



Available online at
SciVerse ScienceDirect
www.sciencedirect.com

Elsevier Masson France
EM|consulte
www.em-consulte.com/en



Review

Association of parental Communication Deviance with offspring's psychiatric and thought disorders. A systematic review and meta-analysis

R. Roisko^{a,*}, K.-E. Wahlberg^{b,c}, J. Miettunen^b, P. Tienari^b

^a Oulu University Hospital, Department of Psychiatry, PO Box 26, 90029 OYS, Finland

^b University of Oulu, Institute of Clinical Medicine, Department of Psychiatry, PO Box 5000, 90014 Oulun Yliopisto, Finland

^c Department of Psychology, University of Jyväskylä, Jyväskylä, Finland

ARTICLE INFO

Article history:

Received 14 February 2013

Received in revised form 6 May 2013

Accepted 7 May 2013

Available online 9 July 2013

Keywords:

CD

Gene-environment interaction

Schizophrenia spectrum

Systemic model

Vulnerability-stress theory

ABSTRACT

Elevated number of parental Communication Deviance (CD) has been connected with psychiatric and thought disorders in their offspring. However, no earlier systematic efforts have been made to review this issue. The aim of this study was to survey the existing literature systematically and perform a meta-analysis of this association. A literature search for published and unpublished observational studies on the association of parental Communication Deviance with psychopathology in the offspring was conducted. Multiple electronic databases were searched (from 1960 to 2012) and the reference lists of the resulting publications were scanned. The findings were pooled using random effect meta-analysis. A total of 19 relevant papers were found and accessed. The results showed that a high level of parental CD is associated with schizophrenia spectrum disorders in the offspring. A large overall effect size (0.79) was found in the meta-analysis. No meta-analysis could be performed on the association of parental CD with an offspring's thought disorders, but the results suggest that such an association may exist. Parental Communication Deviance is associated with schizophrenia spectrum disorders in the offspring. High parental CD could be treated as an indicator of a risk of developing a schizophrenia spectrum disorder, at least among high-risk groups.

© 2013 Elsevier Masson SAS. All rights reserved.

1. Introduction

Research into the familial environment of schizophrenia patients, including their communicational environment, began in the 1950s [3,19,46]. The emphasis at first was on the content rather than the form of the thoughts and attitudes of family members, but later the form of the thinking and communication of family members was brought into focus and evaluated systematically in empirical studies [30,31,47,48], and the Communication Deviance (CD) scale, a tool for the systematic evaluation of disturbed communication, was developed for assessing the degree to which family members are unable to share and maintain a focus of attention during communication [32]. The early Communication Deviance studies were cross-sectional and consisted of schizophrenia and schizophrenia spectrum patients and their biological family members, mainly parents. It was not long, however, before the limitations of such a study design in an aetiological sense were acknowledged and high-risk and other longitudinal prospective studies and adoption studies came to be conducted. An astonishing variety of methods for the quantitative measurement of the extent of Communication Deviance have emerged over the decades, including measurement in

both pseudo-natural interactive and experimental situations, with the individual participating in the test situations either alone or together with a varying number of family members or other significant persons. There is also a wide diversity of scales for scoring communication as observed in different situations.

Frequent CD makes speech difficult to follow, and meanings are not consensually or visually validated [33]. It was hypothesized originally that disturbed communication that affects the manner in which foci and attention are shared is connected with “schizophrenic” thinking, i.e. formal thought disorders, attention disorders and the processing of information and meaning, and not with schizophrenia as a clinical diagnosis [29–31,47,48]. Formal thinking disorders were considered to be central and primary as compared with a descriptive diagnosis of schizophrenia [48]. This approach is still reasonable, as in the light of modern neuropsychology, compromised cognitive functioning (deficits in memory and learning, working memory, executive functions, attention and processing speed) is a core feature of schizophrenia [24] and neuropsychological abnormalities are considered to be one of the schizophrenia endophenotypes [1].

As far as we know, there are no systematic reviews, not to mention meta-analyses, of Communication Deviance in families who have a member with schizophrenia or some other psychiatric disorder. The aim of this systematic review and meta-analysis is to collate and summarize the literature on the association of parental

* Corresponding author. Tel.: +358 40 727 2180; fax: +358 8 333 167.
 E-mail address: rroisko@paju.oulu.fi (R. Roisko).

Communication Deviance with psychiatric and thought disorders in offspring.

2. Methods

Reporting within this systematic review and meta-analysis followed the guidelines of the Meta-analysis Of Observational Studies in Epidemiology (MOOSE) Group [35].

2.1. Identification of studies

To make sure that all the relevant studies would be found, a broad search term “communication deviance” was used in the PsycINFO, MedLine (Ovid) and SCOPUS databases (covering the period from 1960 to 31st Dec 2012), and the title and abstract, if available, of each candidate paper were reviewed to check its relevance to the association of parental Communication Deviance with psychiatric and thought disorders in an offspring. Potentially relevant papers were accessed if possible in order to review the full text. In addition, the references cited by each of these papers, together with citations in major review papers and book chapters, were scrutinized in order to locate additional potentially relevant papers.

2.2. Study selection

Only quantitative original studies (not reviews) in which the concept of Communication Deviance was explicitly based on Singer and Wynne's definitions and scoring methods (and not merely loosely inspired by them) were included. Where multiple publications presented identical data, the most informative version was included and the other related papers were excluded. Unpublished congress abstracts were excluded because they are extremely hard or impossible to access. Potentially relevant unpublished dissertations were accessed. No limits were set with regard to the language of the papers.

2.3. Data abstraction

Descriptive statistics for the frequency of parental Communication Deviance in schizophrenia (spectrum) and control groups (means, standard deviations or standard errors, frequencies and sample size) were extracted from the papers for the purposes of the meta-analysis whenever available.

2.4. Quantitative data synthesis

Effect sizes (ES) for group differences are presented with 95% confidence intervals using Forest plots. ES is calculated by dividing the difference between the mean scores for the groups by the pooled standard deviation. The *d* values of Cohen [5] were used as a measure of ES, i.e. a *d* value of 0.2 was taken to indicate a small effect, 0.5 a medium effect and 0.8 a large effect. If the results were presented using categorical variables, we calculated odds ratios and converted these to standardized mean differences [4]. We used Cochran's Q statistic and I^2 statistics [16] to assess the heterogeneity of the studies. On account of this heterogeneity, we pooled the studies using the random effects method. The data were analysed with Stata 11.1 (StataCorp LP, College Station, TX, USA).

3. Results

3.1. Search results

A total of 176 studies were found from the various sources used, but after exclusions made on the grounds indicated above, 19 could be included in the review (Fig. 1). The majority of the works

excluded were simply not relevant, most of them being concerned with other dimensions of Communication Deviance rather than the relationship of parental CD with psychiatric or thought disorders in their offspring. There were also some studies in which the definition of communication disturbances was so remote from the definitions and measurement methods of Singer and Wynne that they could no longer be said to discuss the same concept. There were three papers that reported the same results as in earlier papers (duplications) and the results reported in three otherwise relevant dissertations were found to have been published in scientific papers. The other four unpublished dissertations accessed appeared not to be relevant. Seven references were found to unpublished congress abstracts which could have been relevant.

Seven reports on the association of parental Communication Deviance with psychiatric disorder in offspring were available for the meta-analysis. Two papers yielded by the systematic review had to be excluded because they did not offer the relevant parameters and they in any case turned out to be impossible to obtain. Four papers in the review reported the results of the UCLA High-Risk Study, and only one of them was included in the meta-analysis. It was impossible to perform any meta-analysis of the association of parental Communication Deviance with thought disorders in offspring because three of four papers on this topic obtained in the review reported results from one project, the Finnish Adoptive Family Study of Schizophrenia, and the fourth paper did not employ the relevant parameters.

3.2. Association of parental Communication Deviance with an offspring's psychiatric disorders

3.2.1. Studies on biological families: cross-sectional studies

The vast majority of studies on the association of parental Communication Deviance with an offspring's psychiatric diagnoses were cross-sectional, with a population largely consisting of adult schizophrenia or schizophrenia spectrum patients and their biological relatives, while the control groups consisted mainly of non-psychotic psychiatric patients and their families, but also of psychiatrically healthy individuals with their families in some cases. The definition of the schizophrenia spectrum category varied between studies and these definitions, as well as other details of the studies, are presented in Table 1.

In one study of the parents of 59 schizophrenic or neurotic patients and psychiatrically healthy subjects, almost all of whom had been hospitalized for a psychiatric or medical condition, the ratio score (incidence of CD/number of responses) differentiated the parents of the neurotic patients or psychiatrically healthy subjects from those of the schizophrenic patients [45]. In another study of the parents of 39 schizophrenic and neurotic patients, these groups were similarly differentiated on the basis of the parental CD ratio scores [17], but now the difference disappeared when the effect of the number of words spoken was eliminated. The results of a comparison of the biological families of 94 psychiatrically ill patients (severe neurotics, borderlines and schizophrenics) with those of 20 control subjects who were either healthy or had a severe chronic medical condition [49] indicated that the higher the parents' Communication Deviance ratio scores were, the more severe was the psychiatric illness of the offspring. Contrary to the previous observations of Hirsch and Leff [17], the differentiating effect persisted when the number of words spoken was included in the analyses. In a study of 50 psychiatrically ill (schizophrenic or non-psychotic psychiatric) patients and healthy subjects and their parents, the total parental CD scores did not differentiate between the three main groups [27], nor were there any differences between the groups when the schizophrenic

Download English Version:

<https://daneshyari.com/en/article/4184319>

Download Persian Version:

<https://daneshyari.com/article/4184319>

[Daneshyari.com](https://daneshyari.com)