in a medical consultation, and all may be relevant to the problem he or she came to discuss.

More detail and all scientific references are contained in:

Fryers T & Brugha TS, 2006. Childhood determinants of adult mental illness; a research summary. In Improving Mental Health Information in Europe. (Editors: J Lavikainen, T Fryers, V Lehtenen) STAKES, Helsinki. pp 35-48.

Fryers T, 2007. Children at Risk: Childhood Determinants of Adult Mental Illness. STAKES, Helsinki. This book is no longer available but an up-dated and revised new edition will be issued in 2011 / 2012 by the e-journal, *Clinical Practice and Epidemiology in Mental Health*, on their web-site.

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