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ABSTRACT

The role of family life in the production or prevention of emotional problems in offspring is a contoversial topic. To determine in what ways family competence in childhood might be associated prospectively with freedom from psychiatric symptoms in young adulthood for children at risk, three groups of families from the St. Louis Risk Research Project particpated in a longitutdinal study of family dynamics. The families included 25 families of parents with mental disorders, 10 families of parents with physical illness requiring prolonged hospitalization, and 21 families with non-ill parents. When the children averaged 8 years old, an interview was conducted with the family to rate family competence on 19 variables which were reduced to five factors: conflict, undercontrol, estrangement, father overcontrol, and impoverishment. Offspring were administered the Diagnostic Interview Schedule when they were at least 18 years old. An analysis of the data using structured equation methodology showed that parental illness increased family incompetence and family incompetence in turn increased offspring symptoms. However, only parental mental disorder and offspring symptoms were significantly correlated. The findings indicate that the competent young adult offspring of disturbed parents is competent because the parent's illness did not affect the quality of family functioning, and that symptoms of psychopathology in young adulthood may be related to having lived in a dysfunctional family. (Diagrams of the hypothesis testing models are appended.) (BL)

Childhood Family Interaction and Young Adult Outcome in Children at Risk

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Running Head: Family Competence

Childhood Family Interaction and Young Adult Outcome in Children at Risk

The purpose of this investigation was to determine in what ways family competence in childhood might be associated prospectively with freedom from psychiatric symptoms in young adulthood for children at risk.

The role of family life in the production or prevention of mental disorder is a controversial topic (6, 9, 10, 13, 15, 21), which has produced considerable disagreement about how much influence family interactions have in the emergence of mental health or psychopathology in offspring (4, 7, 12, 13, 15, 18, 22, 23).

I will present today some data that bear on this question. The investigation employs a prospective methodology over a long enough period that family variables can be conceptualized more likely as causes than effects of offspring mental health or disorder (11, 15, 19). Second, the sample includes children at risk so that the yield of offspring disorder is great enough to test associations of interest. Finally, the investigation employs a statistical method that allows the testing of causal hypotheses from correlational data and that permits our ruling out of unsupported hypotheses.

Method

Slide 1

The families and offspring evaluated in these analyses were drawn from a larger group of families being followed in the St. Louis Risk Research Project (2, 25). Three groups of families are represented. Families of parents with mental disorder were selected because one parent had been hospitalized with schizophrenia (in 14 families) or manic-depressive psychosis (in 10 families). Their DSM-III diagnoses were 8 with schizophrenia, 7 with affective disorder, 7 with schizoaffective disorder, and 2 with other mental disorders. The physically-ill control group of families had parents with physical illness requiring prolonged hospitalization. The nonill control group contained families with normal parents. Family data collected between 1967 and 1972 and offspring diagnostic data collected ten years later (1980 - 1982) will be presented today.

How Were Families Assessed? After parents agreed to participate in the longitudinal study, when their children averaged 8 years old, two social workers made a home visit to each family. Their thorough reports of these visits contained vivid descriptions of family members and a detailed account of the events during their 90-minute stay, which provided our source for assessing family competence. We evaluated these by having a rater (blind to parents' illness, offspring symptoms, and to the goals of this project) rate 19 family variables,

which measured the functional adequacy of structural characteristics of the families (17). Moderate to acceptable rater reliability was achieved.

We rated each family on 19 variables that described elements of competent family functioning that could be gleaned from the narratives, in the areas of marital satisfaction, parental teamwork, sibling cohesion, and parent/child interactions leading to sufficient nurturance and behavior control for the children (20).

Slide 2

Each characteristic was rated on a five-point scale; and the 19 ratings were reduced to five factors: Conflict, Undercontrol, Estrangement, Father Overcontrol, and Impoverishment.

Let me give you a flavor for these reports, which were quite colorful and descriptive. An example of Conflict rated as "moderately severe" went like this. "Mr. H seemed to resent the verbosity of his wife, her familiarity and her expressiveness which bordered on exaggeration. . . . Mrs. H resented her husband's contradicting her when she would make statements and also his great investment in the children and exclusion of herself."

A second example is of Undercontrol rated "severe," from a family with a sibling subsystem in which all his siblings laughed uproariously at one boy who became silently withdrawn after being criticized for tearing things up and then trying to fix them.

Not all families were considered incompetent. Our third example is of absence of Conflict. This was recorded for a couple who supported each other in dealing with their children, who encouraged the children to talk to the interviewers about themselves, and who obviously enjoyed their childrens' individuality and accomplishment.

All five of the family competence factors were positively intercorrelated. This suggested that it would be beneficial to use a latent variable (like an underlying factor), Family Incompetence, that would account for the intercorrelations among the family factors. Family Incompetence thus represents the five individual family factors in the analyses.

Slide Off

How Were Offspring Assessed? The mental health of offspring was assessed by the Diagnostic Interview Schedule (DIS, Version II) administered when they were at least 18 years old. The DIS provides detailed questions for each of 18 psychiatric diagnoses (1), a structured set of probes, and has been found reliable when employed by lay interviewers (24). The interview provides a count of the symptoms to which an interviewee has assented. Incidentally, the vast majority of symptoms had onsets long after the family interviews were done. Because we were interested in the role of family variables in the emergence of symptoms, we computed an average symptom count for each sibship, which we used as our measure of offspring mental health health or disorder.

Statistics. We used structural equation methodology (16) as our statistical technique because of its ability to test specific causal hypotheses on correlational data. It does this by testing mathematically a hypothesized model, which we think describes the data, against the data themselves. If the hypothesized model differs significantly from the data, it can be rejected and we can try again. The method also allows us to choose the more accurate of two competing models.

Results and Conclusions

The model (or hypothesis) we chose to test was that there is a causal association between family incompetence and offspring symptoms. The two competing hypotheses we tested were that parental illness (independent of family incompetence) causes symptoms and that low social class causes symptoms.

Since we were interested in investigating the effects of parental illness, we created a contrast variable to reflect parental illness. Each family got a score on this variable. Families with parents hospitalized with mental disorder were coded with a +1 on this contrast variable, families with physically ill parents were coded with a zero, and families with nonill parents were coded with a -1. With this variable we could test how parental illness might affect causal paths connecting variables assessing family incompetence and offspring symptoms, with the hypothesis that parental mental disorder would have more effect than physical disorder, which would have more effect than no disorder.

Slide 3

Model 1 tested the hypothesis of a direct, linear, causal association between parental illness, family incompetence, and offspring symptoms. Family Incompetence is represented by a circle to indicate it is a latent variable; squares represent observed variables. Model 1 was statistically acceptable (i.e., it is not significantly different from the data); and both paths in the model were statistically significant. This indicates that it is correct to accept that parental illness increases family incompetence, and family incompetence in turn increases offspring symptoms.

Does parental illness affect mean symptom count directly? Model 2 was generated to test this hypothesis. This second model could not be rejected, but the difference between the first and second models was nonsignificant. This means that the addition of the direct path did not significantly improve the fit of the model to the data.

Now to present the competing hypotheses. Could parental illness increase family incompetence and increase offspring symptoms, but family incompetence not cause symptoms? This model is represented in Model 3, which is rejectable, indicating that a path from family incompetence to offspring symptoms is necessary.

The remaining competing hypotheses involved social class [breadwinner's education and occupation (14)]. This is an important issue because social class and mental disorder are known to covary. We determined that Models 4, 5, and 6, which

contained social class as a replacement for parental illness, could be rejected as invalid models. We were unable to design a plausible model with a significant path from social class to family incompetence.

Let us summarize the results so far. We have demonstrated that there is an association between mental disorder in parents and family incompetence and that this incompetence is related to later symptoms in offspring. Thus, the competence of families in childhood has a causal influence on offspring symptom counts in young adulthood (3, 5, 6, 8).

Slide 4

Now I would like to show you a plot of the data themselves. In this slide, the family incompetence score of each family with a nonill parent is represented, graphed against the average number of symptoms children in the family reported. There is no relationship at all for families of nonill parents between family incompetence and offspring symptoms, as you can see from the correlation coefficient.

Slide 5

These are the data for families with physically ill parents. The correlation between family incompetence and offspring symptoms is not significant here. There is evidence of both greater family incompetence and greater offspring disorder.

Slide 6

Finally, there are the data for children of parents with mental disorder. Here we see both greater family incompetence and a higher number of symptoms in offspring. Also, for this group only, the correlation between family incompetence and offspring disorder is significant.

Slide 7

These data argue for the conclusion that family incompetence and symptoms of offspring mental disorder are associated only in families with parents who have mental disorder, a group that also demonstrates a broad range of family competence and incompetence.

Significance

The importance of our conclusions for risk researchers is that one of the reasons that the competent young adult offspring of disturbed parent gets that way is that the parent's illness has had little impact on the quality of family functioning. Also, symptoms of psychopathology in the young adult period partially may be due to having lived in a dysfunctional family, in addition to signs of the emergence of genetically-based psychopathology, as adoption strategies would suggest.

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Footnotes.

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Slide 1

Sample

Group	Number of families	Number of children
Parents with mental disorder	25	72
Parents with physical illness	10	25
Nonill parents	21	38
TOTAL	56	135

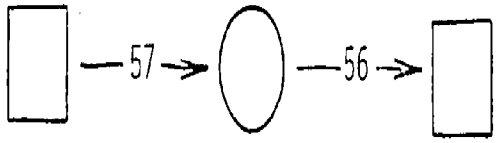
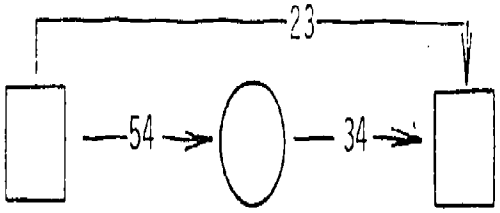
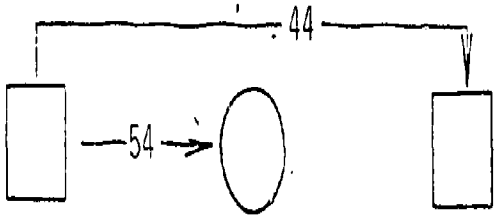
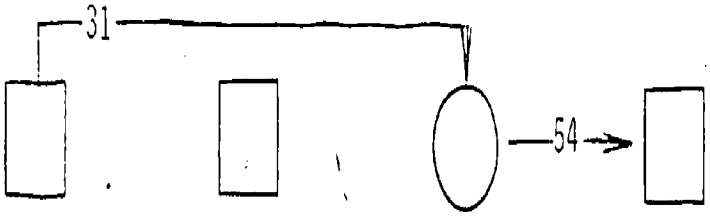
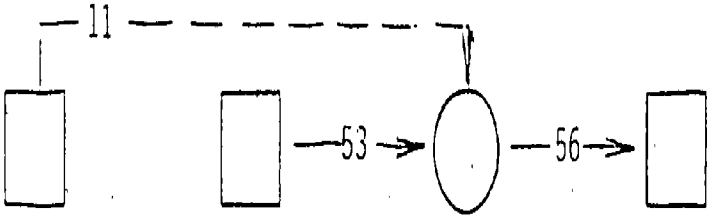
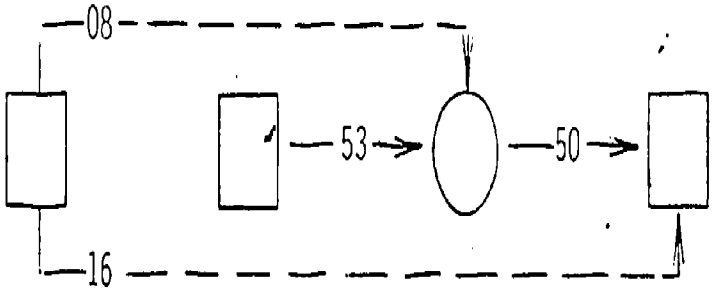
Slide 2

Factors in Family Assessments

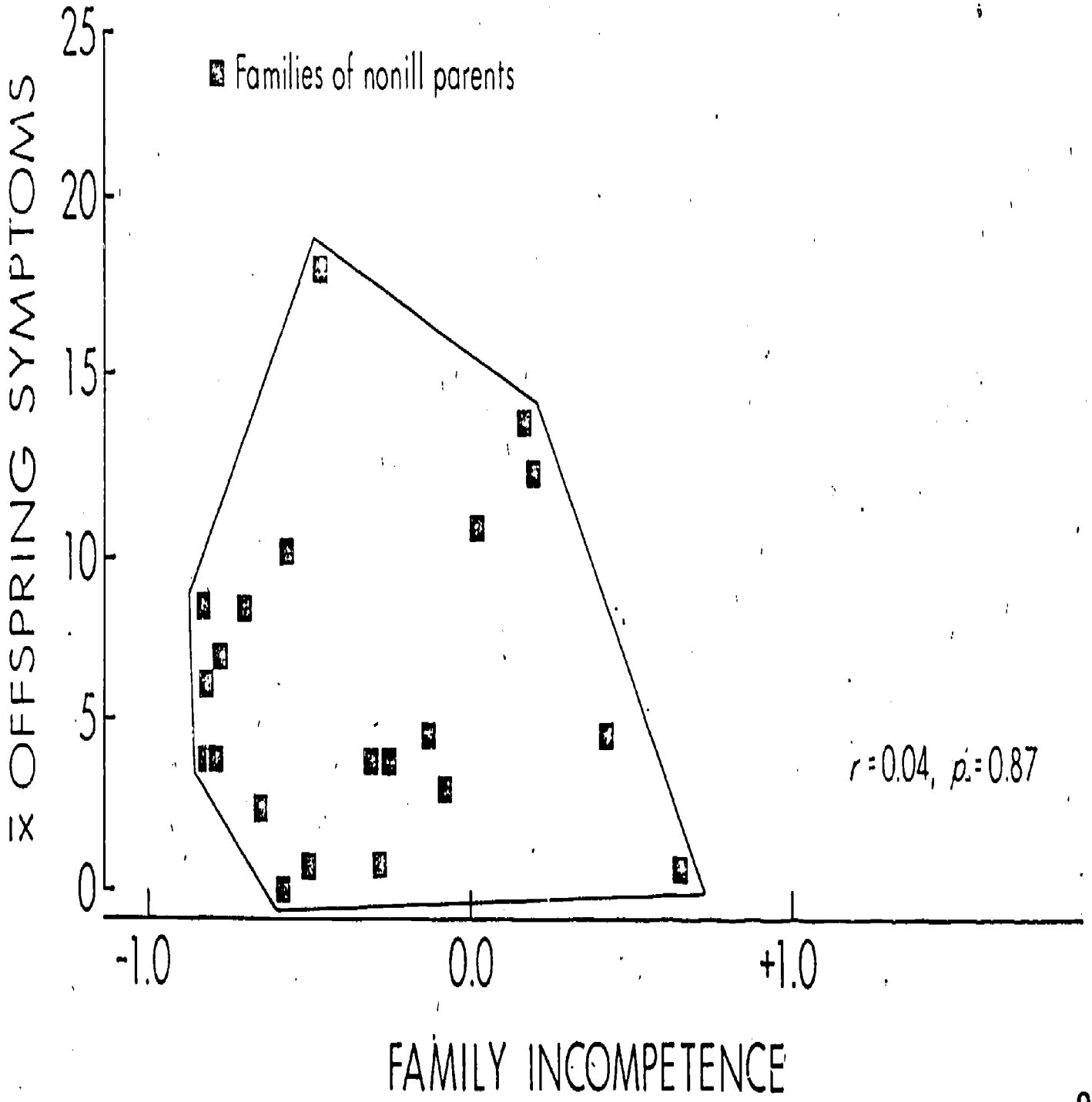
Factors

I.	Conflict:	conflictual marriage; anxious/cold environment; mother enmeshment/overcontrol; mother/father deficient life satisfaction; inadequate parent subsystem
II.	Undercontrol:	mother/father undercontrol; inadequate sibling relationship
III.	Estrangement:	mother/father distance; constricted environment; estranged marriage
IV.	Father Overcontrol:	father overcontrol; father enmeshment
V.	Impoverishment:	impoverished home; impoverished neighborhood

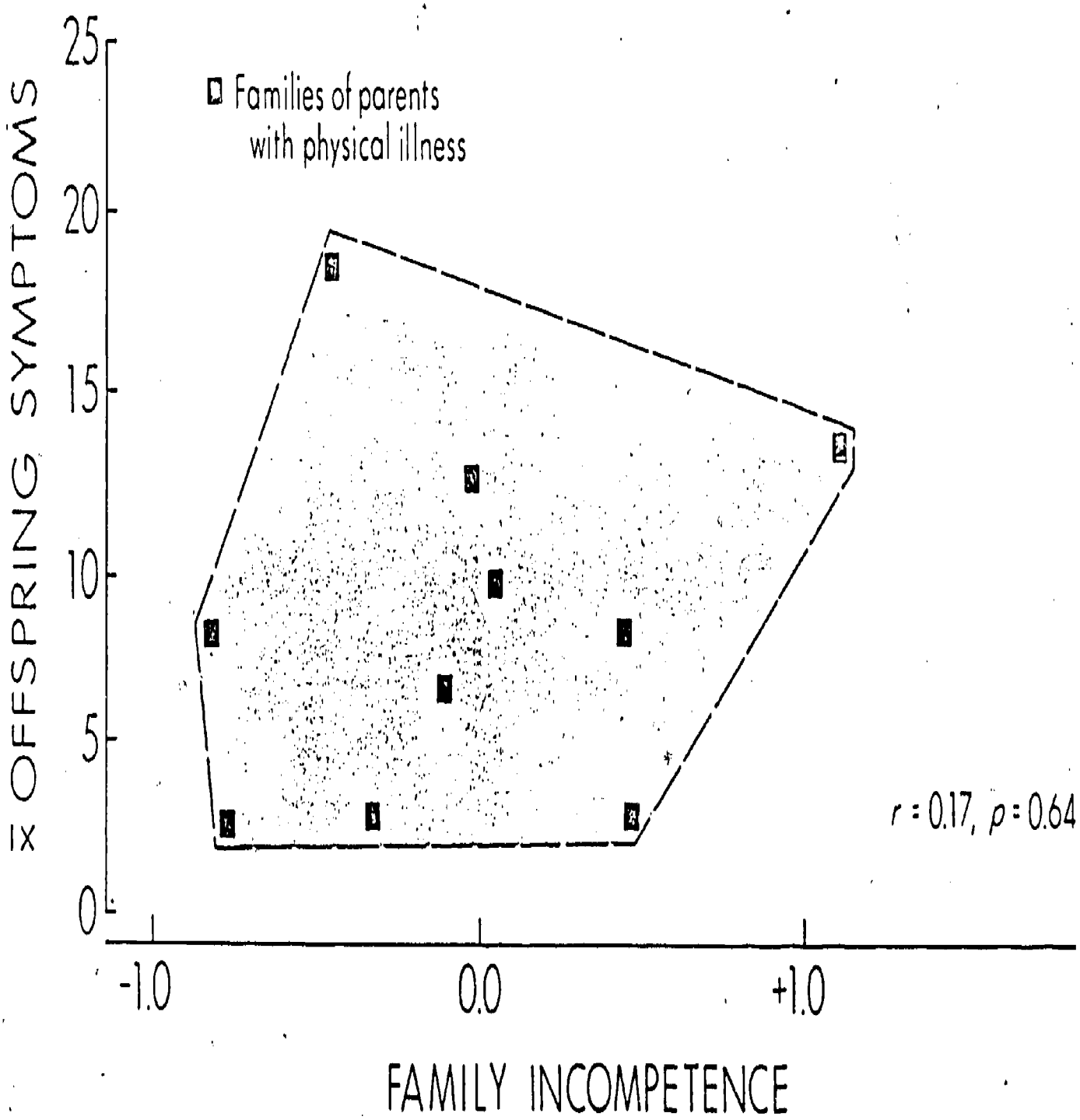
Slide 3

	Social Class	Parent Illness	Family Incompetence	Offspring Symptoms	Comments
Model 1					Accept
Model 2					No improvement over Model 1
Model 3					Reject
Model 4					Reject
Model 5					Social Class path not significant
Model 6					Social Class paths not significant

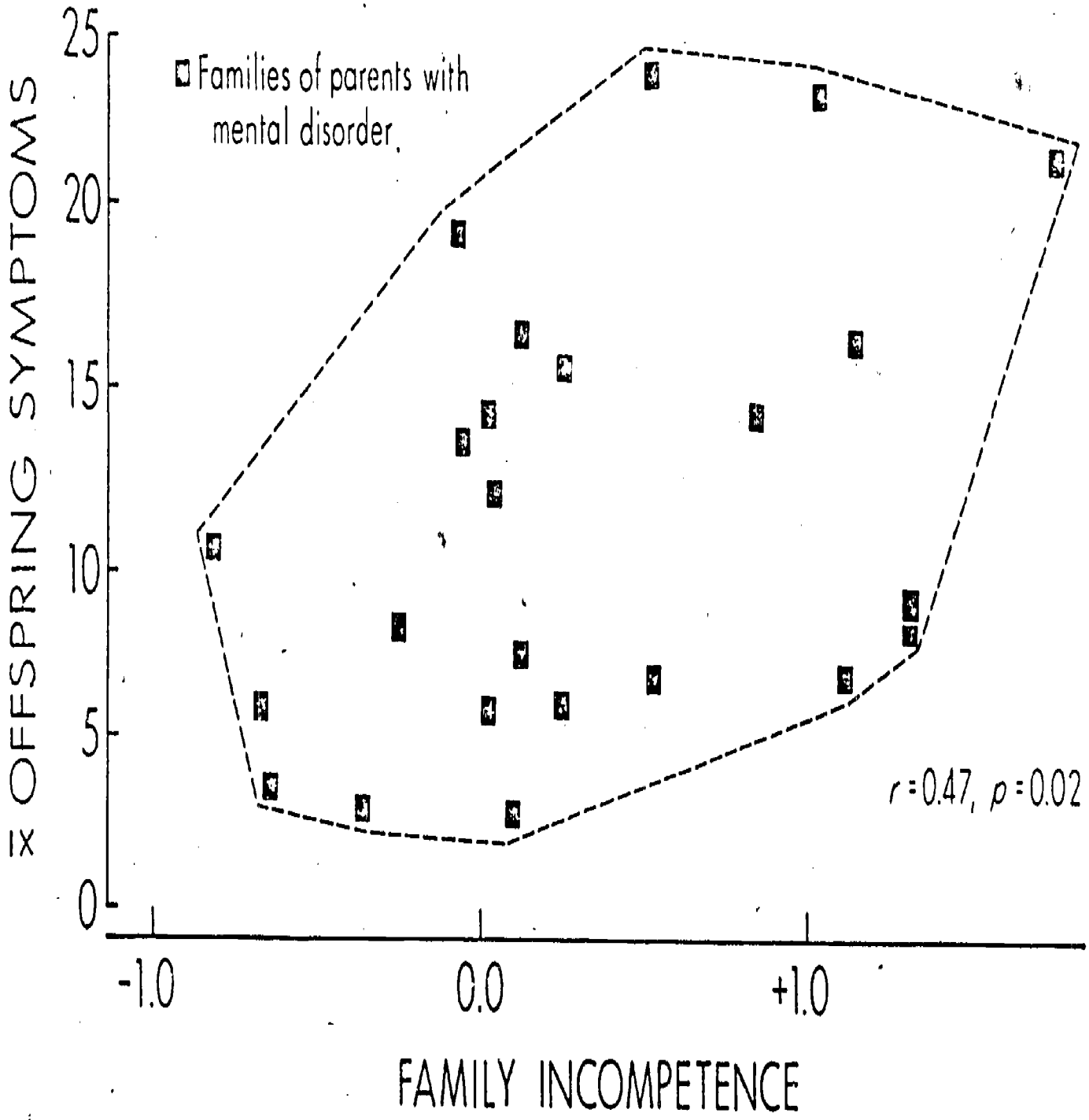
Slide 4


Families of nonill parents
25
20
15
10
5
0
X OFFSPRING SYMPTOMS
-1.0
0.0
+1.0
FAMILY INCOMPETENCE
r = 0.04, p = 0.87

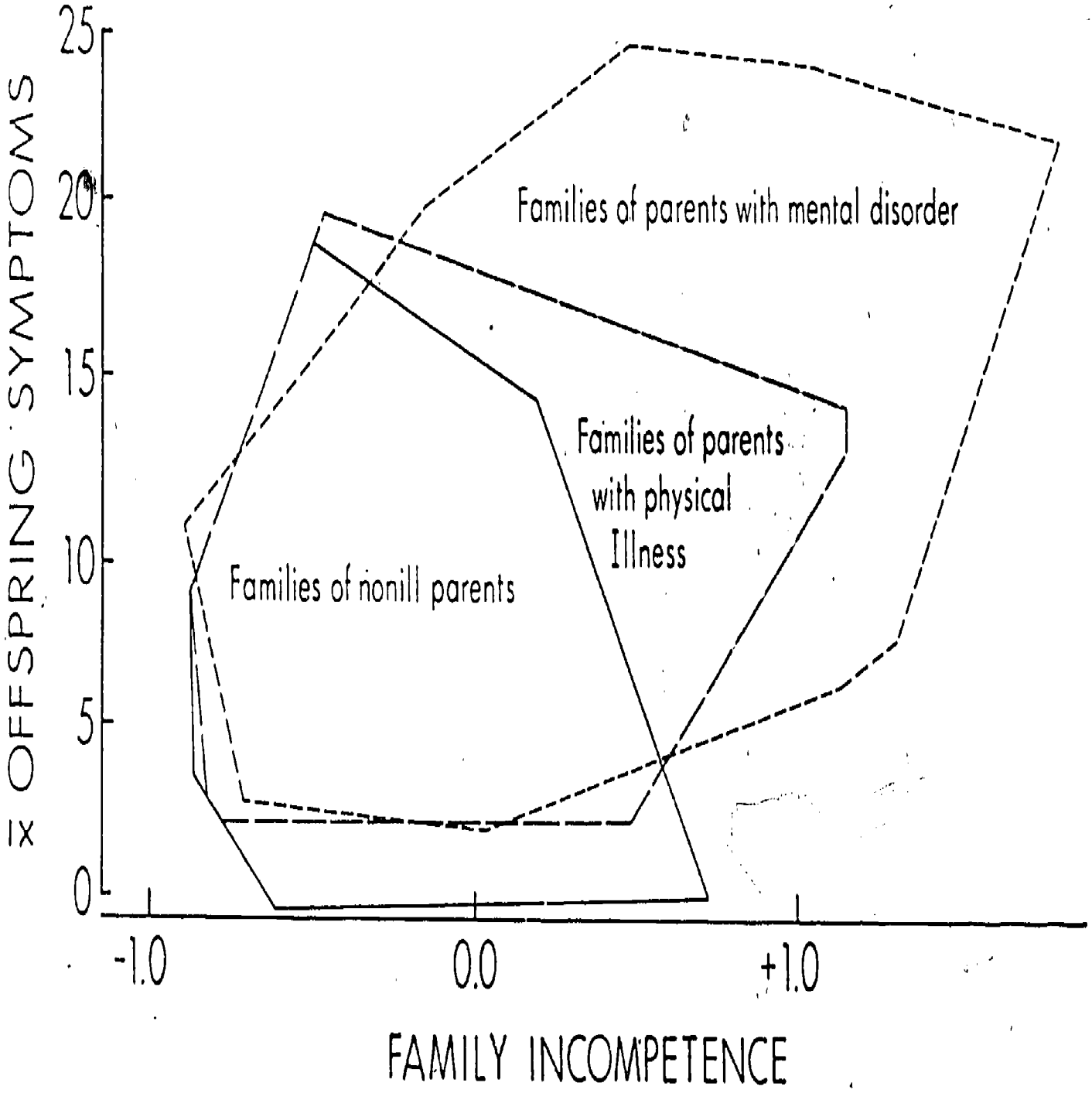
Slide 5?


Families of parents with physical illness
25
20
15
10
5
0
$\bar{x}$ OFFSPRING SYMPTOMS
-1.0
0.0
+1.0
FAMILY INCOMPETENCE
$r = 0.17$, $p = 0.64$

Slide 6


Families of parents with mental disorder
IX OFFSPRING SYMPTOMS
25
20
15
10
5
0
-1.0
0.0
+1.0
FAMILY INCOMPETENCE
r = 0.47, p = 0.02

Slide 7


25
20
15
10
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0
$\bar{x}$ OFFSPRING SYMPTOMS
Families of parents with mental disorder
Families of parents with physical Illness
Families of nonill parents
-1.0
0.0
+1.0
FAMILY INCOMPETENCE