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Parenthood and severe mental illness: Relationships with recovery

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Abstract

Objective—Parenting is an important life domain for many people, but little research examines the parenting experience and its role in recovery for those with a severe mental illness. The current study provides preliminary evidence of how these concepts are related in a sample of individuals living with severe mental illness attending a community mental health center. We also explored potential differences between mothers and fathers, which could help better tailor services to meet the needs of parents with severe mental illness.

Methods—Data were obtained during baseline interviews for a study testing an intervention designed to increase shared decision-making in psychiatric treatment. Participants (N = 167) were administered measures of patient activation, recovery, autonomy preference, hope, and trust in providers. We compared parents and non-parents and compared mothers and fathers using chi-square, *t*-tests, and, where appropriate, analysis of covariance.

Results—Parents had a significantly higher level of trust in their psychiatric care provider than non-parents. Contrary to hypotheses, parents were less active in their treatment and preferred less information-seeking autonomy than did non-parents, but did not differ on other recovery-related indices. No differences on recovery-related indices were detected between mothers and fathers. Secondary analyses revealed parents with minor children had more hope than parents of older children.

Conclusions and Implications for Practice—Although parents may have higher levels of trust in their physicians, our preliminary findings suggest that parents with severe mental illness may benefit from increased efforts to help them be more active and interested in information about their illnesses.

Keywords

parent; severe mental illness; recovery

Although parenting is an important life domain for many people, there is little research about the parenting experience for those with a severe mental illness and even less on the

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role of parenting in recovery. This is a surprising oversight, given high rates of parenthood are typically found in community-based samples. For example, the National Comorbidity Survey found that rates of parenthood for those with severe mental illness are similar to or higher than those without a mental illness, with 67.2% versus 62.4% for women and 75.5% versus 52.9% for men (Nicholson, Biebel, Katz-Leavy, & Williams, 2002). Although some have found lower rates of parenthood ranging from 36–38% (Gewurtz, Krupa, Eastabrook, & Horgan, 2004; Hearle, Plant, Jenner, Barkla, & McGrath, 1999), others have found rates comparable to those in the National Comorbidity Study (Joseph, Joshi, Lewin, & Abrams, 1999).

In an empirical investigation of the recovery concept and its principal components, Resnick, Fontana, Lehman, and Rosenheck (2005) identified four domains that serve as the building blocks to recovery: feeling satisfied with one's quality of life, having hope and optimism for the future, feeling empowered in one's life, and having knowledge about mental health and possible treatments. Given the key role of parenthood for many, it is likely that parenting is related to a number of these recovery-related concepts. First, with respect to the recovery concept of feeling satisfied with quality of life, evidence indicates parenting is an important and rewarding experience for parents with severe mental illness. In several qualitative studies, mothers with severe mental illness have described being a parent as fulfilling, noting that parenthood gives their lives meaning (Diaz-Caneja & Johnson, 2004; Mowbray, Oyserman, Bybee, MacFarlane, & Rueda-Riedle, 2001; Mowbray, Oyserman, & Ross, 1995; Sands, 1995; Sands, Koppelman, & Solomon, 2004). Second, with respect to feeling hope and optimism, mothers have expressed a variety of hopes for their children, such as a life free of abuse and the ability to graduate high school (Sands, 1995). Given the positive aspects of parenting and the hopes typically held for children, it may be that those with severe mental illness who are parents are more hopeful than non-parents. Hope has been repeatedly recognized as a concept integral to recovery (Jacobson & Greenley, 2001; Noordsy et al., 2002; Resnick et al., 2005), and may play a key role in how parents with severe mental illness view the future for themselves and their children.

The two other domains of recovery, empowerment and having knowledge about one's illness, may also be related to parenting. Closely related to empowerment, autonomy (i.e., the desire to be informed and involved in treatment decisions) has been identified as a key concept in the recovery movement (Onken, Dumont, Ridgway, Dornan, & Ralph, 2002), but autonomy preferences in psychiatric decision-making have not been well studied, and have not yet been examined in parents with severe mental illness. A further related area of interest is consumer activation in psychiatric treatment. Activation in treatment is a function of one's knowledge, confidence, and skills in managing illness (Hibbard, Stockard, Mahoney, & Tusler, 2004). Although this would seem a central concept to recovery, there is limited research available regarding activation in mental health treatment (Druss et al., 2010; Green et al., 2010; Kukla, Salyers, & Lysaker, 2013; Salyers, Matthias, et al., 2009), and no study has investigated the relationship between parenthood and patient activation. Although research is limited, we hypothesized higher levels of both preferences for autonomy and activation in treatment among parents with severe mental illness, due to these consumers' desire to make the best choices for both themselves and their children.

Despite the potentially recovery-promoting role of parenthood, parenting needs are often not addressed in mental health services for adults with severe mental illness, and consumers report numerous unmet parenting needs (Brunette & Dean, 2002; Nicholson & Biebel, 2002; Nicholson, Biebel, Hinden, Henry, & Stier, 2001; White, McGrew, & Salyers, 2013). Relationships with treatment providers are important for these consumers, considering the often chronic nature of severe mental illness, the close relationships many consumers maintain with health care professionals, and the effects of these relationships on several aspects of recovery, including consumers' feelings of empowerment, their perceived knowledge, and hope for the future. Although little research on physician trust for people with severe mental illness exists, studies of other populations have shown that patients' level of trust in their physicians is related to how often patients seek care, the type of information they are willing to reveal, adherence to treatment plans, level of engagement in making treatment decisions, satisfaction with care, and treatment follow-up (Bova, Fennie, Watrous, Dieckhaus, & Williams, 2006; Hall et al., 2002; Kraetschmer, Sharpe, Urowitz, & Deber, 2004; Safran et al., 1998). Issues of trust in physician and subsequent disclosure may be particularly salient to parents with severe mental illness. These parents report feeling mental health clinicians do not address this important aspect of their lives (Ackerson, 2003; Nicholson et al., 2001), which may impact their perceived quality of care and their engagement in services. Fear of loss of custody is a recurring theme in the literature, with parents reporting reticence to bring up mental health concerns or parenting problems with their physicians (Bassett, Lampe, & Lloyd, 1999; Nicholson, 1996). Indeed, parents who experienced custody loss of their children also reported a general loss of trust in mental health professionals (Diaz-Caneja & Johnson, 2004), indicating that being a parent may impact consumers' level of trust in their psychiatric care providers. Given these findings, we hypothesized that parents would have less trust in their physicians than non-parents.

Although research on parenthood's effects on recovery-related concepts is limited, some research has separately investigated parenting issues for mothers and fathers with severe mental illness. Mothers with severe mental illness spend considerable amounts of time engaging in childrearing activities, so environmental supports and specific knowledge or skills training are needed (Brunette & Dean, 2002; Mowbray et al., 2001). Though more mothers than fathers with severe mental illness are primary caregivers of children (Jones, Macias, Gold, Barreira, & Fisher, 2008), a substantial number of men report living with their children and appear to have an impact on the wellbeing and developmental outcomes of these children (Fletcher et al., 2012). One study (N = 806) that compared mothers and fathers with severe mental illness to non-parents with severe mental illness found 46% of the women were mothers and 21% of the men were fathers (Nicholson, Nason, Calabresi, & Yando, 1999). Fathers were significantly older than non-fathers, more likely to be racial/ethnic minorities, and more likely to have ever been married. Compared to mothers, fathers were significantly younger, but did not differ in current/past marital status or other background characteristics. Interestingly, most fathers were no longer married, highlighting the potential need for assistance with custody and/or visitation. To date, no research of which we are aware has investigated differences between mothers and fathers with severe mental illness regarding recovery-related areas of functioning, such as autonomy, hope, activation, or trust in provider. Given the lack of parental support typically provided in

mental health services, a better understanding of how mothers and fathers view these different areas may be important when developing future interventions and services. Exploratory evidence in this area will increase available information about the intricacies of parenthood in consumers with severe mental illness.

Considering the lack of research examining associations between parenthood and recovery-related constructs in people with severe mental illness, the current study aims to provide preliminary evidence of how these concepts are related in a sample of individuals receiving services at a community mental health center. Using baseline data from a longitudinal study of shared decision-making in treatment of severe mental illness, we hypothesized that parenthood would be positively associated with measures of hope, activation in treatment, autonomy preferences, and perceptions of recovery. We hypothesized that parenthood would be negatively associated with trust in physicians. We also explored potential differences between mothers and fathers in order to yield helpful information about how to tailor services to meet the needs of parents with severe mental illness.

Method

Participants

Participants were recruited from two outpatient clinics and two Assertive Community Treatment (ACT) teams serving consumers with severe mental illness within one urban community mental health center. Inclusion criteria included being served by one of the four teams in the Community Support Services program serving people with schizophrenia spectrum disorder, bipolar disorder, or major depressive disorder, English fluency, willingness to be interviewed 3 times over the course of 18 months, and agreement to have 3 visits with the psychiatric prescriber audiotaped. Consumers were not eligible for the study if they were planning to leave the community mental health center or change providers within the center during the 18-month timeframe of the study; consumers were not approached for study participation if they required security escort at the mental health center.

Procedure

Data were obtained during baseline interviews in a study of CommonGround, an intervention designed to increase shared decision-making in psychiatric treatment (Deegan, Rapp, Holter, & Riefer, 2008). Upon arriving for a visit with the psychiatric prescriber, potential participants were approached by trained research assistants. Clinic staff notified the research team if any consumer should not be approached (e.g., in crisis). The research assistants then screened participants for eligibility and completed an informed consent process that included a brief test of understanding. Consumers were paid \$20 for the interview. All procedures were approved by the Indiana University Institutional Review Board.

Our study team approached 281 consumers, of whom 167 (59.4%) participated in the study. Ninety-three (30.2%) consumers declined to participate, predominantly for lack of interest. Other reasons for non-participation included inability to pass the cognitive screener ($N = 21$,

6.8%) and conflicts preventing participation among otherwise interested consumers (e.g., no time on the day of clinic visit; $N = 26$, 8.5%).

Measures

Demographics—We administered a demographic questionnaire to collect information pertaining to participant sex, race, age, marital status, education, employment, and housing. We asked for information regarding participants' number of children, custody of minor children, and for those without custody, the average time spent with their children.

Recovery—The Recovery Assessment Scale (RAS) is a 41-item scale that measures perceived level of recovery from psychiatric illness (Corrigan, Giffort, Rashid, Leary, & Okeke, 1999). Items are rated from 1, *strongly disagree*, to 5, *strongly agree*. An example item on the RAS reads "I have a desire to succeed." The RAS has been found to have acceptable test-retest reliability ($r = .88$) and internal consistency ($\alpha = .93$) (Corrigan et al., 1999). We used the overall total score (sum of all items); the Cronbach's alpha in the current sample was .94.

Patient Activation—The Patient Activation Measure (PAM-MH) is a 13-item scale that measures a consumer's level of activation in mental health treatment, with scores ranging from 0–100 (100 = highest activation) (Green et al., 2010). Items are rated from *disagree strongly* to *agree strongly*. An example item on the PAM-MH reads "I am confident I can help prevent or reduce problems associated with my mental health." The initial PAM was developed for samples with chronic physical illness (Hibbard et al., 2004) and has been adapted for use in mental health (Green et al., 2010). The PAM-MH has also been validated for use with individuals with severe mental illness and found to have good internal consistency ($\alpha = .83$) (Salyers, Matthias, et al., 2009). In the current study, the PAM-MH demonstrated a similar level of internal consistency ($\alpha = .78$).

Trust in Health Care Providers—The Health Care Relationship Trust Scale (HCRT) is a 15-item measure developed to assess the level of trust patients with chronic medical conditions hold for their health care providers (Bova et al., 2006). HCRT items are rated from 0, *none of the time*, to 4, *all of the time* and assess three factors: interpersonal communication, respectful communication, and professional partnering skills/collaborative trust, but a total score is used (Bova et al., 2006). An example item on the HCRT reads "[My doctor] is committed to providing the best care possible." The HCRT has good internal consistency (alphas range from .92-.95), but lower test-retest reliability after a 2–4 week period ($r = .59$) (Bova et al., 2006). In the current sample, the HCRT had good internal consistency ($\alpha = .91$).

Autonomy in Decision Making—The Autonomy Preference Index (API) is a 14-item measure designed to assess preferences related to autonomy in medical decision-making (Ende, Kazis, Ash, & Moskowitz, 1989). Items are rated from 1, *strongly disagree*, to 5, *strongly agree* and form two subscales: information seeking and decision-making autonomy. An example item from the API decision-making subscale reads, "You should go along with your doctor's advice even if you disagree with it." An example item from the API

information-seeking subscale reads, “As you become sicker you should be told more and more about your illness.” The API has been found to have good internal consistency (alpha = .82 for both subscales) and test-retest reliability in non-mental health samples ($r = .84$ for the decision making subscale and $r = .83$ for the information seeking subscale) (Ende et al., 1989). The API also has been used in mental health samples (Hamann, Cohen, Leucht, Busch, & Kissling, 2005; O’Neal et al., 2008). In our sample, due to poor item-total correlations, we deleted three items from the scale, leaving four items in the decision-making subscale (alpha = .68) and seven in the information-seeking subscale (alpha = .87).

Hope—The State Hope Scale is a 6-item scale used to measure hope (Snyder et al., 1996). We used a modified response scale with items rated from 1, *definitely false*, to 4, *definitely true*. An example item from the State Hope Scale reads, “There are a lot of ways around any problem that I am facing now.” The State Hope Scale has good internal consistency (alpha ranges from .82-.95; Snyder et al., 1996) and has been successfully used with the modified response scale in samples of consumers with severe mental illness (Kukla et al., 2013; McGrew, Johannesen, Griss, Born, & Vogler, 2004; Salyers, Godfrey, et al., 2009; Salyers et al., 2010). In our sample the State Hope Scale demonstrated good internal consistency (alpha = .78).

Analyses

All analyses were conducted in SPSS version 20. Before conducting main analyses, we examined associations between demographic data and recovery-related indices using analysis of variance (ANOVA) and correlations to identify covariates. Possible covariates included age, race/ethnicity, gender, marital status, employment, education, and housing status. Variables were defined as covariates when associated with recovery-related indices at $p < .05$. When covariates were not present, differences between parents and non-parents were examined using chi-square for categorical data and t-tests for continuous data. When covariates were present, differences on recovery-related indices were examined using analysis of covariance (ANCOVA). Alpha was set at $p < .05$. To examine differences between male and female parents, we compared these subgroups using chi-square for categorical data, t-tests for continuous data, and ANCOVA for comparisons with significant covariates.

Results

Background characteristics of the sample are shown in Table 1. Just over half of participants were male, African American, never married, and living independently. Most were unemployed. One hundred thirteen (68.9%) participants reported being a parent, including 56 (49.6%) with children under the age of 18. Only 10 (17.9%) parents reported having full custody of their children, although an additional 3 (5.4%) reported partial custody. On average, parents reported having 1.8 children, ranging from 1 ($n = 30$) to 10 ($n = 1$). Most parents reported seeing their minor children less than seven days per month ($N = 32$, 71.1%).

Covariate Analyses

ANOVAs indicated significant relationships between marital status and higher scores of hope ($F(1, 164) = 3.96, p = .048$), patient activation ($F(1, 164) = 8.96, p = .003$), and overall recovery ($F(1, 164) = 6.68, p = .011$). Age was significantly related to lower scores of hope ($r(164) = -.29, p < .001$) and recovery ($r(164) = -.26, p = .001$). No other demographic variables were significantly related to recovery-related indices.

Differences Between Parents and Non-parents

Chi-square analyses revealed that parents were more likely than non-parents to be female and to have ever been married (Table 1). Parents were also less likely to be currently employed than non-parents, but more likely to live independently. No differences were found for race and education.

As shown in Table 1, parents had a higher level of trust in their psychiatric care providers and preferred less autonomy in information seeking than did non-parents, contrary to hypotheses. We found no differences between parents and non-parents for the decision-making subscale of the API. With respect to patient activation, ANCOVAs revealed that, again contrary to hypotheses, parents were less active in their treatment than non-parents, controlling for marital status (see Table 1). No significant differences were found between parents and non-parents for recovery and hope, when controlling for marital status and age.

Due to the unexpected results relating to trust, autonomy, and activation, we explored custody issues as possible explanations for findings. Half of the parents in our sample had older children (i.e. >18 years), and only a small percentage (23.2%) of parents with younger children had at least partial custody. We explored differences between parents of older children, parents of minor children but without custody, and parents of minor children with custody. ANOVAs revealed no significant relationships between custody status and trust, the information-seeking subscale, or the decision-making subscale (see Table 2). When controlling for age and/or marital status, no significant relationship was found between custody status and patient activation or overall recovery. However, parents with minor children (with and without custody) had more hope than those with children over 18, when controlling for age and marital status.

Differences Between Mothers and Fathers

We compared the demographic characteristics of male and female parents. As shown in Table 3, mothers were older and more likely to have ever been married than fathers. Mothers were also more likely to have custody of minor children than fathers. Results revealed no other demographic differences between mothers and fathers. In addition, no significant differences were found between mothers and fathers on any of the recovery-related measures (see Table 3).

Discussion

As one of only a few studies to examine mothers and fathers with severe mental illness and the role of parenting in recovery, this study found that the majority (68.9%) of consumers

are parents, with a prevalence rate similar to the community sample used in the National Comorbidity Study (67.2–75.5%; Nicholson et al., 2002), but considerably higher than rates found in some previous studies of individuals with severe mental illness in clinical samples similar to our own (Gewurtz et al., 2004; Hearle et al., 1999). Despite these high rates, few consumers reported having any custody of their children (23.2%), and most parents reported seeing their young children less than seven days per month. Consistent with previous research, few consumers with severe mental illness appear to have custody of their children, and those without custody may not see their children often (Gewurtz et al., 2004; Hearle et al., 1999; Joseph et al., 1999; White et al., 2013).

Surprisingly, parenting status was not related to higher recovery-related functioning. Contrary to study hypotheses, parents scored *lower* on activation in treatment and preferences for autonomy in information-seeking. In addition, parents were more trusting of their prescriber than non-parents. Parents and non-parents did not differ in their overall levels of recovery, preferences for decision-making autonomy, or hope.

Interestingly, parents and non-parents did not differ on hope, but parents who had minor children (with or without custody) had significantly more hope than those who had children over 18. We hypothesized that parents would have more hope than non-parents because of the positive aspects of parenting and hopes typically held for children. Although this was not supported in our main analyses, it may be that this relationship is being reflected in the parenting subgroups. Having younger children may help parents to sustain hope for the future, for both themselves and their children. For example, some research shows that across societal classes, parents have hopes and dreams for their children's futures (Irwin & Elley, 2012). Some qualitative studies of parents with severe mental illness also highlight hope and expectations for children's futures as an important aspect of parenting (Sands, 1995), with some parents acknowledging their children as a source of motivation in their lives and mental health treatment (White et al., 2013). Parents with children over 18 may have lost this mechanism to help them stay hopeful in their own recovery. Although we did not ask how often parents saw children over 18, the finding that parents with older children are less hopeful (even after controlling for age) suggests this could be an important target for intervention. For example, interventions could increase contact with older children or find ways to re-establish a role for older children in parental recovery.

Despite past research indicating that parents with severe mental illness may be less trusting and less likely to share information with psychiatric care providers (Bassett et al., 1999; Diaz-Caneja & Johnson, 2004; Nicholson, 1996), parents in our sample were *more* trusting of their psychiatric care providers than non-parents. Given evidence that parents who fear loss of custody tend to be less trusting (Diaz-Caneja & Johnson, 2004), we conducted subsequent analyses to examine custody status. Although the parent groups did not significantly differ on trust, parents with custody were the most trusting of the three groups, so fear of custody loss does not appear to be a driving factor in the difference in trust between parents and non-parents. Rather, it may be that parents retaining at least some custody have not yet felt "betrayed" by providers, whereas parents who have already lost custody and/or parents of older children may have had negative parenting experiences, such as neglect or abuse reports filed by providers. This would be consistent with previous

findings that custody loss can be a traumatic experience in the lives of mothers with severe mental illness, often with lasting feelings of distress and sadness (Diaz-Caneja & Johnson, 2004; Dipple, Smith, Andrews, & Evans, 2002; Sands, 1995). Furthermore, additional factors in the trusting relationship not measured here may be salient, such as length of the consumer-physician relationship. Further research is needed to understand the context of building trusting relationships and how that may be impacted by parenthood.

The finding that parents were less active and preferred less information in treatment is puzzling. One possible explanation is that consumers who have minor children have less energy to put toward being active in their mental health care, due to the demands of parenthood. Diaz-Caneja and Johnson (2004) found that mothers with severe mental illness can feel distress when burdened with child care and also dealing with heightened symptoms. Furthermore, qualitative data has revealed that some mothers experience negative emotions about motherhood and have increased concerns about finances, work, and lack of time as a result of having children (Mowbray et al., 2001; Mowbray et al., 1995). These heightened concerns may cause these women to prioritize mental health care as less important, leading to lower activation in treatment.

Alternatively, it may be that having a high level of trust in one's medication prescriber allows a consumer to be less active in seeking information and managing treatment - trusting that the process will be handled by the treatment provider. However, studies in other chronic health populations have found that greater trust (Becker & Roblin, 2008) or better quality relationships with treating physicians (Alexander, Hearld, Mittler, & Harvey, 2012) relate to higher levels of activation. Trust and activation have not yet been studied together in a mental health population, and the relationship may operate differently in this population or setting. There is some evidence that consumers with severe mental illness have differing preferences for autonomy depending on the service setting. For example, one study showed consumers preferred collaborative roles with psychiatrists, but more passive roles with primary care physicians (O'Neal et al., 2008). Thus, it is possible that the relationship between trust and activation/autonomy in treatment may differ in primary care and mental health settings. More research is needed in this area to clarify relationships between parenting and taking an active role in psychiatric treatment.

A further purpose of this investigation involved a preliminary examination of differences between mothers and fathers with severe mental illness. Although the numbers of mothers and fathers in our sample was similar (59 mothers and 54 fathers), the percentage of women who were mothers (81.9%) was notably higher than the percentage of men who were fathers (56.8%). Consistent with findings by Nicholson et al. (1999), mothers in our sample were significantly older than fathers; however, contrary to their findings, mothers in our sample were more likely to have been married. Replicating prior research (Jones et al., 2008), current results found mothers were more likely than fathers to have custody of minor children, but, interestingly, no significant differences emerged on the recovery-related indices. Considering the similar numbers of mothers and fathers in this sample, parenting-related services should be readily available to both males and females with severe mental illness. Fathers may need additional support in keeping or regaining custody of or visitation with minor children. However, given the low rates of custody and frequency of contact

throughout the sample, an increased emphasis for services for both males and females is clearly needed.

Several limitations should be noted. Because this investigation was part of a larger study not specifically aimed at parenting, limited information on parenting was gathered. More detailed information regarding custody, time spent with children, and involvement of other parent/family members would be valuable. Additionally, only 13 consumers had any custody of children, resulting in subsequent analyses being underpowered. Furthermore, most parents in our study had limited contact with minor children, and we did not ask about frequency of contact with older children. It may be that the parenting role is more prominent in other samples of more involved parents. Finally, the study took place in only one community mental health center, limiting generalizability of our results.

Conclusions and Implications for Practice

This report is the first study to explore recovery-related concepts among parents with severe mental illness, making an important contribution to the literature regarding an understanding of recovery for these individuals. Our findings confirm prior research indicating that individuals with severe mental illness have high rates of parenthood (Joseph et al., 1999; Nicholson et al., 2002) and often deal with loss of custody. Given that providers do not frequently assess for parenting status (White & McGrew, 2013) and that parents with young children report unmet service needs (White et al., 2013), an obvious implication is that assessment of parenting status and understanding the needs of parents is a critical first step in supporting parents with severe mental illness. Assessing the desired level of parental involvement and ways to support more frequent contact could be helpful, particularly given the low rates of contact we found.

Because parents reported lower preferences for autonomy and less activation in treatment, parents may need additional assistance with regard to parenting-specific issues and unmet needs (Brunette & Dean, 2002; Nicholson & Biebel, 2002; Nicholson et al., 2001; White et al., 2013), but may also need greater support in managing mental health conditions on top of the demands of being a parent. For example, it may be helpful to integrate illness management training with parenting programs.

The finding that parents were more trusting of providers needs further attention. Our within-parent subgroup analyses point to possible trends related to custody, such as those with custody had the highest trust and potentially the most to lose. However, nonparents had the lowest levels of trust of all, indicating that custody may not be the main driver of trust. Future research should explore these issues to better understand how trust, parental status, and custody relate to each other, as well as other potentially important variables in the recovery process.

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Table 1

Demographic and Recovery-related Differences between Parents and Non-parents

Variable	Total Sample Frequency (Percent)	Parents (N=113)	Non-parents (N=51)	Test of Significance (parents vs. nonparents)
Sex (Female)	72 (43.1%)	59 (52.2%)	13 (25.5%)	$X^2(1) = 10.19, p = .001$
Ever Married	72 (43.1%)	62 (54.9%)	10 (19.6%)	$X^2(1) = 17.74, p < .001$
Employed	20 (12.0%)	6 (5.3%)	13 (25.5%)	$X^2(1) = 13.97, p < .001$
Education				
Less than high school	70 (41.9%)	48 (42.5%)	21 (41.2%)	$X^2(2) = .11, p = .948$
High school or GED	61 (36.5%)	41 (36.3%)	18 (35.3%)	
Some college or beyond	36 (21.6%)	24 (21.2%)	12 (23.5%)	
Living independently	91 (54.5%)	68 (60.2%)	21 (41.2%)	$X^2(1) = 5.11, p = .024$
Race				
Black	91 (54.8%)	59 (52.7%)	31 (60.8%)	$X^2(2) = .94, p = .624$
White	59 (35.5%)	43 (38.4%)	16 (31.4%)	
Other	16 (9.6%)	10 (8.9%)	4 (7.8%)	

	Total Sample Mean (SD)	Parents	Non-Parents	Test of Significance
Age	44.1 (10.4)	44.9 (10.3)	42.7 (10.6)	$t(162) = 1.27, p = .207$
API Decision-making Subscale	2.4 (.8)	2.5 (.8)	2.3 (.9)	$t(161) = 1.77, p = .078$
API Information seeking Subscale	4.4 (.5)	4.3 (.5)	4.5 (.3)	$t(161) = -1.98, p = .049$
HCRT	50.2 (10.3)	51.5 (8.9)	48.1 (12.3)	$t(160) = 1.97, p = .050$
State Hope Scale	17.5 (3.8)	17.3 (3.7)	17.9 (4.3)	$F(1,159) = .32, p = .574$
PAM-MH	55.5 (13.5)	53.3 (11.5)	60.7 (16.3)	$F(1,160) = 5.97, p = .016$
RAS Total	158.9 (20.0)	158.4 (19.8)	160.1 (21.1)	$F(1,159) = .07, p = .787$

Note: API = Autonomy Preferences Index; HCRT = Health Care Relationship Trust Scale; PAM-MH = Patient Activation Measure, Mental Health version; RAS = Recovery Assessment Scale

Table 2

Recovery-related Differences Among Parent Subgroups

Recovery-related Index	Children over 18 (N = 56) M (SD)	Minor children, no custody (N = 43)	Minor children, with custody (N = 13)	Test of Significance
API Decision-making Subscale	2.6 (.8)	2.5 (.9)	2.4 (.6)	$F(2, 109) = .40, p = .671$
API Information seeking Subscale	4.3 (.5)	4.3 (.6)	4.4 (.1)	$F(2, 109) = .23, p = .797$
HCRT	50.6 (9.3)	51.2 (9.3)	56.1 (3.3)	$F(2, 109) = 2.03, p = .136$
State Hope Scale	16.0 (3.4)	18.5 (3.6)	18.9 (3.1)	$F(2, 107) = 3.04, p = .052$
PAM	50.8 (11.8)	55.6 (11.1)	56.5 (9.7)	$F(2, 108) = 1.65, p = .197$
RAS Total	152.3 (16.6)	164.3 (19.9)	165.5 (24.7)	$F(2, 107) = .86, p = .425$

Note: API = Autonomy Preferences Index; HCRT = Health Care Relationship Trust Scale; PAM-MH = Patient Activation Measure, Mental Health version; RAS = Recovery Assessment Scale

Table 3

Demographic and Recovery-related Differences between Mothers and Fathers

Variable of Interest	Mothers (N = 59) Frequency (%)	Fathers (N = 54) Frequency (%)	Test of Significance (mothers vs. fathers)
Sex (Female)			
Ever Married	38 (64.4%)	24 (44.4%)	$X^2(1) = 4.54, p = .033$
Employed	2 (3.4%)	4 (7.4%)	$X^2(1) = .91, p = .341$
Education			
Less than high school	24 (40.7%)	24 (44.4%)	$X^2(2) = 1.31, p = .521$
High school or GED	20 (33.9%)	21 (38.9%)	
Some college or beyond	15 (25.4%)	9 (16.7%)	
Living independently	40 (67.8%)	28 (51.9%)	$X^2(1) = 2.99, p = .084$
Race			
Black	31 (53.4%)	28 (51.9%)	$X^2(2) = 2.19, p = .334$
White	24 (41.4%)	19 (35.2%)	
Other	3 (5.2%)	7 (13.0%)	
Custody Status – retains some custody of minor children (N with minor children = 56)	9 (40.9%)	4 (11.8%)	$X^2(1) = 6.37, p = .012$

	Mothers Mean (SD)	Fathers Mean (SD)	Test of Significance
Age	47.6 (8.6)	42.0 (11.3)	$t(99.1) = -2.98, p = .004$
API Decision-making Subscale	2.5 (.8)	2.5 (.8)	$t(110) = .00, p = .998$
API Information seeking Subscale	4.4 (.5)	4.3 (.6)	$t(110) = -.65, p = .518$
HCRT	51.8 (9.7)	51.2 (8.0)	$t(110) = -.36, p = .720$
State Hope Scale	16.7 (4.0)	17.9 (3.2)	$F(1, 108) = .97, p = .328$
PAM	51.5 (9.9)	55.3 (12.8)	$F(1, 109) = 2.06, p = .154$
RAS Total	156.2 (19.7)	160.9 (19.7)	$F(1, 108) = .15, p = .703$

Note: API = Autonomy Preferences Index; HCRT = Health Care Relationship Trust Scale; PAM-MH = Patient Activation Measure, Mental Health version; RAS = Recovery Assessment Scale