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Genetics is sometimes the Enemy of Parents in the Context of Mental Health Services[1]

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Abstract

The field of genetic epidemiology includes three sets of studies: family, twin, and adoption studies. This commentary argues that findings from these studies are sometimes used to blame parents for the development of developmental disabilities, emotional problems, or problem behaviors in their children. For this reason, this paper concludes that genetics as explanations of psychopathology among children is sometimes the enemy of parents and those parents should avoid mental health practitioners who emphasize genetics in the explanation of why children develop such psychopathology.

Keywords: Parents; Genetics; Family studies; Twin studies; Adoption studies

Introduction

The gene concept in the explanation of mental disorders

Mental health practitioners generally agree with the role of genetics in the presentation of physical characteristics and the development of disorders resulting from a defective gene, including cystic fibrosis, muscular dystrophy, Down syndrome [1]. Mental health practitioners, however, tend to show more disagreement when genetics is used to explain the development of mental disorders or developmental disabilities in children and adolescents [2-4]. Parents, however, are generally unfamiliar with such disagreements among mental health practitioners (e.g., psychologists, psychiatrists, social workers, etc.). In this situation, parents are sometimes blamed for the development of such disorders in their children because such disorders result from "genetic abnormalities" the child inherited from one of the parents. Mental health practitioners who believe that genetics play a critical role in the development of mental disorders or emotional disabilities defend their position with the help of research findings in genetic epidemiology with emphasis on three variants of studies, namely, family, twin, and adoption studies [5-7].

Variants of genetic epidemiology

Fisher reviewed the literature with emphasis on family studies and found that "studies have documented increased incidence of speech and language problems in relatives of children with SLI [specific language impairment], as compared with relatives of matched control individuals" (p. 206; i.e., relatives without SLI) [7]. Barkley [8] reviewed the literature with emphasis on ADHD and found that "over 25% of the first –degree relatives in the families of children with ADHD [the probands] also had ADHD, whereas this rate was only about 5% in each of the other [control] groups" (p. 83).

In a review of the genetic literature with emphasis on twin studies and reading problems, Willcutt et al. [9] found that "[monozygotic] twins were more likely than [dizygotic] twins to be more concordant [i.e., more genetically related] for reading disability" (p. 228). In the case of autism spectrum disorder, Pericak-Vance (2003) observed that "compelling evidence exists that autistic disorder is a genetic disorder. Pooled estimates of concordance rates for MZ [monozygotic] twins versus DZ [dizygotic] twins are 65% and about 3%, respectively" (p. 269). These findings suggests that if a monozygotic twin is diagnosed with autism, the chance that the second monozygotic twin would develop symptoms of autism is much higher in comparison with the development of similar symptoms in one of the dizygotic twins without such symptoms in a given point in time. Additional findings in this context have been reported in twin studies with emphasis on symptoms associated with major depression [10] and ADHD [2,11].

In the design of adoption studies, siblings are adopted by a different family. The researcher then compares the similarities of a selected mental disorder between one of the adopted children with his or her biological parents, and also compared

the same similarities and same mental disorder between the same adoptive child and his or her adoptive parents. The general findings in adoptive studies is that the similarities of a given mental disorder (e.g., symptoms of depression, anxiety, ADHD) are significantly correlated (associated) between the adopted child and his or her biological parents, relative to a lesser correlation in such similarities between the adopted child and his or her adopted parents [7,3,12]. An example is the study by Tharp [13] with emphasis on the genetics of attention-deficit hyperactivity disorder (ADHD). Tharp found that "the rate of ADHD…is much higher in the biological relatives of affected individuals than among adoptive relatives" (pp. 446-447).

Genetics as the enemy of parents

The overall conclusion among family, twin, and adoptive studies is that the "gene" is acritical factorin the explanation for the presence of a given mental disorder shared by some members of a given family. Despite the rejection of the null hypothesis in all studies with emphasis on variants of genetic epidemiology (e.g., twin studies), the statistically significant results are correlational rather than causal. That is, the only valid assertion the investigator can make is that event A (e.g., a twin with autism) is correlated with event B (a sibling may also develop symptoms of autism), but that investigator is not in the position to explicitly state that A is the cause for B. In this context, the investigator asserts the validity of a "correlational" explanation with the help of statistical tricks. For example, the investigator learned during his or he statistical training that it is easier to reject the null hypothesis with criterion levels of statistical significance = 0.05, in comparison with 0.01 where it is more difficult to reject that hypothesis. Similarly, it is more difficult to reject the null hypothesis with two-tailed tests, in comparison with one-tailed test [14]. But despite these tricks, in the case of "correlational" explanations the researcher will never be able to assert without doubt that A is actually what caused B.

Correlational explanations derived from all variants of genetic epidemiology reinforce the belief of some mental health practitioners in that there must be a "gene" responsible for the commonality of symptoms of a given mental disorders among family members [4]. I suggest, however, that the emphasis on findings based on genetic explanations that are essentially correlational in nature sometimes may function as the *enemy of parents*. The reason for this suggestion is that in such explanations parents are often blamed for the development of mental disorders in their children just because they happen to be their parents.For example, [15] reviewed the genetic literature with emphasis on families and ADHD and found that "a history of maternal depression uniquely predicts negative long-term outcome for children with ADHD, including the development of later conduct problems, depression, and suicidal behavior" (p. 198). These authors also found that "there is substantial evidence of links between parental antisocial behaviors and both child ADHD and disruptive problems [e.g., conduct disorder] "(p. 199), and that "genetically informed studies have revealed the strongest evidence for disorder-specific risk transmission for psychopathology from parents to child" (p. 199). In addition, in that review of the literature Johnston and Chronis-Tuscano also found that some studies "found support for a genetic link between maternal alcohol use disorder and offspring risk for ADHD" (p.200). These authors [15], however, did not reveal a crucial point in their review of the literature, namely, that all these findings are correlational and that suggesting that children develop symptoms of ADHD and other "psychopathological" problems because these children inherited such problems from their parents is clearly a case of using genetic arguments against parents [16-17].

The negative consequence of findings derived from all variants of genetic epidemiology is that some mental health practitioners aware of such findings would conduct the initial clinical interview (intake) with the belief that the child's symptoms for a given mental disorder (e.g., ADHD, depression, anxiety, alcohol-related problems, etc.) are the result of a "bad" gene the child received from their parents who also experience similar disorders in the past. This situation should alert parents that genetics is its enemy in certain circumstances. Therefore, if parents "feel" that the mental health practitioner is using such correlational findings to blame them for the mental disorder, emotional disability, or problematic behavior their child is currently experiencing, my suggestion is that parents should quickly search for a different mental health practitioner who is not mentally or cognitively "infected" by those correlational findings. This recommendation is particularly important to remember in those clinical cases where the family history does not show any evidence of parents' psychopathological problems, but the mental health practitioner evaluating the case still blames parents for their child's psychopathology.

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[1]This opinion is an abbreviated version of a more extensive discussion published by the author in his book entitled Informed Parents, Healthy Kids: Information you Need to Know to Find the Right Mental Health Practitioner, published by Nova Science Publishers, 2018, Hauppauge, New York

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