Contents lists available at ScienceDirect



Journal of Substance Abuse Treatment



Meeting health and psychological needs of women in drug treatment court

Diane S. Morse, M.D. ^{a,*}, Catherine Cerulli, J.D., Ph.D. ^b, Precious Bedell, M.A. ^c, John L. Wilson ^c, Katherine Thomas ^c, Mona Mittal, Ph.D. ^d, J. Steven Lamberti, M.D. ^c, Geoffrey Williams, M.D., Ph.D. ^a, Jennifer Silverstein, B.S. ^c, Aninda Mukherjee, B.A. ^c, Donna Walck, M.S. ^e, Nancy Chin, Ph.D. ^d

^a Departments of Psychiatry and Medicine, University of Rochester School of Medicine, Women's Initiative Supporting Health, Center for Community Health, Rochester, NY 14642, USA

^b Department of Psychiatry, University of Rochester School of Medicine, Susan B. Anthony Center for Women's Leadership, Rochester, NY, USA

^c Department of Psychiatry, University of Rochester School of Medicine, Rochester, NY, USA

^d Department of Public Health Sciences, University of Rochester School of Medicine, Rochester, NY, USA

^e Warner School of Education, University of Rochester, Rochester, NY, USA

ARTICLE INFO

Article history: Received 17 April 2013 Received in revised form 9 August 2013 Accepted 14 August 2013

Keywords: Drug treatment court Women Trauma Self-determination theory Socio-ecological model

ABSTRACT

We explored healthcare-related experiences of women drug court participants through combining context from the socio-ecological model with motivation needs for health behavior as indicated by self-determination theory. Five focus groups with 8 women drug court participants, 8 court staff, and 9 community service providers were examined using qualitative framework analysis. Themes emerged across the socio-ecological model and were cross-mapped with self-determination theory-defined motivation needs for autonomy, relatedness, and competence. Socio-ecological levels contained experiences either supporting or eroding women's motivation needs: 1) intrapersonal challenges participants termed an "evil cycle" of relapse, recidivism, trauma, and life challenges; 2) interpersonal context of parenting and stigma involving features of this "evil cycle"; 3) institutions with logistical barriers to legal and medical assistance; 4) community resources inadequate to support living and employment needs. Self-determination theory helps explain motivation required to address the women's healthcare needs and multiple demands at all levels of the socio-ecological model.

© 2013 Elsevier Inc. All rights reserved.

1. Introduction

1.1. Drug Treatment Court

Drug treatment court (DTC) offers community court-mandated treatment programs in lieu of incarceration, significantly reducing relapse and recidivism rates (Fielding, Tye, Ogawa, Imam, & Long, 2002). DTC incorporates intensive judicial supervision and community-based treatment, facilitating use of substance abuse resources (Taxman & Bouffard, 2006). These successes provide a foundation to examine, develop, and improve DTC programs to address participants' remaining unmet health needs (Rossman et al., 2011). Given DTC participants' co-morbid physical and mental health needs, and the unique issues female drug users face, this paper explores barriers and motivation regarding meeting the health needs of women DTC attendees (Engstrom, El-Bassel, & Gilbert, 2012).

1.2. Women DTC participants

Depression, posttraumatic stress disorder (PTSD) and trauma histories are paramount among women DTC participants. Women are

E-mail address: Diane_Morse@urmc.rochester.edu (D.S. Morse).

twice as likely to be depressed or anxious compared to men in DTC (Gray & Saum, 2005). Women with a current major depression episode were almost 6 times likelier to relapse with cocaine use compared to those depressed within the past 1 month to 1 year (Johnson et al., 2011). Among women DTC participants, 20% met PTSD criteria, compared to 12% in the general population and 20–45% among female offenders (Goff, Rose, Rose, & Purves, 2007; Resnick, Kilpatrick, Dansky, Saunders, & Best, 1993). Among these women with PTSD, 91% reported trauma histories with sex work and homelessness 6 times more prevalent than for those without a trauma history (Sartor et al., 2012). These studies highlight the mental health needs of women DTC participants.

Less is known about women DTC participants than women inmates. However, given the preponderance of substance abuse disorders among incarcerated women, they are likely similar (Fielding et al., 2002). The Centers for Disease Control and Prevention (2012) reports that most incarcerated women are arrested for drug-related and sex work crimes that put them at increased risk for HIV and other sexually transmitted infections, trauma, and complicated pregnancies. Women DTC participants are at least as much at risk of infection as are other women inmates, with women of color at particular risk (El-Bassel et al., 2012). Women of color are imprisoned disproportionately at between 2 to 3 times the rates of white women (Carson & Sabol, 2012). DTCs have not systematically assessed proportions of women or people of color in the population they serve (Brewer &

^{*} Corresponding author. University of Rochester Medical Center, Rochester, NY 14642. Tel.: +1 585 275 6484; fax: +1 585 276 0307.

^{0740-5472/\$ –} see front matter © 2013 Elsevier Inc. All rights reserved. http://dx.doi.org/10.1016/j.jsat.2013.08.017

Heitzeg, 2008). Also, women involved in the justice system report more health problems than other women (Staton, Leukefeld, & Webster, 2003). A qualitative study described female DTC participants' unmet needs for comprehensive services including childcare, parenting training, and medical treatment, yet did not detail unmet healthcare needs (Fischer, Geiger, & Hughes, 2007), leaving a knowledge gap.

1.3. Meeting health needs of DTC participants

Should DTC address health needs when current programmatic goals are to decrease substance abuse and recidivism? We argue yes, given research that documents chronic disease management doubles odds of improving drug and alcohol addiction outcomes (Kim et al., 2012). Conversely, drug and alcohol abuse increase risks of numerous conditions, including cirrhosis and infectious diseases such as HIV/ AIDS and viral hepatitis (Rehm et al., 2009). Public health also argues for improved infectious diseases treatment. Substance abuse may precede or spring from mental health disorders, yet the chaotic lifestyle interferes with mental and physical health treatment (Drake, Mueser, Clark, & Wallach, 1996). However, efforts to incorporate health services into DTC programs are in exploratory stages. Comprehensive assessments of DTC participants' service needs and delivery do not include healthcare (Guastaferro, 2011). A few large DTC descriptive studies have explored barriers to "a bridge" between providers and DTC staff with the aim of addressing participant needs and improving outcomes (Wenzel, Longshore, Turner, & Ridgely, 2001; Wenzel, Turner, & Ridgely, 2004). They found formal links primarily with substance abuse treatment providers and lacking with healthcare providers. None of these studies comprehensively assessed needs or barriers regarding healthcare treatment among DTC participants and among women in particular.

Mental health conditions and services can impact DTC completion. One study found that participants who had received mental health prescriptions in the 30 days prior to entering DTC were 700% more likely to complete the program than those who did not (Gray & Saum, 2005). Conversely, those who reported depressive symptoms were 55% less likely to complete the program than those who did not have depressive symptoms. The authors suggested that more DTC programs should address unmet mental healthcare needs among DTC participants.

A recent comprehensive assessment of DTC participant outcomes showed little evidence of improved mental or physical health and confirmed that depression upon entry predicted depression at followup (Rossman et al., 2011). Improving healthcare delivery to women DTC participants remains an unmet goal while needs and barriers are inadequately described. DTC could benefit from a broader perspective incorporating both intrapersonal and systemic analyses.

1.4. The socio-ecological model, self-determination theory, health, and study aims

The socio-ecological model (SEM) is a multi-level systems approach to understanding individual behaviors as embedded in different, interacting social contexts (Stokols, Allen, & Bellingham, 1996). The SEM is congruent with research and interventions addressing the individual and their behaviors, within the multiple settings and social contexts where behavior originates, including the context of the justice system (McLaren & Hawe, 2005). Use of the SEM allows an exploration of women's health behaviors as embedded in multiple levels of influence: intrapersonal, interpersonal, institutional, and community contexts (El-Bassel, Caldeira, Ruglass, & Gilbert, 2009). This approach is consistent with community-based participatory research (CBPR) strategies to obtain stakeholder input for a planned intervention (Israel et al., 2010; Sormanti, Pereira, El-Bassel, Witte, & Gilbert, 2001). Because SEM does not explain health related motivation, health behaviors, or how they change, self-determination theory is complementary.

Self-determination theory (SDT) is a general theory of human motivation that has been applied in many life domains including health (Deci & Ryan, 2000; Ng et al., 2012; Ryan, Patrick, Deci, & Williams, 2008). Motivation is defined as psychological energy directed at a particular goal. SDT assumes that humans are innately motivated toward growth and well-being (i.e., psychological and physical health), and that humans have basic motivational needs (also called psychological needs) for autonomy, relatedness, and competence. Autonomy is defined as the degree to which people feel volitional and responsible for initiating their behavior. Relatedness is defined as the extent to which they feel positively, authentically connected to caring others. Competence is defined as the degree to which people feel able to achieve desired goals. Autonomously regulated behavior is done willingly, because of personal importance. Controlled motivation, in contrast, involves feeling pressured by an outside or internal force (Deci & Ryan, 2000). If the social surround supports these needs, humans become naturally more motivated by internalizing autonomous self-regulation of their behaviors and by developing a better sense of competence (Deci & Ryan, 2000). Furthermore, the degree to which the various social structures in the SEM support or undermine people's motivation needs is expected to enhance or lower patient motivation for initiating and maintaining healthy behaviors, including stopping smoking (Williams et al., 2006) or taking a medication regularly (Kennedy, Goggin, & Nollen, 2004). When a patient trusts and feels respected by the healthcare provider, it satisfies needs for autonomy, relatedness, and competence, which is associated with positive mental health, and healthy behaviors according to a meta-analysis of over 184 data sets (Ng et al., 2012).

The SEM and SDT models overlap in examining the context in which autonomy is supported or thwarted. In particular, it is important to consider the role of culture among women of color, as they are over-represented in justice settings (Brewer & Heitzeg, 2008). Basic SDT-defined motivation needs are held to be universal across cultures and gender (Chirkov, Rvan, & Sheldon, 2010; Deci & Ryan, 2011; Ryan & Deci, 2011). Furthermore, influences on individual health behaviors, and support for the motivation needs of autonomy, relatedness, and competence can be identified in the SEM at intrapersonal, interpersonal, institutional, and community levels (Ryan & Deci, 2011; Stokols, 1996). Lastly, SDT indicates that individuals become more motivated with optimal challenges- not too difficult or too easy- and only when patients feel fully autonomous with respect to the behavior while the SEM helps contextualize individual challenges in the social context (Ryan & Deci, 2000). Understanding the broader context for healthcare discrepancies could help in addressing these discrepancies.

The SEM and SDT models differ in that the SEM does not address the internal process of change while SDT does. SDT demonstrates that the energy required to overcome SEM described barriers is maximized by supporting needs for autonomy, relatedness, and competence. For example, when people are required at an institutional level to have substance abuse treatment, they are likely to experience feeling controlled when starting the treatment. However as treatment progresses and if autonomy is supported, they shift their locus of causality through internalization. After internalization, treatment motivation is autonomous as they seek health on the intrapersonal level (Ryan & Deci, 2000). Hence the combined models are complementary.

This paper explores healthcare-related needs and motivations of women participants in DTC within the wider social context of their lives. We combined levels of the SEM with SDT to get a robust picture of how social context may support or undermine women's motivation needs. The information will inform an intervention for women DTC participants. This exploratory research phase is not hypothesisdriven. Our approach is based upon the stage model for the development of behavioral interventions research (Rounsaville, Carroll, & Onksen, 2001).

This paper contributes to the literature via two important goals: 1) to explore the needs and barriers for vital healthcare services among women DTC participants from stakeholder perspectives of the women themselves, providers, and court staff; and 2) to integrate SDT concepts of autonomy, relatedness, and competence across the levels of the SEM.

2. Methods

2.1. Study design

We conducted five stakeholder focus groups in 2012: two with women DTC participants, two with court staff, and one with providers from two community agencies: one serving medical and social needs of HIV patients, and one serving survivors of intimate partner violence (IPV) (Kitzinger, 1995). Recruitment was conducted through three primary methods: 1) approaching females outside a county DTC in a moderately large upstate New York City; 2) emailing via staff listserves: and 3) snowball methods of staff contacting other staff who gave the team permission to email them. Scripts were used for approaching and emailing. Focus groups were in private conference rooms as follows: a community health center (DTC participants), an HIV/AIDS clinic (providers), and in court (court staff). Focus groups were audio-recorded, transcribed and de-identified. Lines within transcripts were labeled to differentiate between focus group facilitators and participants. Focus groups subjects were provided a meal and reimbursed with \$10 gift cards. Court employees were required by employers to decline reimbursement.

Research team members developed the focus group guide according to research goals, focus group methodology (Morgan & Spanish, 1984), and principles of CBPR (Israel et al., 2010; Sormanti et al., 2001). The guide¹ was modified slightly according to focus group member roles (DTC participant, providers, or court staff) and revised iteratively over the course of the study. Experienced focus group facilitators (DM and CC), followed the discussion guide, attended to group responses, and allowed a spontaneous exchange of ideas (Brown, 1999). The University of Rochester Institutional Review Board approved the protocol as low risk with the requirement that the discussion guide include frequent reminders to speak in general terms and not about one's own specific medical conditions or personal experiences. Participants completed anonymous demographic information sheets.

2.2. Data analysis

A multidisciplinary analytic team, which included a member with personal experience as a DTC participant, identified recurrent events, terms, and social actors within each transcript. We then organized recurrences into 12 higher order conceptual themes (Creswell, 2012). The research team conducted the analysis in several large group consensus meetings, which included 4 undergraduate and graduate research assistant co-authors. The team first coded each focus group transcript in pairs or triads which were then brought to large group meetings and analyzed in detail by consensus. Through these meetings and direct supervision by the PI, the research assistants became proficient with coding and with ATLAS.ti software. The 4 research assistants, first individually, then in pairs, and finally as a group, came to consensus to assign every quote to one or more of the themes (Smit, 2002) and entered them into the ATLAS.ti system. The PI reviewed the codes and reached consensus with the research

assistants. Using the framework approach (Pope, Ziebland, & Mays, 2000), the team mapped themes across the SEM, identifying reoccurrences within themes as supportive or eroding of the three SDT constructs of autonomy, relatedness, and competence. In other words, an utterance could be experienced as supportive or eroding of motivation. However, as described in the following quotes, a single quote could cross multiple SDT constructs while the levels of the SEM were more discrete. For this reason, results are presented according to SEM levels with associated SDT constructs within those levels. Final coded quotes and themes were agreed to by the research team. A key community informant reviewed the data and conceptual framework as respondent verification (Barbour, 2001). Theme numbers and percentages are presented in relation to all coded statements (see Table 1).

3. Results

3.1. Demographics

Among the 8 women DTC participant subjects, ages ranged from 19 to 58, all were non-Hispanic, 5 were White, and 3 were African American, and education ranged from less than high school to some college. Among the 9 provider subjects, 7 were women, ages ranged from 32 to 55, 2 were Hispanic White, 2 were non-Hispanic White, 5 were non-Hispanic African American, and education ranged from GED to graduate degree. Among the 8 court staff subjects, 5 were women, ages ranged from 30 to 52, all were non-Hispanic White, and all had graduate degrees.

3.2. Four categories

The complex interactions between themes, SEM levels, and SDT constructs are summarized by four overarching categories of SEM levels in which experiences either supported or eroded autonomy, relatedness, and competence of the women: 1) intrapersonal challenges of an "evil cycle" of relapse, recidivism, trauma, and life challenges faced by the women of DTC; 2) interpersonal context affecting stigma, mistrust, and parenting involving features of the "evil cycle"; 3) institutions with logistical barriers spanning medical and legal contexts; and 4) community resources inadequate to support living and employment needs in the context of intrapersonal challenges. These four overarching categories are encompassed by 12 themes (Table 1) that are underlined as they occur repeatedly in the results section and elaborated.

Table 1

Numbers and percentages of quotes from focus groups relating to the 4 socio-ecological model (SEM) levels and 12 conceptual themes.

Quote distribution according to SEM level and theme	п	%
Intrapersonal level		
Coping with living conditions	48	5.60
Struggle with recovery	133	15.52
"Evil cycle"	62	7.23
Interpersonal level		
Mistrust	49	5.72
Intimate partner violence (IPV)	7	0.82
Court staff and healthcare/mental health providers	193	22.52
Stigma related to addiction/incarceration	41	4.78
Parenting/children/family	19	2.22
Institutional level		
Drug court policies	44	5.13
Access to healthcare/mental healthcare	204	23.80
Community level		
Community resources	41	4.78
Living needs	16	1.87

¹ Text and figures available from author.

3.3. Intrapersonal

Each group described a cycle of recurrent problems or an "evil cycle" in similar ways as trauma, struggle with substance abuse recovery, depression, health risks, chaos, lack of support, stigma, recidivism, job loss and re-entry impacted on women's living conditions.

"...the client...[does] not show up for their appointments...Or they don't have a birth certificate, or...they're missing their social security card. So the onus has to be on the drug court participant and they... may be homeless. They may not have an alarm clock. They may not have transportation...it's an evil cycle because they may be using. They can't remember when their appointment is. And the case managers can't pick them up."

[Court staff member]

Managing these overwhelming challenges requires women to have autonomous motivation, which could easily be lacking due to control they experienced from incarceration or abuse. Similarly as in the quote above, they would need to feel competent in order to address structural barriers in a context of intrapersonal barriers including depression or addiction.

Meeting health needs was part of a tenuously motivated <u>struggle</u> with recovery:

"I write on my calendar in my purse and in my kitchen...Since I've been sober I've been keeping up on it. It's important to me not to fail again...so far so good; I've been keeping up with stuff...Everything's just let go for so many years...it's very important for me."

[Drug treatment court participant]

All focus groups described mental health treatment as key in maintaining sobriety and moving ahead to break out of the "evil cycle." Support in dealing with these challenges was very important as a source of relatedness, especially after erosion of trust, and complex internal reactions to cycles of trauma, subsequent substance abuse behaviors, and ensuing stigma:

"Maybe it's just cause of my trauma I guess. I don't know if I trust." [Drug treatment court participant]

"Because of stigma...to have someone to communicate with them on their level makes a big difference, it really does."

[Provider]

3.4. Interpersonal

Interpersonal challenges included <u>mistrust</u> in substance abuse treatment related to IPV.

"Whether it was a history of sexual abuse as children, abuse... within an intimate relationship, johns they've had or things they've had to do in order to get money for drugs. Many of those things that have happened against them are coming from males. If they're experiencing that and now in [substance abuse treatment] groups where they're supposed to feel safe...not necessarily the perpetrators themselves but representing that for them...I've seen it can be traumatizing in itself to be in that space."

[Provider]

Mixed gender treatment groups could remind women of trauma and powerlessness, thwarting the autonomy, relatedness and competence needed to foster motivation for sobriety. Relatedness could be eroded or supported with <u>case managers</u> and <u>doctors</u> interpersonally. Jail was a loss of autonomy that women wanted their DTC case manager to help them avoid.

"In drug court [case managers] have a thousand clients but everyone is different...If we go to jail, [they] sleep at night, we don't...that extra step, that extra effort to help makes [me] feel comfortable - with a doctor as well. That's how I feel because this is our life."

[Drug treatment court participant]

<u>Interpersonal stigma</u> from medical providers eroded relatedness and autonomy as women <u>lacked trust</u> in their providers and had little control over their healthcare.

"I had a tough pregnancy...I had toxemia, preeclampsia, gestational diabetes, fluid retention, 40 pounds in two days...I kept going back and forth...[to]emergency, they'd send me home..because they did a tox screen on me early in my pregnancy. I came out positive for cocaine. Finally...I was in full blown congestive heart failure...Myself and my child were literally minutes away from death...my gynecologist... admitted that they were concerned about my drug use and not about my health...They also told me I was positive for cocaine... They didn't ask to...have my daughter walk out of the room... she was 10.

[Drug treatment court participant]

Choice of doctor satisfied autonomy, relatedness, and competence on the interpersonal level.

"I always made sure that I got my doctor...because he knows everything about me. I don't wanta go to someone that's gonna miss...that I'm an addict and they prescribe me something [addictive]... If I had that...in my hand I would [use it], being an addict."

[Drug treatment court participant]

Family dynamics could precipitate relapse by eroding <u>parental</u> relatedness and competence.

"It causes them to relapse because they get home and all those dynamics going on in the house, all that stress and then they're back out there. The kids are back with grandma or uncle or aunt or whatever and it's just like a revolving door, which is why they don't get through the Drug Court treatment program like they should." [Court staff member]

Conversely, a supportive <u>family</u> improves relatedness and competence, motivating sobriety.

"If you have family that has your back and supports you, that feels good to know that you have people who are in your corner."

[Provider]

Relationships with children can keep women from focusing on their own health needs, possibly reducing autonomy, though they do support women's need for relatedness:

"We see this a lot with HIV and Hepatitis C, that mothering thing comes out. Their healthcare they could care less about. It's their kids, what's going on at that house."

[Provider]

3.5. Institutional

<u>Drug court requirements</u> and the threat of incarceration thwarted autonomy at the institutional level regarding urine testing, for example.

"A few weeks ago...I tested positive for benzos in my urine screen and I haven't taken anything...Then he wouldn't tell me the results of the screen so I could call my doctor or my lawyer...before they lock me up...Once you get locked up you can't call anybody." [Drug treatment court participant]

Conversely, institutional autonomy support from <u>drug treatment</u> <u>court</u> occurred over time as women felt autonomous motivation and internalization for substance abuse treatment.

"I know before I used to go [to substance abuse treatment] because of drug court.. Now that's in the back of my mind but I know that I need it to stay sober."

[Drug treatment court participant]

Institutional rules preclude parolees or probationers contact with former inmates even if they were in DTC together, preventing support and relatedness. Similarly, DTC participants and providers decried the lack of gender and trauma-informed substance abuse treatment.

The other major institution affecting the lives of these women was <u>medical and mental healthcare access</u>. Erosion of competence commonly occurred in relation to making medical and mental health appointments produced a profound effect on the women. These 5 examples depict a sense of urgency, frustration, and institutional discrimination commonly expressed.

"Where I go it is very good but the wait time for psychiatrists - it's a long time...especially when you're on mental health meds. And I understand that they're busy but this is our life here and when you can't get in to see somebody you, your family, everybody is affected and it just may take a quick med tweak.""[It's hard to go to mental] health [because] I want a female counselor. I don't want a male counselor... It's the third time and they just keep giving me a male counselor...I don't want that so [I didn't go back].""One thing they could change about the healthcare system is not discriminate...cause there's a lot of people who don't got healthcare and Medicaid...Everybody needs healthcare...They should come with some kind of healthcare program for people who don't have or can't get health insurance or Medicaid""It took me so long to get into mental health...I ended up relapsing twice and...I told 'em...I had a mental health appointment the next day...but they arrested me...The next day it was finally there, I was waiting and waiting...Now that I'm on the medication I don't feel like drinking like I was at all. I wish I would've started it before because I'm much more stable now...I had really bad anxiety and I just...drank and probably wouldn't have had to lose my job and go back to jail if I would have gotten that help.""I haven't been [to my gynecologist] in over three or four years. I know I need an annual...and [I have to] make an appointment...[but] they book six months out."

[Drug treatment court participants]

Some providers supported relatedness and competence for patients to access care.

"Once they feel comfortable to talk, you find out that they've had mental health issues or group programs that they used to attend, medication that they should've been on, and all these other programs that they'd lost touch with because domestic violence had taken over and their main priority at that time was just to keep safe. In the meantime their health issues have suffered, their children suffer, relationships suffer. So once they come to us and we try to, through the case manager, reconnect them with external resources that they need. And that's before they can even think about housing."

[Provider]

Women did not appreciate the <u>lack of access</u> to continuity in medical care, which could be exacerbated by DTC time constraints and affected relatedness and autonomy.

"A lot of times nowadays you can't have a steady doctor...if you wanta keep the same doctor you probably gotta schedule like three

weeks from then...you want a bond...you want that one person to be there when you're having the baby. I don't want anybody be pushing on me and be like, what's your name again?"

[Drug treatment court participant]

3.6. Community

This example of community level barriers demonstrates the layers of intersecting challenges faced by the women due to <u>lack of community resources</u>. Autonomy is eroded by lack of control over their employment, housing, transportation, and childcare; competence is eroded by an inability to effect change in that situation; and relatedness is eroded by living with their abuser.

"Some of them aren't even eligible for shelter anymore because of past problems and situations that have happened so they have no housing when they get out. So the only other option is to, and in a lot of the cases they go back to their abuser, they go back to that environment they're used to cause that's all they've got."

[Provider]

Court staff expressed a desire to support DTC participants to stay sober despite <u>limited resources</u>. While they do not enhance competence, they do support relatedness:

"Unfortunately I think that we do get people in, we talk with them, but we don't provide them with the skills that they need to really be successful once they leave. Community support groups are great. They do provide bonding, support, and but it doesn't give them any knowledge or any basic skills to become independent and successful." [Court staff member]

<u>Community childcare resources</u> are lacking but childcare issues are not considered a valid excuse to miss DTC or substance abuse treatment. This lack of flexibility and resources diminished women's autonomy and competence to engage in substance abuse treatment.

"If your son is sick and you can't [get childcare]...I can leave him home and he's 13 but he has problems...I had to go to mental health and group and he stayed home [alone].""It's hard to go to mental health if you have a little one with you...not having a ride, providing bus passes [is important] because I have 150 dollars a month that I'm supposed to support two children and myself on right now."

[Drug treatment court participants]

Despite women's attempts to prioritize children's needs, providers expressed concerns that <u>community resources</u> were inadequate. This could further erode women's sense of competence:

"There's no support systems for those kids. When the parent is going through all that they're bounced to another family member's house if the parent relapses in the process, cause we know relapse is a part of recovery for them. So then the kids are bounced around but there's no support for the kids, no counseling, no nothing. The kids are just left out there hearing whatever they hear about their mom or dad and their drug use."

[Provider]

Lack of housing and employment in the community for those with a criminal record eroded women's sense of autonomy and competence to get out of the neighborhoods where their problems began and earn a living wage to meet their living needs:

"That is such a big barrier to housing and...employment. As soon as they say they have a conviction they're automatically out the door... a lot of times [that] puts people in a position...What am I, where am I making any progress?...I'm on parole, I have a drug history...' Whether or not [they] have a college education, training or skills, that automatically puts them at a disadvantage. So they're gonna get denied."

[Provider]

Relatedness could be supported or eroded at the <u>community</u> resource level, depending on availability of staff or other community members as resources.

"There's no follow-up throughout that time period to the end of that first year, which everybody knows is the hardest time for them when a lot of them normally relapse...No kind of support person or support groups or nothing for them to fall back on."

[Court staff member]

Due to community resource shortages, competence was eroded by the complex rules in place that could not be addressed straightforwardly.

"You are teaching clients to lie to get what they want, which is the very behavior they've been told that is bad. But we're having to say 'This is what you gotta do in order to get in, pretend you [use alcohol] in order to get in' [to the program]."

[Provider]

4. Discussion

The SEM delineated DTC participants' overlapping challenges that eroded or supported abilities to satisfy the three basic motivation needs of autonomy, relatedness, and competence in the context of profound intrapersonal, interpersonal, institutional, and community barriers.

4.1. Intrapersonal

Intrapersonally, women struggled with daily living challenges superimposed upon early substance abuse recovery, highlighted by the so-called "evil cycle" of relapse, recidivism, trauma, and life challenges compounded by depression, and unmet medical and mental health needs. These social and economic issues impede success (Amaro et al., 2007). Strategies supporting psychological needs, could promote the motivation needed to change the cycle.

Study participants confirm that pathways to continued justice system involvement, including abuse and neglect, warrant advocacy for gender and trauma-informed programs which are rarely implemented (Amaro et al., 2007, Bloom, Owen, & Covington, 2003).

4.2. Interpersonal

Interpersonally, stigma and mistrust related to the behaviors in the so-called "evil cycle," fear due to past trauma, and family issues. Such concerns impacted motivation needed to change relationships with court staff, providers, children, partners, and others.

Subjects valued trusting relationships with providers who did not stigmatize but rather viewed substance abuse as a disease, which also correlates with improved outcomes for justice-involved women (Oser, Knudsen, Staton-Tindall, & Leukefeld, 2009). Stigma could interfere with seeking needed treatment for conditions such as HIV and sexually transmitted infections. In contrast, autonomy support by providers including validating patient feelings and including them in treatment plans is associated with following medical recommendations (Ng et al., 2012).

Subjects expressed a need for peer support who could understand without judgment. Also racial differences impact on the receipt of healthcare, trust, and communication quality (Blair et al., 2013). Respectful and empowering interactions are helpful across cultures (Chirkov et al., 2010). Relationships are keys to women's recovery (Tracy, Burton, Nich, & Rounsaville, 2011). Women have more success when they attend or live in drug treatment programs staffed by women and peer-lead groups (Messina, Calhoun, & Warda, 2012).

4.3. Institutional

Institutionally, court and health systems threatened incarceration and provided limited access to services. However, the structure of DTC helped to enhance motivation for sobriety from DTC. Also, health systems can allow continuity of care with providers. It is crucial to facilitate care for community justice-involved women to address public health issues of sexually transmitted infections including HIV/ AIDS, depression, PTSD and care of their children. Hence systems must provide urgent appointments for women who serve short frequent jail sentences, which interrupt care. Primary care with culturally informed providers shows promise (Wang et al., 2012), yet is not widely available.

Gender-specific wrap-around services (Oser et al., 2009) are keys to justice-involved women's sobriety (Fletcher & Chandler, 2006). However data are limited regarding mental and physical healthcare linkages. DTC missed opportunities to address individual, relational, community, and broader social issues our subjects faced. Obstacles remain to healthcare linkages (Wenzel et al., 2001).

Few studies have examined the efficacy of DTC for women (Shaffer, 2011). DTC could provide more autonomy support to potentiate motivation for long-term sobriety and re-entry into society. Prosocial behavior change is more likely to be internalized when an environment is autonomy supportive rather than punitive (Roth, Kanat-Maymon, & Bibi, 2011). The DTC "sanction" of incarceration combined with demands of strict compliance with court dates, substance abuse treatment, and education were overwhelming and left little room for "real life" issues of transportation, sick children, and domestic violence. A gender-and autonomy-informed DTC could factor in needs for healthcare, housing, and childcare. Since 75% of justice-involved women are mothers and relationships with their children can motivate sobriety, such changes could have far-reaching effects (Einbinder, 2010; Mumola, 2000).

4.4. Community

Re-entry challenges and limited community resources for employment, housing, transportation, and childcare thwarted autonomy and may contribute to the low motivation and continued cycling. Our subjects described childcare problems impacting their ability to meet DTC requirements. Women can have better substance abuse treatment outcomes if they can regain their children (Fischer et al., 2007). Gender-informed DTC care could help women get childcare to attend substance abuse treatment sessions rather than incarcerate them if they miss. Access to mental health treatment could increase sobriety, potentially improving parenting.

We employed the SEM to put health promotion into context (Simons-Morton, 2013). Provider subjects used deception to help women not meeting program criteria. In turn, women DTC participants may be more accustomed to using deception and providers depended upon this agility. Such approaches undermine burgeoning competence in living honestly. DTC case managers could help women participants obtain needed services. However clients fearful of sanctions may lie to DTC case managers rather than seeking needed help. Hence case managers could support client access to needed services by honest exchanges that do not result in sanctions or incarceration.

4.5. Implications

The so-called "evil cycle" of relapse, recidivism, trauma, and life challenges is related to an erosion of autonomy. Such autonomy could foster the motivation needed to improve health (Grosso et al., 2013). The SEM further contextualizes lives impacted by poverty, racism, and gender discrimination beyond what can be treated in the current rewards and punitive sanctions model (Stokols, 1996). The 12 themes from our focus groups utilize the SEM and SDT models to shed light on barrriers and facilitators to needed services among women DTC participants. SDT is an empirical model of healthcare behavior that mobilizes individuals' autonomous motivation for healthcare behavior by supporting autonomy. This model could be employed to foster healthy behaviors among DTC participants while systemic change to increase access is pursued.

4.6. Limitations

The number of comments regarding IPV from women DTC focus group participants was lower than would be predicted by its prevalence among women with substance use disorders and justice involvement (Engstrom et al., 2012). This could be related to focus group instructions that participants speak in general terms and not about themselves. This exploratory study adds to limited knowledge of a unique population, and women in particular. Our sample had limited racial and ethnic diversity (only two Hispanic participants overall and no people of color among court staff), which may have decreased discussion of racial and ethnic discrimination. Lastly, this study was conducted in a single geographical location which may limit examples of community and institutional barriers. Nonetheless, findings were reinforced with respondent verification and a member of the research team with direct DTC experience.

4.7. Conclusions

Health needs of women DTC participants within social and motivational contexts will inform a planned health services intervention. Availability of services does not confer accessibility across overlapping domains of the SEM in relation to autonomy, relatedness, and competence for women in a cycle of co-occurring morbidities and psychosocial obstacles.

Acknowledgments

(1) Dr. Morse, NIMH T32 MH18911, PI Eric Caine, MD; NIDA 1K23DA031612-01A1; the McGowan Charitable Fund, 524475; and University of Rochester Center for AIDS Research (NIH P30AI078498). (2) Focus group participants from Monroe County Court, AIDS Care, and Alternatives for Battered Women, Inc.; Neha Ahuja; Jennifer Rodriguez; Trish Zava; Hortensia Amaro, PhD; Christina Raimondi; and University of Rochester Laboratory of Interpersonal Violence and Victimization. Portions of this study were presented at the Association of Medical Education and Research in Substance Abuse conference in Bethesda, MD, Nov 1–3, 2012.

References

- Amaro, H., Larson, M. J., Zhang, A., Acevedo, A., Dai, J., & Matsumoto, A. (2007). Effects of trauma intervention on HIV sexual risk behaviors among women with co-occurring disorders in substance abuse treatment. *Journal of Community Psychology*, 35, 895–908.
- Barbour, R. S. (2001). Checklists for improving rigour in qualitative research: A case of the tail wagging the dog? BMJ (Clinical Research Edition), 322, 1115–1117.
- Blair, I. V., Steiner, J. F., Fairclough, D. L., Hanratty, R., Price, D. W., Hirsh, H. K., et al. (2013). Clinicians' implicit ethnic/racial bias and perceptions of care among black and Latino patients. *Annals of Family Medicine*, 11, 43–52.
- Bloom, B. E., Owen, B. A., & Covington, S. (2003). Gender-responsive strategies: Research, practice, and guiding principles for women offenders. Washington DC: National Institute of Corrections.
- Brewer, R. M., & Heitzeg, N. A. (2008). The racialization of crime and punishment: Criminal justice, color-blind racism, and the political economy of the prison industrial complex. *The American Behavioral Scientist*, 51, 625–644.
- Brown, J. B. (1999). The use of focus groups in clinical research. *Doing Qualitative Research*, 2, 109–124.

- Carson, E., & Sabol, W. J. (2012). Prisoners in 2011 (No. 239808). Washington, DC: Bureau of Justice Statistics.
- Centers for Disease Control and Prevention (2012). *HIV in correctional settings*. GA: Atlanta.
- Chirkov, V., Ryan, R. M., & Sheldon, K. M. (2010). Human autonomy in cross-cultural context: Perspectives on the psychology of agency, freedom, and well-being. New York: Springer.
- Creswell, J. W. (2012). Qualitative inquiry and research design: Choosing among five approaches (3rd ed.). Thousand Oaks, CA: Sage Publications, Inc.
- Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11, 227–268.
- Deci, E. L., & Ryan, R. M. (2011). Levels of analysis, regnant causes of behavior and wellbeing: The role of psychological needs. *Psychological Inquiry*, 22, 17–22.
- Drake, R. E., Mueser, K. T., Clark, R. E., & Wallach, M. A. (1996). The course, treatment, and outcome of substance disorder in persons with severe mental illness. *The American Journal of Orthopsychiatry*, 66, 42–51, http://dx.doi.org/10.1037/h0080153.
- Einbinder, S. (2010). A qualitative study of exodus graduates: Family-focused residential substance abuse treatment as an option for mothers to retain or regain custody and sobriety in Los Angeles, California. *Child Welfare*, 89, 29–45.
- El-Bassel, N., Caldeira, N. A., Ruglass, L. M., & Gilbert, L. (2009). Addressing the unique needs of African American women in HIV prevention. *American Journal of Public Health*, 99, 996–1001, http://dx.doi.org/10.2105/AJPH.2008.140541.
- El-Bassel, N., Gilbert, L., Wu, E., Goddard-Eckrich, D. A., Chang, M. P., Witte, S. S., et al. (2012). Prevalence and correlates of HIV and STIs among drug-involved female offenders under community supervision in New York City [Abstract]. Retrieved from. http://hdl.handle.net/10022/AC:P:14232
- Engstrom, M., El-Bassel, N., & Gilbert, L. (2012). Childhood sexual abuse characteristics, intimate partner violence exposure, and psychological distress among women in methadone treatment. *Journal of Substance Abuse Treatment*, 43, 366–376.
- Fielding, J. E., Tye, G., Ogawa, P. L., Imam, I. J., & Long, A. M. (2002). Los Angeles county drug court programs: Initial results. *Journal of Substance Abuse Treatment*, 23, 217–224.
- Fischer, M., Geiger, B., & Hughes, M. E. (2007). Female recidivists speak about their experience in drug court while engaging in appreciative inquiry. *International Journal of Offender Therapy and Comparative Criminology*, 51, 703–722.
- Fletcher, B., & Chandler, R. (2006). Principles of drug abuse treatment for criminal justice populations. Washington, DC: National Institute on Drug Abuse.
- Goff, A., Rose, E., Rose, S., & Purves, D. (2007). Does PTSD occur in sentenced prison populations? A systematic literature review. *Criminal Behaviour and Mental Health*, 17, 152–162, http://dx.doi.org/10.1002/cbm.653.
 Gray, A. R., & Saum, C. A. (2005). Mental health, gender, and drug court completion.
- Gray, A. R., & Saum, C. A. (2005). Mental health, gender, and drug court completion. American Journal of Criminal Justice, 30, 55–69, http://dx.doi.org/10.1007/BF02885881.
- Grosso, J. A., Epstein, E. E., McCrady, B. S., Gaba, A., Cook, S., Backer-Fulghum, L. M., et al. (2013). Women's motivators for seeking treatment for alcohol use disorders. *Addictive Behaviors*, 38, 2236–2245, http://dx.doi.org/10.1016/j.addbeh.2013.02.004.
- Guastaferro, W. P. (2011). Using the level of service inventory–Revised to improve assessment in drug court. International Journal of Offender Therapy and Comparative Criminology, 56, 768–789, http://dx.doi.org/10.1177/0306624X11413879.
- Israel, B. A., Coombe, C. M., Cheezum, R. R., Schulz, A. J., McGranaghan, R. J., Lichtenstein, R., et al. (2010). Community-based participatory research: A capacity-building approach for policy advocacy aimed at eliminating health disparities. *American Journal* of Public Health, 100, 2094–2102, http://dx.doi.org/10.2105/AJPH.2009.170506.
- Johnson, J. E., O'Leary, C. C., Striley, C. W., Abdallah, A. B., Bradford, S., & Cottler, L. B. (2011). Addiction, 106, 1279–1286, http://dx.doi.org/10.1111/j.1360-0443.2011.03389.x.
- Kennedy, S., Goggin, K., & Nollen, N. (2004). Adherence to HIV medications: Utility of the theory of self-determination. Cognitive Therapy and Research, 28, 611–628.
- Kim, T. W., Saitz, R., Cheng, D. M., Winter, M. R., Witas, J., & Samet, J. H. (2012). Effect of quality chronic disease management for alcohol and drug dependence on addiction outcomes. *Journal of Substance Abuse Treatment*, 43, 389–396.
- Kitzinger, J. (1995). Qualitative research: Introducing focus groups. BMJ: British Medical Journal, 311, 299–302, http://dx.doi.org/10.1136/bmj.311.7000.299.
- McLaren, L., & Hawe, P. (2005). Ecological perspectives in health research. Journal of Epidemiology and Community Health, 59, 6–14.
- Messina, N., Calhoun, S., & Warda, U. (2012). Gender-responsive drug court treatment: A randomized controlled trial. Criminal Justice and Behavior, 39, 1539–1558.
- Morgan, D. L., & Spanish, M. T. (1984). Focus groups: A new tool for qualitative research. Qualitative Sociology, 7, 253–270, http://dx.doi.org/10.1007/BF00987314.
- Mumola, C. J. (2000). *Incarcerated parents and their children*. Washington, D.C.: U.S. Department of Justice.
- Ng, J., Ntoumanis, N., Thøgersen-Ntoumani, C., Deci, E., Ryan, R., Duda, J., et al. (2012). Self-determination theory applied to health contexts: A meta-analysis. *Perspectives* on Psychological Science, 7, 325–340.
- Oser, C., Knudsen, H., Staton-Tindall, M., & Leukefeld, C. (2009). The adoption of wraparound services among substance abuse treatment organizations serving criminal offenders: The role of a women-specific program. *Drug and Alcohol Dependence*, 103, S82–S90.
- Pope, C., Ziebland, S., & Mays, N. (2000). Analysing qualitative data. BMJ: Clinical Research Edition, 320(7227), 114–116.
- Rehm, J., Mathers, C., Popova, S., Thavorncharoensap, M., Teerawattananon, Y., & Patra, J. (2009). Global burden of disease and injury and economic cost attributable to alcohol use and alcohol-use disorders. *The Lancet*, 373, 2223–2233.
- Resnick, H. S., Kilpatrick, D. G., Dansky, B. S., Saunders, B. E., & Best, C. L. (1993). Prevalence of civilian trauma and posttraumatic stress disorder in a representative national sample of women. *Journal of Consulting and Clinical Psychology*, 61, 984–991.

- Rossman, S. B., Rempel, M., Roman, J. K., Zweig, J. M., Lindquist, C. H., Green, M., et al. (2011). The multi-site adult drug court evaluation: The impact of drug courts, volume 4 (No. 237112). Washington, DC: The Urban Institute.
- Roth, G., Kanat-Maymon, Y., & Bibi, U. (2011). Prevention of school bullying: The important role of autonomy-supportive teaching and internalization of pro-social values. *The British Journal of Educational Psychology*, 81, 654–666.
- Rounsaville, B. J., Carroll, K. M., & Onksen, L. S. (2001). A stage model of behavioral therapies research: Getting started and moving on from stage 1. *Clinical Psychology: Science and Practice*, 8, 133–142, http://dx.doi.org/10.1093/clipsy.8.2.133.
- Ryan, R. M., & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology*, 25, 54–67.
- Ryan, R. M., & Deci, E. L. (2011). A self-determination theory perspective on social, institutional, cultural, and economic supports for autonomy and their importance for well-being. *Human Autonomy in Cross-Cultural Context*, 1, 45–64.
- Ryan, R. M., Patrick, H., Deci, E. L., & Williams, G. C. (2008). Facilitating health behaviour change and its maintenance: Interventions based on self-determination theory. *The European Health Psychologist*, 10, 2–5.
- Sartor, C. E., McCutcheon, V. V., Callahan O'Leary, C., Van Buren, D. J., Allsworth, J. E., Jeffe, D. B., et al. (2012). Lifetime trauma exposure and posttraumatic stress disorder in women sentenced to drug court. *Psychiatry Research*, 200, 602–608.
- Shaffer, D. K. (2011). Looking inside the black box of drug courts: A meta-analytic review. Justice Quarterly, 28, 493–521, http://dx.doi.org/10.1080/07418825.2010.525222.
- Simons-Morton, B. (2013). Health behavior in ecological context. Health Education & Behavior, 40, 6–10, http://dx.doi.org/10.1177/1090198112464494.
- Smit, B. (2002). Atlas.ti for qualitative data analysis. Perspectives in Education, 20, 65-75.
- Sormanti, M., Pereira, L., El-Bassel, N., Witte, S., & Gilbert, L. (2001). The role of community consultants in designing an HIV prevention intervention. *AIDS Education and Prevention*, 13, 311–328, http://dx.doi.org/10.1521/aeap.13.4.311.21431.

- Staton, M., Leukefeld, C., & Webster, J. M. (2003). Substance use, health, and mental health: Problems and service utilization among incarcerated women. *International Journal of Offender Therapy and Comparative Criminology*, 47, 224–239.
- Stokols, D. (1996). Translating social ecological theory into guidelines for community health promotion. *American Journal of Health Promotion*, 10, 282–298.
- Stokols, D., Allen, J., & Bellingham, R. (1996). The social ecology of health promotion: Implications for research and practice. *American Journal of Health Promotion*, 10, 247–251, http://dx.doi.org/10.4278/0890-1171-10.4.247.
- Taxman, F. S., & Bouffard, J. A. (2006). Treatment as part of drug court: The impact on graduation rates. Journal of Offender Rehabilitation, 42, 23–50.
- Tracy, K., Burton, M., Nich, C., & Rounsaville, B. (2011). Utilizing peer mentorship to engage high recidivism substance-abusing patients in treatment. *The American Journal of Drug and Alcohol Abuse*, 37, 525–531, http://dx.doi.org/10.3109/ 00952990.2011.600385.
- Wang, E. A., Hong, C. S., Shavit, S., Sanders, R., Kessell, E., & Kushel, M. B. (2012). Engaging individuals recently released from prison into primary care: A randomized trial. *American Journal of Public Health*, 102, 22–29.
- Wenzel, S. L., Longshore, D., Turner, S., & Ridgely, M. S. (2001). Drug courts: A bridge between criminal justice and health services. *Journal of Criminal Justice*, 29, 241–253.
- Wenzel, S. L., Turner, S. F., & Ridgely, M. S. (2004). Collaborations between drug courts and service providers: Characteristics and challenges. *Journal of Criminal Justice*, 32, 253–263, http://dx.doi.org/10.1016/j.jcrimjus.2004.02.005.
- Williams, G. C., McGregor, H. A., Sharp, D., Levesque, C., Kouides, R. W., Ryan, R. M., et al. (2006). Testing a self-determination theory intervention for motivating tobacco cessation: Supporting autonomy and competence in a clinical trial. *Health Psychology*, 25, 91–101, http://dx.doi.org/10.1037/0278-6133.25.1.91.