Interdisciplinary Trauma Research Centre
Faculty of Health & Environmental Sciences

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MAKING SENSE OF MADNESS:

BRAIN DISORDER OR UNDERSTANDABLE REACTION TO LIFE EVENTS?

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MAKING SENSE OF MADNESS

- The Medical Model and the construct of ‘schizophrenia’
- Public Opinion
- The Psycho-social Causes
- Implications for Assessment and Treatment
- Drug Companies
- Primary Prevention

Edited by
JOHN READ • LOREN R. MOSHER
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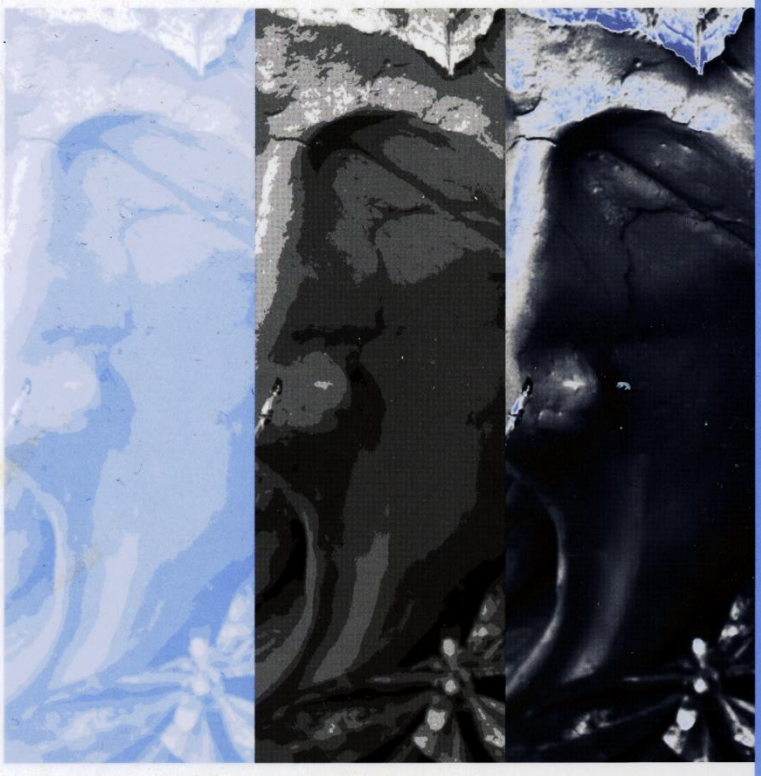
Models of Madness



PSYCHOLOGICAL, SOCIAL AND BIOLOGICAL APPROACHES TO SCHIZOPHRENIA

PUBLISHED FOR isps THE INTERNATIONAL SOCIETY FOR THE PSYCHOLOGICAL TREATMENTS OF THE SCHIZOPHRENIAS AND OTHER PSYCHOSES

Dominance of the ‘medical model’

medicalisation of human distress

diagnose and medicate

Percentage of NZ adults prescribed anti-depressants each year

- **7.4% 2004–2005**
- **8.2% 2005–2006**
- **9.4% 2006–2007**

Exeter, D. et al. Australian and New Zealand Journal of Psychiatry 2009; 43:1131–1140

“female subjects account for approximately two-thirds of all prescriptions”

So approximately one in every seven women

Does ‘schizophrenia’ exist? Reliability

‘On being sane in insane places’ (Rosenhan, 1973)

16 diagnostic systems for ‘schizophrenia’ led to between 1 and 203 of 248 patients being diagnosed (Herron et al. 1992)

.

DSM diagnostic criteria for ‘schizophrenia’ today

Two of:

- Hallucinations
- Delusions
- Thought Disorder
- Catatonia
- Negative symptoms

Or just one if voices are conversing or commenting on your behaviour, or if delusions are ‘bizarre’

A **DYSJUNCTIVE** CATEGORY

Scientifically meaningless

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ACTA PSYCHIATRICA SCANDINAVICA

Review article

Prejudice and schizophrenia: a review of the 'mental illness is an illness like any other' approach

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Read J, Haslam N, Sayce L, Davies E. Prejudice and schizophrenia: a review of the 'mental illness is an illness like any other' approach.

Objective: Many anti-stigma programmes use the 'mental illness is an illness like any other' approach. This review evaluates the effectiveness of this approach in relation to schizophrenia.
Method: The academic literature was searched, via PsycINFO and MEDLINE, to identify peer-reviewed studies addressing whether public espousal of a biogenetic paradigm has increased over time, and whether biogenetic causal beliefs and diagnostic labelling are associated with less negative attitudes.
Results: The public, internationally, continues to prefer psychosocial to biogenetic explanations and treatments for schizophrenia. Biogenetic causal theories and diagnostic labelling as 'illness', are both positively related to perceptions of dangerousness and unpredictability, and to fear and desire for social distance.
Conclusion: An evidence-based approach to reducing discrimination would seek a range of alternatives to the 'mental illness is an illness like any other' approach, based on enhanced understanding, from multi-disciplinary research, of the causes of prejudice.

Key words: prejudice; attitudes; stigma; mental illness; schizophrenia

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Public believe mental health problems, including schizophrenia, caused primarily by adverse life events *(Read et al. 2006)*

South Africa
China
Egypt
Turkey
Fiji
Japan
Malaysia
Switzerland
Ethiopia
Greece
Bali
Brazil
England
Ireland
Germany
India
Australia
Italy
Mongolia
Russia
and …

New Zealand

Psychiatrists' causal beliefs

- 2813 UK psychiatrists
  (Kingdon et al, 2004)

'primarily social' 0.4%
'primarily biological' 46.1%
'a balance of both' 53.5%

For every psychiatrist who agrees with the public there are 115 who think 'schizophrenia' is caused primarily by biological factors

Relationship between bio-genetic causal beliefs and negative attitudes

Review of 21 studies, from 10 countries –

31 analyses

	ATTITUDES	
CAUSAL BELIEFS	Positive	Negative
Psycho-social	11	1
Bio-genetic	1	18

Read et al., 2006
Acta Psychiatrica Scandinavica

No single cause.

As for other mental health problems, the causes, often in combination, include:

- **Genetic predisposition ??**
- **Brain abnormalities ??**
- **Maternal prenatal health and stress**
- **Birth complications**
- **Early loss of parents**
- **Child abuse**
- **Child neglect**
- **Dysfunctional families** (intergenerational)
- **Bullying**
- **Rape and physical assault in adulthood**
- **War combat**
- **Poverty**
- **Urban living**
- **Ethnicity** (poverty, isolation and racism)
- **Heavy early cannabis use**

No evidence of genetic predisposition to schizophrenia

(Hamilton, 2008, American Journal of Psychiatry)

- ‘The most comprehensive genetic association study of genes previously reported to contribute to the susceptibility to schizophrenia’ found that ‘none of the polymorphisms were associated with the schizophrenia phenotype at a reasonable threshold for statistical significance’

- ‘The distribution of test statistics suggests nothing outside of what would be expected by chance’

No evidence of genetic predisposition to depression

http://www.nimh.nih.gov/science-news/2009

- a meta-analysis, re-analyzing data on 14,250 participants in 14 studies published from 2003 through March 2009.
- …. found a strong association between the number of stressful life events and risk of depression across the studies.
- However, the serotonin transporter gene did not show a relationship to increased risk for major depression, alone or in interaction with stressful life events.

Poverty

‘The cause of the causes’

Poverty predicts most mental health problems, including:

Depression

Generalised Anxiety Diorder

Phobias

Panic Disorder

Alcohol Abuse

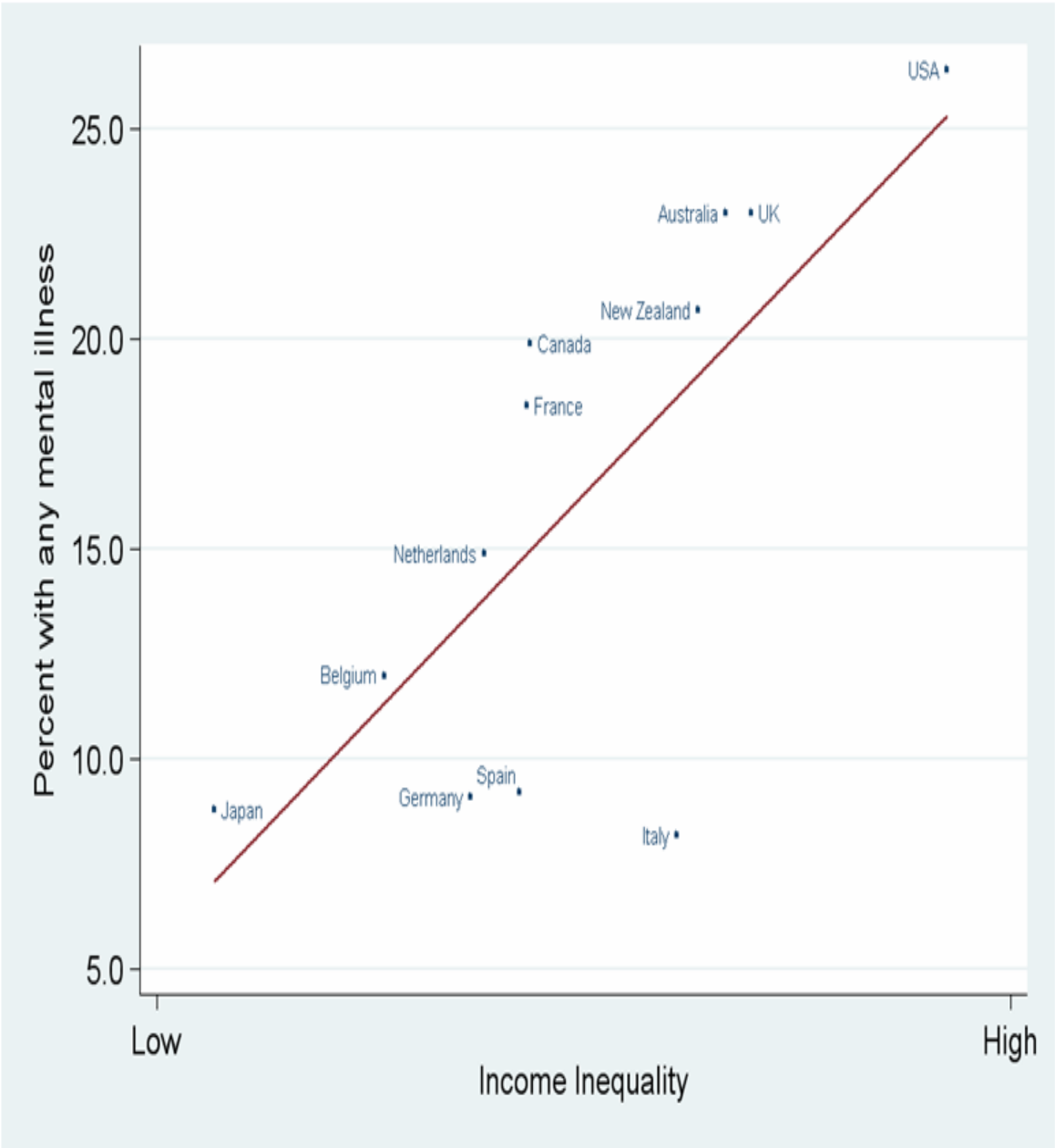
Drug Abuse

‘Schizophrenia’

and **Childhood disorders** (eg ‘conduct disorder)

Relative poverty

Wilkinson & Pickett 'The Spirit Level' (2009)



Source: Wilkinson & Pickett, The Spirit Level (2009)

Ethnicity

- Relationship between high rates of mental health problems and being a member of an ethnic minority or of a colonised indigenous people:

- **Australia**
- **Belgium**
- **Denmark**
- **Germany**
- **Greenland**
- **Netherlands**
- **New Zealand**
- **Israel**
- **Sweden**
- **UK**
- **USA**

eg: **In the UK Afro-caribbeans are 9 to 12 times more likely to be diagnosed with 'schizophrenia'**

Psychiatric inpatient admission rates - Auckland

Wheeler, A. NZ Medical Journal 2005

	Inpatients	Community	Risk Ratio
European	**60%**	**61%**	**1.0**
Maori	**23%**	**11%**	**2.1**

Diagnoses given to New Zealand inpatients

Wheeler, A. NZ Medical Journal 2005

Psychotic disorder

(eg ‘schizophrenia’)

European	38**%**
Maori	62%
Pacific Islanders	59%
Asian	59%

Ethnicity

Relationship between high rates of mental health problems and being a member of an ethnic minority or of a colonised indigenous people:

Explained by

- **Poverty**
- **Level of discrimination experienced**
- **Isolation from ethnic group/loss of cultural identity**

Prevalence of Child Abuse in Psychiatric Inpatients

'Models of Madness' (Read et al. 2004) chapter 16

Average child abuse rates from review of **40** inpatient studies

- **Female inpatients**:

Sexual abuse: 50%

Physical abuse: 48%

Either sexual or physical: 69%

- **Male inpatients**:

Sexual abuse: 28%

Physical abuse: 51%

Either sexual or physical: 60%

Child Abuse and 'Schizophrenia' symptoms

200 outpatients

Hallucinations	Child Abuse	No Abuse
Auditory p<.0005	43%	18%
Command p<.005	13%	2%
Visual p<.005	17%	4%
Tactile p<.001	12%	0%

Read J, et al. 2003

Dutch general population (n = 4045) free from psychotic symptoms, followed for 3 years (Janssen et al., 2004)

Controlled for: age, sex, education, discrimination, ethnicity, urbanicity, unemployment, marital status, other mental health problems, **psychosis in relatives**, drug use.:

- Those abused as children **9 times** more likely to develop 'pathology level psychosis'
- Those suffering most severe level of abuse **48 times** more likely to develop psychosis

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DOI: 10.1111/j.1600-0447.2005.00634.x

ACTA PSYCHIATRICA SCANDINAVICA

Review article

Childhood trauma, psychosis and schizophrenia: a literature review with theoretical and clinical implications

Read J, van Os J, Morrison AP, Ross CA. Childhood trauma, psychosis and schizophrenia: a literature review with theoretical and clinical implications.
Acta Psychiatr Scand 2005: 112: 330–350. © 2005 Blackwell Munksgaard.

Objective: To review the research addressing the relationship of childhood trauma to psychosis and schizophrenia, and to discuss the theoretical and clinical implications.
Method: Relevant studies and previous review papers were identified via computer literature searches.
Results: Symptoms considered indicative of psychosis and schizophrenia, particularly hallucinations, are at least as strongly related to childhood abuse and neglect as many other mental health problems. Recent large-scale general population studies indicate the relationship is a causal one, with a dose-effect.
Conclusion: Several psychological and biological mechanisms by which childhood trauma increases risk for psychosis merit attention. Integration of these different levels of analysis may stimulate a more genuinely integrated bio-psycho-social model of psychosis than currently prevails. Clinical implications include the need for staff training in asking about abuse and the need to offer appropriate psychosocial treatments to patients who have been abused or neglected as children. Prevention issues are also identified.

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Key words: child abuse; trauma; psychosis; schizophrenia; hallucinations; delusions; literature review

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***The Guardian* (UK)** *(22 Oct., 2005)* :

“The psychiatric establishment is about to experience an earthquake that will shake its intellectual foundations. When it has absorbed the juddering contents of the latest edition of one of its leading journals, it will have to rethink many of its most cherished assumptions.”

Newsweek *(12 Dec., 2005)* :

“The most definitive look at schizophrenia to date”

“The cumulative impact of this research has swayed opinion in the profession's highest echelons”.

2007

Shevlin et al. 2007 *Schizophrenia Bulletin*

UK, 8580

People who had experienced three types of trauma (sexual abuse, physical abuse etc.) were 18 times more likely to be psychotic than non-abused people

People who had experienced five types of trauma were 193 times more likely to be psychotic

‘Child Maltreatment and Psychosis: A Return to a Genuinely Integrated Bio-Psycho-Social Model’

J Read, et al., 2008, *Clinical Schizophrenia*

- **Ten out of eleven recent general population studies** have found, even after controlling for other factors (including family history of psychosis), **that child maltreatment is significantly related to psychosis.**

- **Eight of these studies tested for, and found, a dose-response.**

- This paper **advocates a return to the original stress-vulnerability model** proposed by Zubin and Spring in 1977, in which heightened vulnerability to stress is not necessarily genetically inherited, but can be acquired via adverse life events.

FIRST META-ANALYSIS

VARESE F, SMEETS F, DRUKKER M, LIEVERSE R, LATASTER T, VIECHTBAUER W, READ J, VAN OS J, BENTALL R.

‘Childhood adversities increase the risk of psychosis:

A meta-analysis of patient-control, prospective- and cross-sectional cohort studies’.

Schizophrenia Bulletin (2012)

A meta-analysis improves on ordinary literature reviews by adopting rigorous inclusion criteria and allowing for differences in sample sizes and methodologies when conducting analyses

FIRST META-ANALYSIS

- Analysing the most rigorous 41 studies ….
- people who had suffered childhood adversity were **2.8 times** more likely to develop psychosis than those who had not **(p < .001 level).**
- Nine of the ten studies that tested for a **dose-response** found it.

FIRST META-ANALYSIS

odds ratios for each type of adversity:

		number of studies
• **sexual abuse**	**2.4**	20
• **physical abuse**	**2.9**	13
• **emotional abuse**	**3.4**	6
• **neglect**	**2.9**	7
• **bullying**	**2.4**	6
• **parental death**	**1.7**	8

Reliability of disclosures of ‘psychiatric patients’

- **Corroborating evidence for reports of child sexual abuse [CSA] by psychiatric patients has been found in**

  74% [HERMAN J, SCHATZOW E. 1987]

  82% [READ J, et al. 2003]

- One study found that **“The problem of incorrect allegations of sexual assaults was no different for schizophrenics than the general population**”

  [DARVES-BORNOZ J- M, et al. 1995]

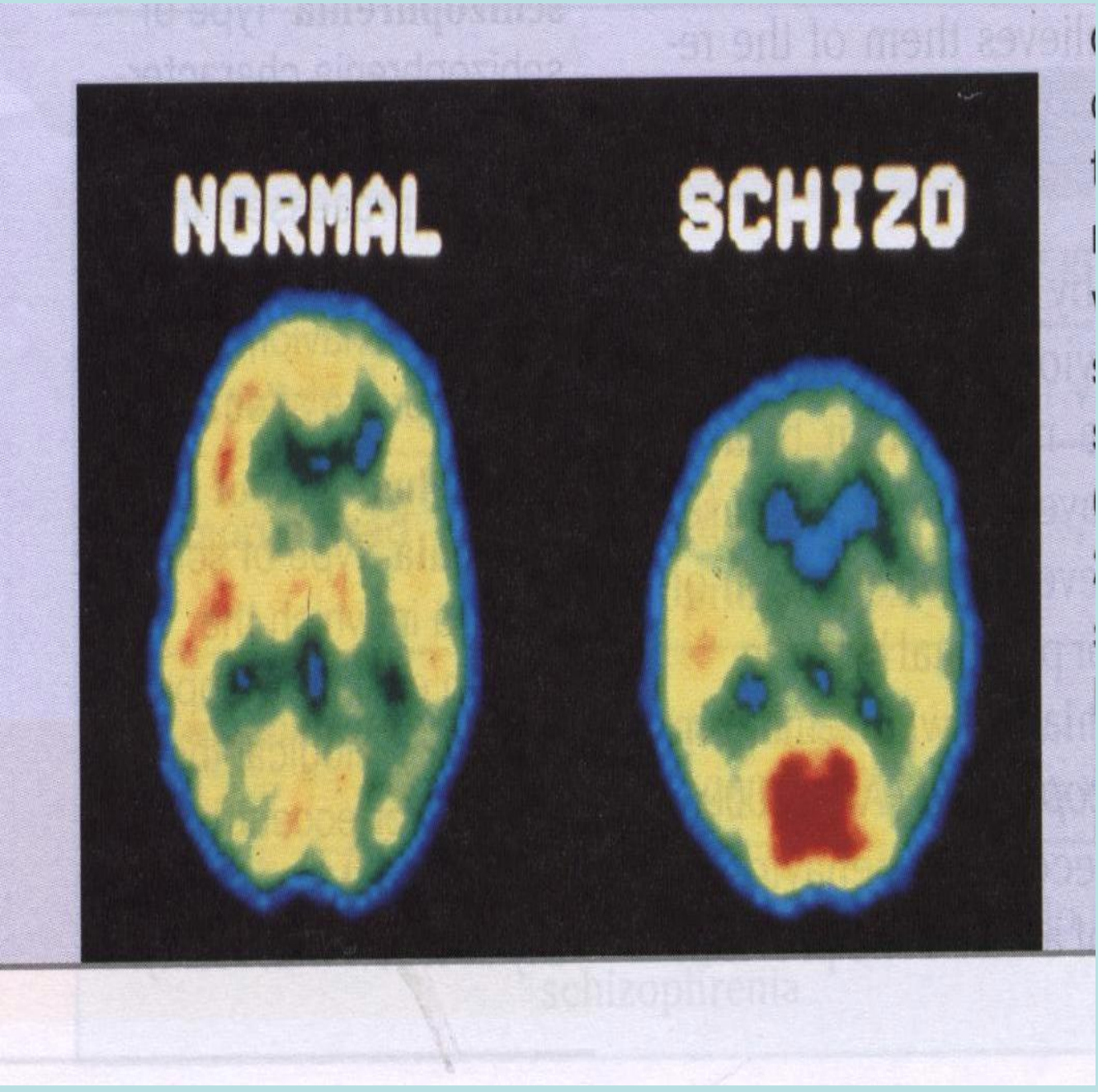
- 2009 British study – disclosures of CSA, CPA and neglect were stable (over 7 years), valid, and **not associated with current severity of psychotic symptoms**

  [FISHER et al., 2009]

Theories about HOW child abuse/neglect leads to psychosis

- **TRAUMAGENIC NEURODEVELOPMENTAL**
- **COGNITIVE**
- ATTACHMENT
- PSYCHODYNAMIC
- DISSOCIATION

What causes brain differences?



The Contribution of Early Traumatic Events to Schizophrenia in Some Patients: A Traumagenic Neurodevelopmental Model

JOHN READ, BRUCE D. PERRY, ANDREW MOSKOWITZ, AND JAN CONNOLLY

THE current diathesis-stress model of schizophrenia proposes that a genetic deficit creates a predisposing vulnerability in the form of oversenstivity to stress. This model positions all psychosocial events on the stress side of the diathesis-stress equation. As an example of hypotheses that emerge when consideration is given to repositioning adverse life events as potential contributors to the diathesis, this article examines one possible explanation for the high prevalence of child abuse found in adults diagnosed schizophrenic. A traumagenic neurodevelopmental (TN) model of schizophrenia is presented, documenting the similarities between the effects of traumatic events on the developing brain and the biological abnormalities found in persons diagnosed with schizophrenia, including overreactivity of the hypothalamic–pituitary–adrenal (HPA) axis; dopamine, norepinephrine, and serotonin abnormalities; and structural changes to the brain such as hippocampal damage, cerebral atrophy, ventricular enlargement, and reversed cerebral asymmetry. The TN model offers potential explanations for other findings in schizophrenia research beyond oversensitivity to stress, including cognitive impairment, pathways to positive and negative symptoms, and the relationship between psychotic and dissociative symptomatology. It is recommended that clinicians and researchers explore the presence of early adverse life events in adults with psychotic symptoms in order to ensure comprehensive formulations and appropriate treatment plans, and to further investigate the hypotheses generated by the TN model.

INTRODUCTION

Schizophrenia is considered to be one of the most biologically based of the mental disorders (Chua and Murray 1996; McGuffin, Asherson, Owen, and Farmer 1994; Walker and DiForio 1997). However, the methodological rigor of the evidence for this proposition is often described as less than adequate (Bentall 1990; Boyle 1990; Karon 1999; Rose 2001; Ross and Pam 1995). This article explores the possibility that for some adults diagnosed as schizophrenic, adverse life events or significant losses and deprivations cannot only "trigger" schizophrenic symptoms but may also, if they occur early enough or are sufficiently

Evidence that schizophrenia is a brain disease

- Overactivity of hypothalamic-pituitary-adrenal (HPA) axis
- Abnormalities in neurotransmitter systems (especially dopamine)
- Hippocampal damage
- Cerebral atrophy
- Reversed Cerebral Asymmetry

The effects of early childhood trauma on the developing brain

- Overactivity of hypothalamic-pituitary-adrenal (HPA) axis
- Abnormalities in neurotransmitter systems (especially dopamine)
- Hippocampal damage
- Cerebral atrophy
- Reversed Cerebral Asymmetry

UNDERSTANDING HEARING VOICES

- **About 10-15% of us hear voices at some point in our lives**

  (Beavan, Read & Cartwright, 2011, Journal of Mental Health)

- **About 80% of over 60 year olds who have lost their life partner hear or see their partner within 12 months of their death**

- **When people are hearing voices their voice muscles are moving and the speech area of the brain lights up**

- **So 'voices' are internal events projected out onto the world**

Hearing Voices

Response to first experiences of voice-hearing crucial :

Who is in control – me or the voices ?

Does it mean I am mad/bad ?

Level of distress largely predicts who becomes psychotic

Distress largely determined by explanation

(Delusions are sometimes attempts to explain hallucinations)

Psychological processes that have been implicated in paranoia

Jumping to conclusions *(e.g. Garety et al. 2001):*

Patients with delusions tend to 'jump to conclusions' (make a decision about uncertain events) on the basis of little information

Theory of mind *(e.g. Corcoran & Frith, 1996):*

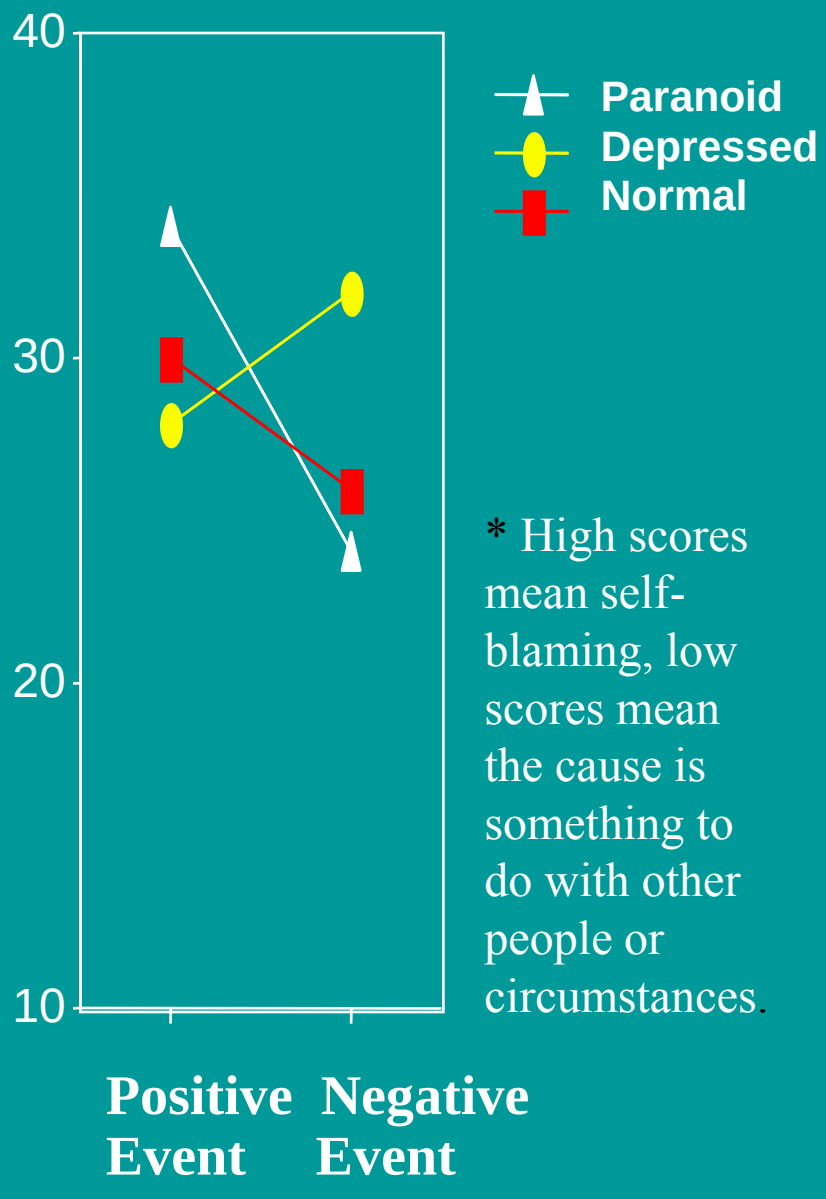
Paranoid patients have difficulty in understanding other people's thoughts and feelings

Attributions *(e.g. Kaney & Bentall, 1989):*

Paranoid beliefs are related to abnormal styles of reasoning about the causes of events

UNDERSTANDING PARANOID DELUSIONS

Internality Scores*



Paranoid patients make excessively stable and global attributions for negative events. And they blame people more than situations.
(Kaney & Bentall, 1989)

* High scores mean self-blaming, low scores mean the cause is something to do with other people or circumstances.

IMPLICATIONS FOR ASSESSMENT AND TREATMENT

Current Rates of Inquiry

Chart review of 100 inpatients

Read J, Fraser A. (1998)

- **Even when an abuse section was included in the admission form, 68% of the psychiatrists skipped that section**

- **Abuse prevalences when asked, and not asked, at initial assessment :**

CHILD SEXUAL ABUSE:

If asked: 47%

If not asked: 6%

ANY ABUSE, LIFETIME:

If asked: 82%

If not asked: 8%

Implications for assessment

‘WHY, WHEN AND HOW TO ASK ABOUT CHILD ABUSE’

Read J, et al., *Advances in Psychiatric Treatment (2007)*

New Zealand training programme described for the professional journal of the Royal College of Psychiatry (UK)

2008 NHS Guidelines – all clients must be asked and staff must be trained

Cochrane review of Risperidone

(Rattehalli, Jayaram, & Smith, 2010).

- **“Risperidone appears to have a marginal benefit in terms of clinical improvement compared with placebo in the first few weeks of treatment but the margin of improvement may not be clinically meaningful.”**

- **“Global effects suggests that there is no clear difference between risperidone and placebo.”**

- **“Risperidone causes many adverse effects and, these effects are important and common.”**

- **“People with schizophrenia or their advocates may want to lobby regulatory authorities to insist on better studies being available before wide release of a compound with the subsequent beguiling advertising.”**

‘Initial Severity and Antidepressant Benefits’

Kirsch et al. (2008)

Meta-analysis of all available studies, including those previously unpublished by the drug companies:

Drug–placebo differences:

- Virtually no difference at moderate levels of initial depression
- Small difference for patients with very severe depression . . .
- . . . reaching ‘clinical significance’ **only for patients at the upper end of the very severely depressed category.**

{This is less than 10% of people receiving the drugs}

Adverse effects of anti-psychotic drugs

- **First-generation:**

tardive dyskinesia (30-50%)
neuropletic malignant syndrome (1%)

- **Second-generation (‘atypicals’)**

reduced sexual function
agranulocytosis
rapid weight gain
diabetes
heart disease
neurodegeneration
reduced life span

Drug company influence

- **Research Funding**
- **Scientific journals**
- **Educational/training institutes**
- **Training for doctors**
- **Drug licensing bodies**
- **Lobbying governments**
- **More recently, the internet…..**

Drug Companies and the Internet

Significant Bio-Genetic -Bias in Drug Company funded websites

(%D-C Funded)	Causes	Treatments	Total Score
Schizophrenia (58%) (Read 2007)	X	X	X
Depression (42%) (de Wattignar & Read, 2008)	X		X
PTSD (42%) (Mansell & Read, 2008)		X	X
ADHD (37%) (Mitchell & Read, in prep.)		X	X
Erectile Disorder (44%) (Mati & Read, in prep.)	X	X	X

Dr Steven Sharfstein –

President,
American Psychiatric Association (2005)

Financial incentives have contributed to the notion of a 'quick fix' by taking a pill and reducing the emphasis on psychotherapy and psychosocial treatments.

If we are seen as mere pill pushers and employees of the pharmaceutical industry, our credibility as a profession is compromised.

As we address these Big Pharma issues, we must examine the fact that as a profession, we have allowed the bio-psycho-social model to become the bio-bio-bio model."

Professor Mike Shooter

President of the Royal College of Psychiatrists (UK) - 2005

"I cannot be the only person to be sickened by the sight of parties of psychiatrists standing at the airport desk with so many gifts with them that they might as well have the name of the drug company tattooed across their foreheads".

ISPS THE INTERNATIONAL SOCIETY FOR PSYCHOLOGICAL AND SOCIAL APPROACHES TO PSYCHOSIS

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Hearing Voices Network

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CBT FOR PSYCHOSIS

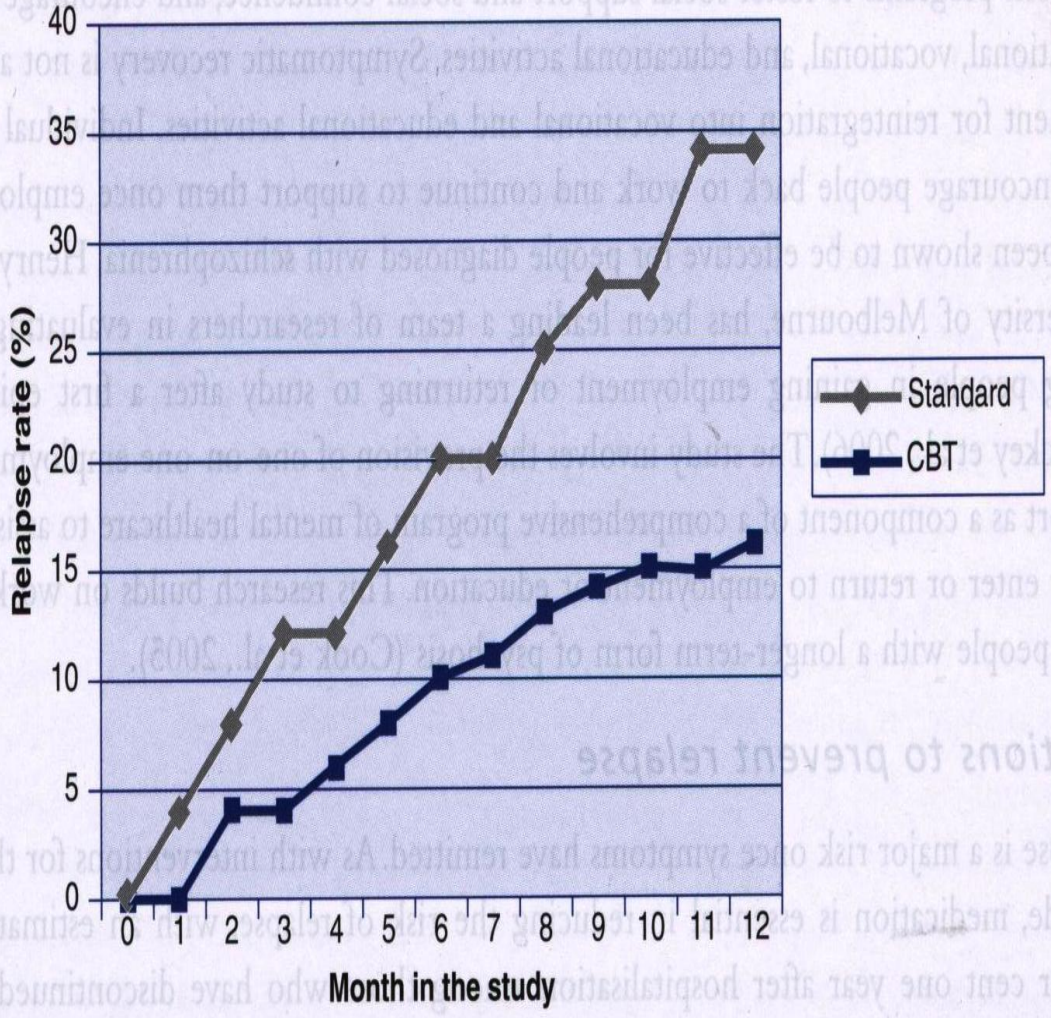

Figure 4 **The percentage of CBT and standard treatment patients who relapsed over 12 months of the study**

Note. From Gumley et al. (2003). Early intervention for relapse in schizophrenia: Results of a 12-month randomised controlled cognitive behavioural therapy. *Psychological Medicine*, 33, 419–431, Cambridge University Press.

CBT or the relationship?

- CBT has strong evidence to support its efficacy for psychosis

- But best predictor of positive outcome – for any treatment for psychosis – is the quality of the therapeutic relationship !

IMPLICATIONS FOR PRIMARY PREVENTION

The 2012 meta-analysis calculated that the 'estimated population attributable risk' was 33%.

This means that if the six childhood adversities reviewed were eliminated the number of people with psychosis would be reduced by a third! (Varese, Smeets *et al.* 2012).

George Albee, 1996

"Psychologists must join with persons who reject racism, sexism, colonialism, and exploitation and must find ways to redistribute social power and to increase social justice.

Primary prevention research inevitably will make clear the relationship between social pathology and psychopathology and then will work to change social and political structures in the interests of social justice.

It is as simple and as difficult as that!"

Wilma Boevink

Schizophrenia Bulletin, 2008

I don't think that abuse itself is a strong cause for psychosis. It hurts, but it is rather simple.

I think that the threat and the betrayal that come with it feed psychosis. The betrayal of the family that says, “you must have asked for it,” instead of standing up for you. That excuses the offender and accuses the victim. And forces the child to accept the reality of the adults. That forces the child to say that the air is green, while she sees clearly it is not green but blue.

That is a distortion of reality that is very hard to deal with when you're a child. You are forced to betray yourself.

That is what causes the twilight zone. What makes you vulnerable for psychosis.

Survey of NZ users of mental health services.

Lothian J, Read J (2002)

"There was an assumption that I had a mental illness and because I wasn't saying anything about my abuse no one knew"

"There was so many doctors and nurses and social workers in your life asking you about the same thing, mental, mental, mental, but not asking you why"

"I just wish they would have said 'What happened to you?' 'What happened ?' But they didn't."

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