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ORIGINAL ARTICLE

Supporting pregnant and parenting women with substance-related problems by addressing emotion regulation and executive function needs

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ABSTRACT

Treatment of maternal substance-related problems is often complicated by complex pictures of risk, including mental and physical illness and social-contextual risk. In motherhood, systemic barriers, such as lack of childcare and stigma, further complicate access and sustained treatment engagement. Integrated programs are designed to address this issue by providing treatment for substance use, as well as services to address other maternal, parenting, and child needs, ideally at a single access point. Despite growth in integrated programs, a common theoretical framework to inform service provision is lacking. This has resulted in considerable heterogeneity among integrated programs and hindered multi-site evaluation. This study sought to develop a theoretical model of integrated treatment, with a focus on the therapeutic relationship and how the relationship serves to support two common areas of need in this population: emotion regulation (ER) and executive functions (EF). As part of a multi-site evaluation of integrated substance use treatment, six client focus groups ($N = 50$) were conducted to explore client perspectives on integrated treatment and specifically aspects of the therapeutic relationship they found most/least helpful. Thematic analysis revealed approaches and behaviors of counselors that support ER and EF. These themes are presented and contextualized within the literature that addresses ER and EF risk from a mental health and socio-contextual risk perspective. A theoretical model of these processes is presented, along with practice and policy implications.

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Introduction

Recent statistics indicate that approximately one-third of people in substance use treatment in North America are women (DATIS 2013; SAMHSA 2014a,b). Substance use treatment for women is thought to be most effective when it is sensitive to the specific experiences and needs of women and when it addresses the specific barriers they face (Women's Services Strategy Work Group 2005). Women tend to present to treatment with a complex array of risks and challenges, including past experiences of trauma (e.g. physical and sexual abuse; Ouimette et al. 2000; Cormier et al. 2004), physical health challenges (e.g. respiratory illnesses, sexually transmitted infections, HIV; Tuchman 2010), psychological disorders (e.g. depression, bipolar disorder, anxiety, personality disorders and suicidality; Brady & Randall 1999; Zilberman et al. 2003), and social issues (e.g. homelessness, unemployment and poverty; Osterling & Austin 2008). While data is not available for Canada, the majority of women entering substance use treatment in the United States are pregnant and/or have children (Werner et al. 2007). Similarly, 61% of women in substance use treatment in the United Kingdom are parents, with over half of children residing in their parents' care (NTA 2010). Parenting places additional demands on women, particularly when women are transitioning to the motherhood role. Instrumental (e.g. feeding and clothing children), emotional (e.g. caring for and responding to child's emotional needs), and physical (e.g. post-partum recovery, carrying/lifting children) demands can place significant stress on the health and mental well-being of new mothers. Moreover, the transition to motherhood can represent a period of significant disruption for women, reflecting significant changes in daily life and responsibilities, relationships with others, self and personal identity and work (Nelson 2003). Engaging and remaining in treatment may be even more difficult for women with substance-related issues due to the stigma associated with substance use and substance-related problems in the context of pregnancy/parenting (Poole & Dell 2005). These women may also experience barriers such as, lack of childcare (Poole & Greaves 2009) and concerns about child welfare involvement (Howell & Chasnoff 1999; Curet & His 2002). As such, additional supports (e.g. childcare), as well as access to other services that promote the health and well-being for both the woman and her children (e.g. prenatal care, parenting support, housing, food) may be required to successfully engage in treatment.

Integrated treatments have been developed to address the barriers and to meet the diverse and often complex needs of women who are experiencing substance-related problems (Milligan et al. 2010). Broadly, integrated treatment for pregnant and parenting women use an ecological approach,

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addressing the woman's substance-related problems and goals, as well as other health, parenting, and social-contextual factors that may jeopardize treatment participation and perpetuate substance-related harms (Milligan et al. 2010; Niccols et al. 2010). While integrated treatment has comparable substance-related outcomes when compared to traditional (nonintegrated) substance use treatment (Milligan et al. 2010), they tend to have a further reach in terms of their impact on factors associated with continued risk for substance-related problems. For example, integrated treatments have been shown to be superior to traditional (nonintegrated) substance use treatment in supporting outcomes such as maternal mental health, prenatal care attendance, parenting, birth and child behavioral health (Milligan et al. 2011a, 2011b; Niccols et al. 2014).

Despite growing evidence of the effectiveness of integrated treatments, advancement in our understanding of the active components of these programs has been hindered by the absence of a common theoretical framework implemented across programs. A meta-analytic review of the literature suggests that there is great variability in terms of the specific complement of services (i.e. substance use, parenting, maternal and child well-being) provided (Milligan et al. 2010). Attempts to distill the active components across programs have further been hindered by limitations in terms of reporting practices regarding treatment models (Henderson et al. 2012). A theoretical framework would be of considerable value to the field of integrated treatment as it would facilitate the identification of core principles and best practices, support continued research, evaluation and program development, and ultimately aid in supporting the availability of effective services (Lynham 2002).

Given variability in the type and manner in which specific services are offered across integrated treatments, one approach to developing a theoretical model is to focus attention at the level of underlying processes, including therapeutic factors and mechanisms of change. There is value in incorporating the client's voice into this model development, given the foundational role that client-centredness plays in effective integrated treatment (Jean Tweed Centre Steering Committee 2008; Meixner et al. 2016). In a meta-synthesis of qualitative studies that examined women's perceptions of their integrated treatment experience, Sword et al. (2009) highlighted themes such as the development of personal agency and a sense of self, giving and receiving social support, being able to self-disclose challenges, feelings and past experiences, recognizing destructive patterns of behavior, goal-setting and engaging with staff as playing a key role in positive treatment outcomes. Examination of these themes provides valuable insight into women's perceptions of mechanisms of change; however, it does not provide explicit information on *how* these mechanisms of change are fostered through treatment. Answering the question of '*how?*' is key for developing a model that will facilitate the development of best practices, and provide guidance to support evaluation, research and program development.

The present study was designed to further refine our theoretical model for integrated programs by incorporating client's perceptions of the ways in which integrated treatments support positive outcomes in pregnant and parenting women with substance-related problems. As such, a key first step was to position the model so that it reflects what is seen by clients as central to effective substance use treatment. The therapeutic relationship was selected as the central focus of the model for this study, this relationship has been overwhelmingly identified by women as a paramount and keystone factor (i.e. a factor that contributes to broad outcomes). The focus on the therapeutic relationship is also consistent with extant literature addressing clients' views of key therapeutic processes for integrated treatment (Wong 2009; Meixner et al. 2016), as well as addiction and mental health treatment more broadly (Rosenblum et al. 1995; Meier et al. 2005). The objective of this study was therefore to further develop our understanding of qualities of the therapeutic relationship that support positive outcomes for women. We further sought to more fully integrate these qualities into an understanding of the underlying processes that may place pregnant and parenting women at risk for substance-related problems, processes that when enhanced may help promote positive outcomes for women and their families.

While there are multiple frameworks that could be applied to unpack qualities of the therapeutic relationship, emotion regulation (ER) and executive functions (EF) were used as an integrative theoretical lens for understanding women's perceptions of their care given the involvement of ER and EF in the initiation and maintenance of use (Brady & Sinha 2005; Blume & Marlatt 2009) and their potential to promote treatment engagement and positive outcomes (Verdejo-Garcia et al. 2012; Bates et al. 2013).

There is significant literature linking substance misuse and ER-related challenges. ER reflects 'the extrinsic and intrinsic processes responsible for monitoring, evaluating, and modifying emotional reactions, especially their intensive and temporal features, to accomplish one's goals' (Thompson 1994, pp. 27–28). ER is regarded commonly as an impetus for use and often also plays a role in maintaining use by down-regulating the experience of negative emotion in the short-term (Brady & Sinha 2005). ER is also frequently associated with co-occurring psychological disorders, including trauma (Camp & Finkelstein 1997; Brady & Randall 1999; Cormier et al. 2004) and mood and anxiety (Ashley et al. 2003; Zilberman et al. 2003; Rush et al. 2008). Further, women with substance use issues often to experience chronically high levels of stress, including poverty, homelessness, neighborhood disadvantage and food insecurity and child welfare involvement (e.g. Kettinger et al. 2000), which may magnify challenges with ER (Brown et al. 1995).

A factor that is inter-related with ER is EF. EF consist of higher-order cognitive processes that support effective problem-solving and goal-directed behavior across behavior, social, and emotion domains (Miller & Cohen 2001). EF reflects a complex and interacting set of processes, including cognitive flexibility, working memory, inhibitory control, planning and self-monitoring (Pennington & Ozonoff 1996). Individuals with substance-related problems are much more likely than those without these challenges to present with deficits in EF. For example, alcohol and opioid dependence

and poly-substance use have been associated with challenges with EF, including areas such as inhibition, flexibility (set-shifting), and decision-making (Blume & Marlatt 2009). Further, psychological disorders are frequently associated with substance use, including Post Traumatic Stress Disorder (Scott et al. 2015), neurodevelopmental disorders (e.g. learning disabilities, Autism Spectrum Disorder, Attention Deficit Hyperactivity Disorder and Fetal Alcohol Spectrum Disorder), as well as social contextual risks, such as poverty (Evans & Schamberg 2009). These disorders and risks have also been associated with increased EF challenge (Khoury et al. 2015; Kaye et al. 2016; Rengit et al. 2016).

In sum, the objective of this research was to develop a theoretical model of integrated treatment by examining how qualities and behaviors within the therapeutic relationship support positive outcomes for pregnant and parenting women with substance-related problems. An ER/EF lens was used to guide the analysis.

Method

Participants

This study was completed as part of a larger evaluation of the integrated programs in Ontario. Of the 36 integrated programs, six were selected purposively to ensure representation of a range of geographic locations, years of operation, and size. The model of integrated treatment at each site differed based on local characteristics and resources, with programs varying in their specific complement of services (services may include, for example, childcare, parenting supports, access to primary care, housing/employment supports, etc.); however, all shared the overarching objective of increasing service provision for women and their children aged 0–6, promoting healthy outcomes and reducing substance-related harms among women, and promoting healthy pregnancy and child/family outcomes. Counselors who staffed the programs had a range of educational backgrounds, with college-level education in addiction counseling and undergraduate degrees in psychology and social work. It was further notable that many of the counselors in these programs had been in their role for a number of years, with generally low levels of employee turnover.

Integrated treatment staff assisted with the recruitment of clients to participate in focus groups by verbally informing women of the opportunity and by posting recruitment flyers created by the research team. Women were eligible to participate if they were current or past clients. Participants completed a brief, anonymous questionnaire on their socio-demographic characteristics. Participants received a $30 gift card to acknowledge involvement. In total, 50 women participated across six focus groups (3–16 women in each group). See Table 1 for a demographic description of the sample.

Table 1. Participant demographics ($N = 50$).

Characteristic	*n*
Age group	
13–18	1
19–25	11
26–34	31
35–44	6
45–54	1
Ethnicity	
White	32
First nations, inuit, metis	6
Black	2
Latin American	2
Mixed/multiple	8
Education level	
High school courses – no diploma	21
High school diploma	12
College	14
University	2
Missing	1
Currently pregnant	
Yes	5
No/did not respond	45
Marital status	
Single	30
Married	1
Common-law	16
Separated/divorced	2
Missing	1
Sexual orientation	
Bisexual	8
Heterosexual	34
Other (Two-spirit, asexual/non-sexual, unsure)	10
Treatment progression	
Just getting started	3
In progress	13
Completed or almost completed	5
Completed but still receiving services	27
Other	2
Mandated/required to receive services	
No	30
Yes	18
Missing	2
Number of children	
Mean (SD)	2.14 (1.5)
Range	0*–7

0 reflects women who were pregnant or who had recently had an unsuccessful pregnancy at the time of data collection.

Procedure

Focus groups were chosen as the preferred method of data collection as it allowed for a broad range of opinions and interactions among participants (Onwuegbuzie et al. 2009). A discussion guide was developed by the research team, in consultation with program managers, service providers, and policy makers working with integrated programs. The discussion guide comprised a series of questions designed to elicit client perceptions of care and program experiences (e.g. 'Tell us about your experience in the program', 'What did you think of the counselor or worker who delivered the program?', 'What parts of the program were most helpful for you?', 'Where there any challenges for you in participating in the program?'). A member of the research team met with prospective participants prior to the focus group to explain study procedures and obtain informed consent.

Focus groups were approximately 45 minutes in length. They were audio-recorded and transcribed verbatim by a professional transcription company. Ethical approval for this study was obtained from Ryerson University and the Center for Addiction and Mental Health and care was taken to approach focus group facilitation and analysis from a non-judgmental, holistic, and strength-based/strength-enhancing approach.

Using ER and EF as a guiding lens for data interpretation, analysis proceeded using a modified grounded theory approach such that themes were allowed to emerge from the data (Corbin & Strauss 2015). Steps involved in this process included immersion in the data, initial open coding, creation of categories and themes, and interpretive analysis (Green et al. 2007). Two authors who attended the focus group interviews and have experience working with pregnant and parenting women with substance-related problems coded the transcripts independently. This was a systematic process of identifying as many codes and themes as possible within the data, using ER and EF as a framework for categorizing specific behaviors and approaches used by counselors that supported a positive therapeutic relationship. After completing this process independently, the authors met on multiple occasions to discuss. An iterative process of constant comparison was undertaken through multiple rounds of coding and discussion whereby both authors identified themes relating to therapeutic relationship and categorized them according to theoretical alignment with ER, EF, or both. The final coding scheme was determined in a collaborative fashion once consensus was reached among authors. The research team met regularly to interpret the thematic finding. NVIVO 10 software was used to facilitate coding.

Results

Women openly shared their experiences and reflected on a number of ways in which the program supported them in making positive change. As noted above, the therapeutic relationship between the woman and her counselor was seen as foundational, and participants discussed a number of counselor behaviors and characteristics that supported treatment engagement and progress in reaching their goals. Across sites, women were overwhelmingly positive in their comments about their experience in integrated programs and in particular the relationship they had with counselors. Consensus about positive experiences and relationship qualities was frequently depicted through head nodding of group members, verbalizations of agreement, and women building on the stories shared by others in the focus group with their own experiences. Results are presented below and reflect the two categories used for thematic analysis (ER and EF), with the understanding that these factors are not distinct entities but rather there is an interplay between factors with each mutually supporting each other. See Figure 1.

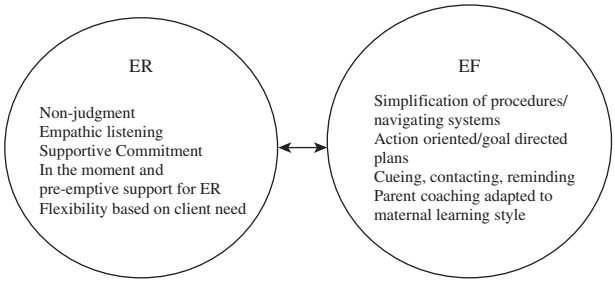

Figure 1. Proposed model of factors within the therapeutic relationships that support ER and EF.

Therapeutic approaches that support ER

Five overarching themes emerged describing treatment processes that served to support ER in clients: non-judgment, empathetic listening, supportive commitment, in the moment support for ER, and treatment flexibility. These themes are presented below with illustrative quotations.

(a) Non-judgment: Program counselors were consistently described as caring, warm, and accepting, having adopted a non-judgmental stance in relation to their clients. Women noted that '*You can walk through the doors and not be judged*'. Women often used language that evoked holistic sense of self, such as being seen as a whole person or a real person in the context of service provision ('*When you come here, you actually feel like a person*'). They described their counselors as seeing beyond substance use to a broader set of personal and parenting needs. This was seen as particularly salient for participants because of the deeply entrenched stigma associated with substance-related problems, particularly for women who are pregnant or parenting:

> *Coming from addiction and stuff like that, you get a lot of people who think you're this awful person because you're a mom and you're addicted to drugs and that you deserve anything that's happening to you. Here, you don't really feel that way, right?*

This holistic, non-judgmental approach served to decrease negative emotion associated with substance use, allowing women to have 'dignity' and to counter common feelings of shame and distrust.

> *And, give you that little shred of dignity, like you have that little shred of dignity, because they understand your struggles, all to a certain extent.'*

(b) Empathetic listening: In keeping with the non-judgmental caring approach, counselors were described as using empathetic listening techniques. Women described being provided with the opportunity to tell their story and be truly heard by their counselors:

> *They listen to you. They listen to your needs and what things you need to work on for you and to do your life work. And, they go step by step and they really just know you and they really just do what's best for you.*

Counselors' empathetic listening served to empower women to be open about their challenges and voice their needs so that they could be addressed in treatment. Counselors were seen as desiring to learn about and being able to fully sit in their client's experience, handling the full range of emotions. This was noted to aid in the development of a trusting therapeutic relationship and a collaborative approach to service delivery.

> *And, they actually want to know deep down what's wrong with you. They feel your pain, right? They're there with you alongside everything. It's okay if you cry. They feel with you every minute.*

> *Balancing the addiction part and being a mom, it's hard. Being in recovery. I got the being an addict and a mom down pat, but being sober and being a mom, that's a whole different thing, so it [the program] really helps you balance that. And there are times where*

kids are going to really piss you off and stress you out that you want to use, and it's a place that you feel safe that you can share that.

This was contrasted with participants' prior experiences with other service providers, including feeling like they were being 'talked at' or told what to do:

That's one thing I really like [here] because the other counselors didn't really listen. They were too focused on telling me how to quit and stuff, without me telling them. They would have the urge to butt in. And it's important to know the background, I feel, like why I'm using and why I'm here today, and [counselor's name] just listened to me.

(c) Supportive Commitment: Women described their counselors as adopting approaches that demonstrated supportive commitment to their success, promoted a sense of safety, and instilled hope – all which served to build a trusting therapeutic relationship and support treatment engagement. For example, one woman acutely described the commitment demonstrated by therapist as key to engaging in the program and remaining a participant:

I'll never ever, ever forget these words. She said, if you're committed to having this baby, we're committed to helping you. So, just having one person say that … Meant the world.

Counselors were also described as conveying commitment through encouragement and championing of client successes, no matter how the small the task or achievement (*They are basically feeding you encouragement.*) This process not only contributed to the sense of security and trust, but also served to empower clients and boost self-esteem. For example:

They see your success. And, it's nice, because they acknowledge it. They acknowledge the good things that you have done and it makes you feel even prouder. Because, you're telling me I'm doing good, so I know I'm doing good now. They push you to believe in yourself.

Further, clients repeatedly noted that they felt safe disclosing information due to their counselor's ability to reframe potentially negative experiences into opportunities for growth:

You actually get more benefit from her program the more honest you are, because she nips it right in the bud, she gives you the tools that you need. She is great for flipping things around and becoming a motivator.

(d) In the moment and preemptive support for ER: Participants reported that their counselors actively helped them to regulate their emotions by providing in the moment feedback and by preparing them for the realities of challenges so that they were prepared and armed with strategies for coping.

Yeah, I think they adapt to your personality, because I'm high strung and she's knows I'm just all over the place. I have the perfect worker because she knows how to calm me down when I get amped up like not just because I'm happy or sometimes I get amped up and I'm very aggressive and angry. It's good that she could adapt to my personality like that.

It's not going to be easy the first couple of weeks when he gets home [child is returned to mother's care], he's going to be all over the place trying to feel what he can do, what wrong or good. You have to be prepared that that's going to happen. If wasn't for them warning me, I probably would have ended up back using for sure.

Ultimately, the approach of ER support and commitment served to build a positive, trusting relationship that served to foster other positive connections. For example

You need to have a good relationship, someone to even open up and say those things to. I've met many people and workers that I had to stop working with because I just couldn't see myself saying those things. [Here] our relationship is key. You need to trust somebody.

These comments are significant given that this population is often mistrustful of service providers given prior experiences of stigmatization and negative encounters with the child welfare system. Indeed, women frequently spontaneously shared past experiences of negative therapeutic relationships. A number of clients reported that their relationship with their counselor as their first trusting relationship with a service provider. Trusting relationship was also described as a foundation, which could be carried forward into other relationships.

This was the first professional trusting relationship that I have had with people in the social services field.… I've been able to have trust in one person and then I was able to carry it over and be able to trust in others.

(e) Flexibility based on client need: Counselors were described as flexible and client-driven, particularly when the women were experiencing emotional distress or challenge. Counselors were frequently described as being able to quickly adapt to their clients' unique circumstances and their often-changing needs. For example, participants often described their counselors positively in terms of crisis response and willingness to address a wide variety of personal challenges.

So, if you want to sit there and talk about your relationship and how it's upsetting you and might cause you to relapse, they'll sit there and listen to you talk about your stressors. It's not just like, okay, we're doing your addiction plan today.

Further, counselors demonstrated a flexible approach to client readiness to change. This had the impact of clients feeling in control of their recovery because they had been provided with relevant information that was tailored to their needs. This approach served to empower women and allowed them to make choices best suited to their individual circumstances.

They do what is best for you based on your needs and based on your understandings of what you can do to make yourself a better person all around.

It's not what works for them, or CAS [Children's Aid Society] or for whoever's opinion. They always do what works for you, what makes you feel comfortable and what makes your child feel comfortable.

These therapeutic approaches support client ER by anticipating and adapting to client presenting issues, and working to support clients to stabilize, de-escalate emotionally charged situations and eventually adapt patterns of emotional responding.

Therapist approaches that support executive functioning/information processing

Women shared experiences that reflected counselor behaviors and techniques that recognized and addressed the

information processing and executive function challenges of women with substance-related problems. Four underlying themes emerged that reflected counselor support for executive functioning and information processing: simplification of procedures and help with navigating systems; action oriented, goal directed support for recovery; cueing, contacting and reminding; and parent coaching adapted to maternal learning style. These are presented below with illustrative quotations.

(a) Simplification of procedures and help with navigating systems: Participants described counselors going out of their way to simplify procedures and help them navigate systems. This included filling out paperwork on client's behalf, seeking out relevant information and resources for clients, and other efforts to more generally make daily life easier for clients. This approach recognizes and accommodates for executive function/problem-solving challenges scaffolding such that they can experience success in meeting their goals.

> *But, they made it very simple. Any kind of paperwork, they simplified everything if I needed it.*

Further, participants saw their counselor as an advocate, and in particular someone who helped them regulate their emotions, problem-solve, and navigate complex systems. For example, many women spoke about the helpfulness of counselors attending meetings with child welfare workers, court appearances, and other appointments.

> *She attends every court date with me and I worked with her every court date that I had, to have my children back in my name and all that. She was there beside me. Any appointments that I needed her there.*

(b) Action oriented, goal directed support for recovery: In terms of assisting women with the EF of planning and organizing, counselors were described as problem-based and action-oriented. They used techniques to appropriately scaffold clients towards mastery, such as creating a collaborative recovery plan, providing practical parenting tools, and providing strategies for relapse prevention.

> *Right away they do an action plan with you and it's based on your needs. I like the way they give you options. When you're having an issue, they give you different ways to deal with it.*

> *Here, they'll help you if you are struggling. They'll give you suggestions instead of being like why aren't you doing that properly? They'll suggest maybe you should try this. Instead of putting you down for it, they give you positive reinforcement in a positive environment.*

Participants noted that this approach was helpful because counselors recognized and worked to support women in developing or recovering life skills that had been neglected during periods of heavy substance use. Scaffolding ultimately helped to support women to approach their problems and to develop problem-solving skills.

> *That's pretty much what I've gotten out of it and the ability to be an adult really because when you're a drug addict, you don't have responsibilities. You don't pay attention to that kind of stuff. When you're an addict, you do nothing for years, and then you go to this normal life and you're like holy crap, bills, applications, fax this, fill this out. So they kind of taught you that you need to do that stuff and give you the tools to be able to do that stuff.*

This included efforts to reduce daily stressors for clients such as providing transportation, childcare, food, or housing, all factors that clients struggled to cope with.

> *I need help with credit counseling, so they hooked me up with that. I needed help with my son and stuff that are targeted towards autism and they found me somebody I connect with. If they can't bring it here, they'll find you somebody that you can connect with.*

> *I think it's more like the information they give you. You kind of ask or you say your side and then they'll go and they'll get the information that fits what you've been talking to them about. And it helps you make a decision and make the right one. I find that's the most helpful thing.*

(c) Cueing, contacting, reminding: Focus group participants described a number of counselor behaviors such as initiating contact, calling, or text messaging. These behaviors recognize that women at this stage in the care process need counselors to put in efforts to initiate contact and promote engagement.

> *They text you every Wednesday morning when there's a group: Are you coming? Can't wait to see you.*

> *Here, you know that they actually think about you outside of hours and are like calling her at home. They go above and beyond what they need to.*

As indicated above, some participants commented specifically on the use of technology employed by their counselors. Texting served as a cue to remind clients of upcoming appointments and an opportunity for frequent, brief status check-ins to provide immediate feedback and support. It was also reported to recognize and accommodate the financial constraints and context of poverty common to this population.

> *I think it [texting] is the best way and I think that most places should do that, because a lot of us don't have minutes on their phone during the day because we are single mothers.*

It should be noted that support for counselor use of texting was not universally embraced by participants, and one individual indicated that she found the practice unprofessional. Nevertheless, texting can be viewed as one strategy among many that can serve as a cognitive cue for clients.

To support learning and development of EF skills, counselors monitored client behavior and provided clear feedback to clients to help them see when they might be experiencing challenge and shift to more adaptive behavior.

> *If you're not on track and you're not doing what you're supposed to be doing, she'll call you on your crap.*

> *Yeah, she knew I wasn't doing well. Instead of being oh, kind of tiptoeing around it, she was straight up. She's like I know you're in a bad place and you need to come here now. And I did because it's nice to have somebody actually give a shit about you.*

(d) Parent coaching adapted to maternal learning style: Counselors provided parenting supports that were tailored specifically to the learning style of the women, such as explicit demonstrations/modeling and repetition of material and learning experiences. This was noted to help women in learning the information in ways that promoted retention and application, acknowledging that readiness for, methods,

and rates of learning may differ between women (e.g. *I did the [parenting] group three times because I needed that support*).

> *[They teach you] how to talk to her [child], how to get inside her head because I'm not really good at breaking stuff down so that kids can understand it. [Here] they give you the simplest tools to work with… There were videos.*

> *Maybe you could show me so that when I'm at home with her, we could do arts and crafts or how we could do a playdoh activity. As an addict, I remember them when I was a kid but I can't grab them off the top of my head.*

Discussion

Building on women's identification of the centrality of the therapeutic relationship in both the present study and the extant literature, we propose a preliminary model of the therapeutic relationship for integrated treatment for pregnant and parenting women with substance-related problems. The model frames the counselor behaviors and approaches in terms of their roles in two areas of common presenting need in pregnant and parenting women with substance-related problems, namely ER and EF. See Figure 1.

We conceptualized the first group of counselor behaviors and approaches as supportive of client ER needs. Clients perceived their counselor's empathetic listening, non-judgment, supportive commitment, and flexible attention to present need as important to the development of the therapeutic relationship and positive treatment outcomes. From this place of safety and security, women reported being able to begin to break down emotional barriers, take emotional risks and begin to build trust in the therapeutic relationship. A strong therapeutic relationship (incorporating elements of a non-punitive attitude, trust, care, and positive regard) is recognized as playing a foundational role in substance use treatment, particularly in fostering engagement and improvements early on in treatment (Rosenblum et al. 1995; Meier et al. 2005; Redko et al. 2007).

These relationship qualities are also consistent with those identified in the literature on Dialectical Behavior Therapy (DBT) for Borderline Personality Disorder (Langley & Klopper 2005). McMain et al. (2015) suggest that empathetic validation, including empathetic listening and conveying acceptance, is a key strategy for cultivating a positive therapeutic relationship patients with BPD. Women with substance-related problems often present to treatment with histories of trauma and highly stigmatized, if not explicitly criminalized, behaviors (e.g. substance use while pregnant or parenting, sex work). Counselors who are accepting and stay present with these experiences may help a woman to build emotional self-awareness and self-acceptance and, in turn, reduce the tendency to engage in automatic emotionally driven responses (e.g. avoidance, substance use; Linehan 1993; Fonagy & Bateman 2006; Zelazo & Lyons 2012; McMain et al. 2015). As such, this model is also very much in line with trauma-informed practice (The Jean Tweed Centre Steering Committee 2013).

Counselor behaviors and approaches identified by the women in the present study are also akin to those that support the development of a secure attachment, with proximity seeking, safe haven in times of distress, and secure base from which to explore a potentially dangerous world having the strongest impact on the quality of the therapeutic relationship (Mallinckrodt 2010). More specifically, children with secure attachments experience their caregivers as a safe haven and have trust that they will be there in times of distress, illness, or hurt. They are confident in their caregivers' ability to attend and accept a range of positive and negative emotions, as well as their provision of assistance in ER (Haft & Slade 1989; Crandell et al. 1997; Milligan et al. 2003). These processes are mirrored in the adult therapeutic relationship and may be particularly important for clients who have experienced trauma, and/or who present with insecure or disorganized attachments in which the attachment system is hyper- or de-activated (or both) in the face of distress (Mallinckrodt 2010). Listening, 'feeling with' the client, wanting to hear the client's story, remaining committed even in the context of distress, and reading and responding to client cues in order to flexibly meet clients where they are at may set the stage for a secure attachment between client and counselor. Research suggests that this therapeutic attachment, in turn, provides a sense of relief and support in times of distress (Janzen et al. 2008) and greater depth of exploration of emotional issues in treatment (Romano et al. 2008).

Women, however, spoke about the relationships with their counselors and specific behaviors that extended beyond the elements of a positive therapeutic relationship. We regarded these counselor behaviors and approaches as supportive of client EF. Across diverse client needs and types of services provided, clients shared stories that reflected counselors adapting treatment to meet their cognitive and learning needs. Namely, behaviors were shared such as simplification of procedures, help with navigating systems, taking an action orientation, setting goals, and cueing clients were seen as essential to both helping clients regulate their emotions but also to addressing risk factors that might be maintaining substance use and substance-related problems. Counselors modeled for women how to recognize triggers and how those triggers related to their 'personality' or automatic patterns of responding, and provided cueing, contacting and reminding so that women could experience success and begin to internalize these skills. They also modeled EFs, such as initiating and planning for emotional challenges (e.g. going to court, meeting with child welfare workers, parenting challenges) and explicitly taught strategies for coping while attending to the their client's need for experiential learning and repetition. This is consistent with Zelazo and Lyons's (2012) suggestion that EF play an important role in the regulation of emotion, as well as findings from the depression literature that suggest that problem-solving and cognitive behavioral approaches, which are more likely to target skills such as impulse control, flexibility, initiation, planning and monitoring, are superior to non-directive supportive counseling (ventilate and validate experiences with empathy; Cuijpers et al. 2008).

In addition to supporting ER, our participants also described ways in which EF strategies were used to assist

them in reducing social-contextual stressors, such as housing, involvement with child welfare and justice systems, food security, relationships, physical and mental health, and education. Clients described being supported at the level needed to effectively problem-solve. These included support with the EFs of initiation, planning (i.e. simplification of procedures and help with navigating systems, action-oriented/goal-directed plans for addressing stressors), inhibitory control, cognitive flexibility (i.e. cueing, contacting and reminding), and generally adapting programing to learning style. Further, these counselor behaviors could be seen as reducing overload and emotion dysregulation, while reciprocally promote the ability of the client to be able to employ EF and more effectively problem-solve (James et al. 2008; Zelazo & Lyons 2012).

Taken together, the proposed ER/EF model provides a new theoretical lens for understanding integrated treatment. A strength of this model is that it incorporates knowledge from affective and cognitive science to inform how to tailor treatment. This is important because treatment is a learning process in which clients learn to be present with distress and manage in new, more adaptive ways – thus drawing on both ER and EF abilities. Explicit descriptions of how to tailor treatment to accommodate for EF weakness and how to develop these abilities in clients has not been defined in substance use (Blume & Marlatt 2009) or mental health literatures (James et al. 2008). Integrating this information into a model of integrated treatment is important given preliminary evidence that suggests that greater EF ability predicts substance use outcomes, self-efficacy, engagement and motivation to change (see Blume & Marlatt 2009 for review).

The importance of tailoring treatment to the affective and cognitive needs of clients has been argued as essential for other populations with ER and EF deficits, including youth with Fetal Alcohol Spectrum Disorder (FASD) and co-occurring learning disabilities and mental health disorders (Milligan et al. 2016). These exemplar models may be informative for the development of a model for pregnant and parenting women with substance-related problems. For example, Kodituwakku (2009) has developed a neurodevelopmental framework to guide clinicians working with FASD. Similar to some of the ways in which counselors were reported to support EF in the present study, Kodituwakku suggests that training in ER and attention (which can include being able to stay present with difficult tasks/contact rather than avoid) is considered to be critically important, particularly in the beginning of treatment. He also recommends that assessment be undertaken to better understand the cognitive profiles of clients and that this information be used to tailor treatment approaches, such as presenting information at a slower rate and using multimodal teaching that includes hands on experience. The need for tailoring is also echoed in the guideline suggesting that treatment strategies should fall within the individual's zone of proximal development, meaning that the most gain from intervention will be attained when the level of difficulty is at or just above the client's current level of functioning.

Future directions and limitations

This study represents a first step in the development of a theoretical model of integrated programing, with a specific focus on the therapeutic relationship. A broader examination of key characteristics from an individual, program, community, and policy/government level is an important area for future study. The findings and model presented also represent the views of pregnant and parenting women who successfully engaged in integrated programing for problematic substance use. It is possible that women who left treatment or who engaged in other types of treatment may have shared different perspectives on qualities of the therapeutic relationship and including the perspectives of these women might have increased access to more critical/negative views of the care received/therapeutic relationship. In the present study, women spoke holistically about their experience, with only a minimal focus on parenting and pregnancy. This is an interesting finding, given the emphasis on motherhood being an important aspect of identity development and developing trusting relationships (Sword et al. 2009). The lack of specificity of these findings to the motherhood role may reflect diversity in service models across programs, with these counselor behaviors/approaches being applied to parenting in some programs more than others. The findings may also be reflective of the intentionally broad nature of the interview questions, without specific probes for parenting interventions. Future research is needed to address how ER and EF are supported in relation to the unique needs of pregnant and parenting women and how this support relates to outcomes for pregnancy, parenting, and child and maternal well-being. Recent research has begun to explore the role of ER and EF in relation to parents' ability to seek and benefit from parenting interventions (Crandall et al. 2015). We view the more general nature of this model as a strength and believe that it may have broader applicability than just pregnant and parenting women with substance-related problems. More specifically, the model may be helpful in informing substance use treatment regardless of target population, as well as the treatment of other mental health challenges associated with affective and cognitive deficits. Future research that uses this model as a foundation to more deeply explore the type of ER and EF supports that are specific to pregnancy and parenthood and integrated treatments is warranted. This may include: quantitative examination of the relationship between ER/EF and areas of specific challenge relevant for pregnant and parenting women; examination of ER/EF program-related processes and their impact on outcomes related to parenting and social determinants of health (e.g., housing, food security, social support, education, employment), including a comparison between integrated and nonintegrated programs; and examination of the moderating role of specific services or service delivery models. The ER/EF model proposed could also be taken to other populations/types of substance use/mental health treatment to systematically evaluate if it has generalizable value.

Implications

Results from the present study indicate that counselors and those working with pregnant and parenting women with

substance-related issues, including administrators and policy makers, may benefit from training in the ER and EF needs of this population, how these challenges relate holistically to the well-being of mother and family, and strategies to address ER and EF. This is consistent with SAMHSA's Treatment Improvement Protocol for addressing FASD that suggests that information and concrete resources are needed to help counselors and care providers to develop the critical competencies (including ER and EF) to develop FASD-informed care (SAMHSA 2014a,b). In addition to education, this could be facilitated by the identification of assessment measures to help clinicians identify ER/EF challenges. Given that counselors often do not have the training to assess for mental health issues or cognitive impairment among individuals with substance use disorders (Fals-Stewart 1997), the development of guidelines for specific therapist behaviors and program policies to support EF and ER challenges is warranted, as is the evaluation of their use and impact on outcomes.

In conclusion, definitions of integrated treatments to date have emphasized services, defining treatment based on the co-location of services to address substance use, as well as other areas of need including parenting and maternal and child health and well-being. Our focus group with clients has brought a new perspective to this definition – one that focuses on counselor behaviors and approaches work to support client ER and EF to promote positive outcomes. The proposed model provides a preliminary framework that bridges the gap between cognitive and affective science and integrated treatment implementation that may be helpful in guiding future research into and development of the integrated treatments.

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