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Discrepancy Between Parents and Children in Reporting of Distress and Impairment: Association with Critical Symptoms

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Abstract

Background: We examined discrepant parent-child reports of subjective distress and psychosocial impairment.

Method: Parent-child pairs ($N = 112$ pairs) completed the Health Dynamics Inventory at intake for outpatient therapy.

Results: Average parent scores were significantly higher than average child scores on distress, impairment, and externalizing symptoms, but not internalizing symptoms. There were significant associations between parent-child discrepancy (i.e. children who reported greater distress or impairment than parents or vice versa) and child endorsement of several notable symptoms (rapid mood swings, panic, nightmares, and suicidal ideation).

Conclusion: Parents tended to report more externalizing symptoms, distress, and impairment than children reported; however, when children report more distress and impairment than parents, this may indicate serious psychological problems.

Keywords: Child psychopathology, discrepant reporting

Obtaining information from multiple sources is an essential component in evidence-based assessments of mental health disorders when working with children and adolescents (Hunsley & Mash, 2007; Mash & Hunsley, 2005). A clinician may obtain information about the presenting problem from the child himself or herself as well as from the child's parents, teachers, or peers. However, parents and children commonly disagree when reporting about the type and degree of psychological problems (Achenbach, McConaughy, & Howell, 1987; De Los Reyes & Kazdin, 2005; Grills & Ollendick, 2002).

The type of the psychological problem influences the magnitude of discrepancy between parent and child reports of psychopathology. Two meta-analyses (Achenbach et al., 1987; Duhig, Renk, Epstein, & Phares, 2000) found evidence that there tends to be more discrepancy between child and parent report of problems related to internalizing disorders as compared to externalizing disorders. Internalizing disorders (e.g. depression, anxiety) tend to cause the child substantial distress, but the associated symptoms may not be readily noticed by parents (Choudhury, Pimentel, & Kendall, 2003; Grills & Ollendick, 2003; Wren, Bridge, & Birmaher, 2004), whereas externalizing disorders (e.g. attention deficit hyperactivity disorder (ADHD), oppositional behavior) tend to be more easily observed by informants (De Los Reyes & Kazdin, 2005). This might lead to relatively greater disagreement (i.e. the child reporting more distress than the parents) for internalizing disorders, even though parents of a child openly showing distress would not likely dispute its existence (Martin, Ford, Dyer-Friedman, Tang, & Huffman, 2004; Wu et al., 1999).

Informant discrepancies were formerly regarded as solely the product of measurement error, but more recent literature has

suggested they also can provide significant, meaningful information about the manifestation of a child or adolescent's psychopathology (Achenbach, 2011; De Los Reyes, 2011). Not only does discrepant reporting provide information about expression of child behaviors in different settings and contexts, but informant discrepancies also provide information about therapeutic outcomes in a way that an individual's report cannot predict. For example, Panichelli-Mindel, Flannery-Schroeder, Kendall, and Angelosante (2005) demonstrated that parent-child discrepancies between the child's report of internal distress impacted the effect of psychotherapy for a clinical sample of children seeking treatment for anxiety disorders. More specifically, Panichelli-Mindel et al. found that children who reported lower levels of internal distress yet whose parent reported that the child had higher distress made fewer improvements in treatment than the children whose report of high distress matched their parent's report of high distress. Reynolds, MacPherson, Matusiewicz, Schreiber, and Lejuez (2011) also found that the larger magnitude between mother and child report of parental knowledge of the child's whereabouts, peers, and daily activities prospectively predicted higher engagement in risky behaviors (e.g. drug or alcohol use, stealing, gambling) in a community sample of adolescent youth.

Research on parent-child discrepant reporting has primarily focused on symptom report. Only two studies that assessed parents and children reports of impairment are present in the literature (Biederman et al., 2007; Jensen et al., 1999). Biederman et al. examined 94 children with ADHD and their mothers to determine whether mothers and children reported differences in mental health problems (as measured by structured diagnostic interviews), including levels of impairment on measures of interpersonal, school, and family functioning. They determined that there was no difference in reported level of impairment between groups in which the mother (but not the child) endorsed ADHD symptoms and groups in which both the child and the mother endorsed ADHD symptoms, suggesting that mothers do not report more impairment than children report. Jensen and colleagues also found similar levels of reported impairment between parents and children across multiple child diagnoses, although one analysis did reveal that parents and children reported significantly different scores on a single measure of impairment among groups with

parents and children endorsing different diagnostic categories. We did not find any studies that directly compared parent and child reports of distress.

The purpose of this study was to extend this literature past evaluating parent-child discrepant reporting of internalizing and externalizing symptoms by investigating the discrepancies between parent's and children's reports of distress and impairment as well. Based on past research, the following hypotheses were specified regarding the parent-child reports of distress and impairment: (1) parents would report higher levels of impairment and externalizing symptoms than their child, since these aspects of psychological health are directly observable by others and (2) children would report higher levels of distress and internalizing symptoms than their parents, as these are less overtly noticeable to parents.

This study also sought to advance the literature through investigating the possible meaningful clinical information about the manifestation of a child or adolescent's psychopathology that informant discrepancies may provide. To this end, we investigated the association between parent-child discrepancy on distress and impairment and endorsement of 12 different critical symptoms (e.g. suicidal ideation). These analyses are unique, making predictions of findings difficult. Nonetheless, the following hypotheses were specified regarding the critical items: (1) the children who reported more distress than their parents would endorse the critical symptoms at a higher rate and (2) the parents who reported more impairment than their child would endorse the critical symptoms at a higher rate.

Method

Sampling and recruitment

Participants were 86 females and 69 males in high school aged 14-18 years ($M = 15.5$, standard deviation (SD) = 1.2) brought to an outpatient treatment facility over a 2-year period. Information about race was unavailable, but the clinic serves predominantly Caucasian clientele. All patients who were seen at the clinic completed intake questionnaires as part of the normal clinic routine, which included the

self-report instrument used to evaluate parent and child report of psychological functioning. Also part of the clinic's normal intake procedure, parents and children completed consent forms granting permission to allow examination of the data in research prior to intake. Since the data were collected as part of the routine procedure of an outpatient clinic, recruitment rate was impossible to determine as the number of clients, either parent or child, who declined either to complete the measure or to allow researchers to use the data was not tracked. Clinicians and staff at the clinic reported that the vast majority of clients, both child and parent, completed the measures. Marquette University's Institutional Review Board approved the current analyses. Inclusion criteria included age 14–18 years, data available from at least one parent and the child, and consent to have information included in the study. There were no exclusion criteria.

Measures

Children completed the Health Dynamics Inventory–Self (HDI-S), a self-report instrument for individuals aged 14 years and older that assesses respondents' mental health within the previous 2 weeks. Parents completed the Health Dynamics Inventory–Parent (HDI-P), which is used to report on the child's mental health. Both the HDI-S and the HDI-P include three scales measuring personal distress, psychosocial impairment, and psychiatric symptoms (Saunders & Wojcik, 2003). For all HDI items, lower scores indicate less distress, less impairment, and fewer symptoms. Scale scores were created by calculating the mean of all items on each scale. Demographic information was also obtained.

Saunders and Wojcik (2004) found support for scale validity using a sample of 477 mental health patients and 477 nonpatients. The mental health patients obtained significantly higher mean scores on 45 of the 48 items. Of the three items that did not distinguish between patient groups, all participants endorsed two items infrequently (i.e. an item assessing "purging behaviors" and an item assessing "lying about or hiding drinking or drug use") while all participants frequently endorsed the item "fear of gaining weight or becoming fat." Independent samples *t*-tests also revealed that mental health patients endorsed more pathological scores than nonpatients on

the Distress, Global Impairment, and Psychological Symptoms Scales. Further information regarding the reliability for the personal distress, psychosocial impairment, and psychiatric symptoms scales is provided below.

Distress Scale. The Distress Scale contains four items, which assess current emotional health, current level of distress, how content or satisfied the adolescent currently feels, and how happy or cheerful the adolescent has been recently. Items are answered on scales ranging from 1 to 5, with higher numbers indicating greater distress, and items are summed to create the Distress Scale score. Normative data analyses indicated that the Distress Scale's internal consistency was adequate (Cronbach's alpha for the HDI-P was .82 and for the HDI-S was .88; see Saunders & Wojcik, 2003). For this study, the internal consistency of the HDI-P Distress Scale was .85 and of the HDI-S Distress Scale was .86.

Global Impairment Scale. The Global Impairment Scale items ask respondents to "rate how much difficulty emotional or behavioral problems cause in your (your child's) ability to do the following?" The scale consists of 12 items, including items asking about the adolescent's ability to initiate and concentrate on tasks, meet demands of work or school, have satisfying relationships with friends, meet obligations to family members, engage in healthy habits, obtain enjoyment from leisure activities, use other people to help manage stress, and do things to help the child feel good about himself or herself. Items are responded to on a 4-point scale, ranging from "no difficulty at all" (=0) to "a great deal of difficulty" (=4). Normative data analyses (Saunders & Wojcik, 2003) indicated that the internal consistency of both versions of the Global Impairment Scale was adequate (Cronbach's alpha for both parent and child versions of the Impairment Scale was .93). For this study, the internal consistency of the parent Global Impairment Scale was .88 and of the child Global Impairment Scale was .92.

Symptoms scales. The HDI-S and the HDI-P both include a list of symptoms and ask how often the child has been bothered by each on a 5-point scale ranging from "not at all" (=0) to "several times per day or more" (=4). For this study, we combined the Depression and

Anxiety Subscales (Saunders & Wojcik, 2003) to create the Internalizing Symptoms Scale, which consisted of 14 items assessing sadness, self-esteem, panic, nightmares, and intrusive thoughts. In this study, the internal consistency (Cronbach's alpha) for the HDI-P Internalizing Symptoms Scale was .90 and for the HDI-S Internalizing Symptoms Scale was .92.

The Externalizing Symptoms Scale (called the Behavior Problems Subscale in Saunders and Wojcik (2003)) comprises six items on the HDI-P and four items on the HDI-S. On both versions, three items evaluate how often the child exhibits angry outbursts, has problems with sexual impulses, and uses force when angry. The HDI-S Externalizing Symptoms Scale includes an item evaluating subjective experiences of anger. The three additional items on the HDI-P Externalizing Symptoms Scale evaluate the extent to which the child refuses consequences, ignores requests, and breaks the law. The internal consistency of the HDI-P Externalizing Symptoms Scale was .84 and for the HDI-S Externalizing Symptoms Scale was .75.

Critical symptoms. In all, 12 critical symptoms, found on both the HDI-S and HDI-P, were examined. Some of the symptoms examined were part of the Internalizing Symptoms Scale (i.e. "rapid mood swings"; "repeated thoughts of death or suicide"; "nightmares, flashbacks, or painful memories"; "repeated and intrusive thoughts, ideas, or impulses"; and "panicky feelings"), some were part of the Externalizing Symptoms Scale (i.e. "using force when angry or upset"; "lying about or hiding drinking or drug use"; and "feeling out of control of anger"), but some were from other subscales of the HDI-S and HDI-P (i.e. "feeling that your thoughts or actions are controlled against your will," "purging behaviors," "binge eating," and "using alcohol or drugs excessively").

Table 1. Parent versus child reports.

Scale	<i>M (SD)</i>	<i>M (SD)</i>	<i>t</i>	<i>p</i>
	HDI-S	HDI-P		
Distress	2.81	3.16 (0.80)	3.96	<.001
Impairment	2.14	2.48 (0.69)	4.29	<.001
Internalizing Symptoms	2.67	2.70 (0.76)	0.26	ns
Externalizing Symptoms	1.79	2.27 (0.87)	5.04	<.001

HDI-S: Health Dynamics Inventory–Self; HDI-P: Health Dynamics Inventory–Parent; SD: standard deviation.

Data analysis

Two-tailed, paired-sample *t*-tests were conducted to determine whether parents or children obtained higher scores on the scales indicating problems for the child, that is, on the Distress Scale, the Externalizing Symptoms Scale, the Internalizing Symptoms Scale, and the Global Impairment Scale. Furthermore, standardized difference scores were used to investigate the differences between child and parent reports on the Impairment and Distress Scales. The standardized difference score was created by first converting the Impairment Scale and Distress Scale on both the HDI-S and the HDI-P into *z* scores. Then, the *z* score for each of the HDI-P scales was subtracted from the corresponding *z* score for the HDI-S scale (i.e. to create the standardized difference between parent and child report of impairment, the *z* score of the HDI-P Impairment Scale was subtracted from the *z* score of the HDI-S Impairment Scale). Thus, positive *z* scores indicate that the child reported more distress/impairment than the parent and negative *z* scores indicate that the parent reported more distress/impairment than the child. The standardized difference scores for the Impairment and Distress Scales were then correlated with both the parent and child's report on each of the 12 critical symptoms. This method of analysis is in congruence with De Los Reyes and Kazdin's (2004) recommendation that the standardized difference score should be used as the principal way to measure informant discrepancy.

Results

Comparison of parent and child reports of symptoms, distress, and impairment

Average parent scores indicated by the *t*-test analyses were significantly higher than average child scores on the Distress Scale, the Externalizing Symptoms Scale, and the Global Impairment Scale (but not the Internalizing Symptoms Scale—see Table 1). Additional analyses (not reported) indicated no significant differences between parents and children on any of these scales when comparing children by age and by gender.

Association between parent–child discrepancy on reports of distress and impairment and critical symptoms

The relationship between the parent–child standardized difference scores on the Distress and Impairment Scales and the 12 critical symptoms on both the HDI-S and HDI-P were examined in bivariate Pearson correlations. The following critical symptoms examined were as follows: rapid mood swings; repeated thoughts of death or suicide; repeated and intrusive thoughts, ideas, or impulses; feeling that your thoughts or actions are controlled against your will; nightmares, flashbacks, or painful memories; purging behaviors; binge eating; panicky feelings; using alcohol or drugs excessively; using force when angry or upset; lying about or hiding drinking or drug use; and feeling out of control of anger. Due to the large number of analyses, alpha was adjusted to .001 via Bonferroni correction to indicate statistical significance.

Table 2 displays the correlations between the standard difference scores for the Distress and Impairment Scales and the child report of the 12 critical symptoms. After statistical adjustment, there was a significant positive association between increased parent–child discrepancy on the Distress Scale and increased child ratings of rapid mood swings ($r = .33, p = .001$), repeated thoughts about death or suicide ($r = .32, p = .001$), feelings of panic ($r = .35, p < .001$), and

repeated intrusive thoughts ($r = .35, p < .001$). There also were significant positive associations between increased parent-child discrepancy on the Impairment Scale and the same four critical items: rapid mood swings ($r = .33, p = .001$), repeated thoughts about death or suicide ($r = .41, p < .001$), feelings of panic ($r = .47, p < .001$), and repeated intrusive thoughts ($r = .33, p = .001$).

Table 2 also displays the correlations between the standard difference scores for the Distress and Impairment Scales and the parent report of the 12 critical symptoms. After statistical adjustment, there was a significant negative association between parent-child discrepancy on the Distress Scale and parent ratings of the child feeling out of control of anger ($r = -.34, p < .001$). There also were significant negative associations between parent-child discrepancy on the Impairment Scale and parent ratings of the child feeling out of control of anger ($r = -.38, p < .001$) and using force when angry or upset ($r = -.31, p = .001$).

Discussion

In partial support of the hypotheses, parents rated children higher than children rated themselves on reports of distress, impairment, and externalizing symptoms, but not on internalizing symptoms. The latter finding is contrary to the hypotheses and prior work that indicates children tend to be more accurate informants when rating their internalizing symptoms. These results suggest that children in this sample may be reporting to parents the internalizing symptoms (such as anxiety or depression) that they are suffering, and that parents generally concur when reporting these to clinicians.

There also were several notable associations between the magnitude of parent-child discrepancy on reports of distress and impairment and various critical items; these results partially supported hypotheses. Specifically, as a child reported higher distress and impairment than his or her parent, he or she reported higher scores on several critical items, which included higher endorsement of rapid mood swings, repeated thoughts about death or suicide, feelings of panic, and repeated intrusive thoughts. Also, as a child reported lower distress and impairment than his or her parent, the parent reported

higher scores of the child feeling out of control of anger. Finally, as the child rated lower impairment than his or her parent, the parent reported higher scores of the child using force when angry or upset.

These findings advance prior work that suggests that informant discrepancy may provide meaningful clinical information about a child's presentation (e.g. Achenbach, 2011; De Los Reyes, 2011) as well as have significant implications for clinicians. Specifically, when children report more distress or impairment than parents, clinicians should remain cognizant of the likelihood that this may be indicative of substantial psychological difficulties (i.e. rapid mood swings, suicidal ideation, panic, and repeated intrusive thoughts) the child is experiencing. It is especially important for clinicians to be aware that children who report more distress or impairment than parents may be more likely to experience suicidal ideation.

Table 2. Correlations between parent-child standard difference scores for Distress Scale and Impairment Scale and child and parent report of critical items.

	HDI-S critical items		HDI-P critical items	
	Standard difference Distress Scale	Standard difference Impairment Scale	Standard difference Distress Scale	Standard difference Impairment Scale
Rapid mood swings	.33*	.33*	-.23	-.20*
Repeated thoughts about death or suicide	.32*	.41**	.01	.05
Feelings of panic	.35**	.47**	-.09	-.01
Nightmares, flashbacks, and painful memories	0.27	0.28	.04	-.01
Repeated or intrusive thoughts, and ideas	.35**	.33*	.02	-.05
Lying about or hiding drinking and/or drug use	0.21	0.16	-.12	-.24
Using force when angry or upset	0.24	0.17	-.16	-.31*
Feeling out of control of anger, and ashamed of anger	0.22	0.21	-.34**	-.38**
Feeling that your thoughts or actions are being controlled	0.11	0.29	-.17	.05
Purging behaviors	0.12	0.17	.001	-.04
Binge eating	0.11	0.17	-.04	-.14
Using alcohol or drugs excessively	0.13	0.08	-.07	-.18

HDI-S: Health Dynamics Inventory-Self; HDI-P: Health Dynamics Inventory-Parent.
*p = .001. **p < .001.

One limitation of this study is that the racial and ethnic backgrounds of the participants were not recorded, whereas it is important to consider how different racial or ethnic groups perceive mental health and the psychological experiences of children (e.g. Lau et al., 2004). Another limitation of this study is that the researchers could not determine whether it was the mother or the father reporting. Fathers and mothers may view and report problems differently, so examination of discrepancies based on parent gender may provide important additional information. The importance of considering mothers and fathers separately in reports of their child's mental health

has been demonstrated (De Los Reyes & Kazdin, 2005; Treutler & Epkins, 2003).

In summary, this study supports recent work that proposes that discrepancies between parent and child reports of psychological problems are clinically meaningful and important treatment considerations. Although psychotherapy is generally effective among youth (Garcia-Lopez et al., 2006), many children with mental disorders do not receive any type of treatment (e.g. Kataoka, Zhang, & Wells, 2002; Kodjo & Auinger, 2004). Untreated mental illness is a serious public health concern, as youths with mental disorders are at higher risk of suicide as well as social and academic impairment (e.g. Department of Health and Human Services, 1999; Wood, 2006). Since children generally rely on parents for access to health care, understanding the incongruence between the perspectives of children and parents may improve both access to mental health treatment and the effectiveness of the intervention once the child is engaged in treatment.

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