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Family Counselors' Perceived Efficacy, Expertise, and Use of Neurobiological Concepts in the Provision of Addiction Counseling Services: A Mixed Method Study

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This national study investigated family counselors' expertise, self-efficacy, and provision of services to family members of individuals undergoing addiction treatment. A total of 64 family counselors across the country participated in the survey. Results from this mixed-methods study suggest that family counselors with addiction credentials are more confident in their practice, while their use of neurobiological concepts is limited when compared to other interventions. These findings underscore the need for more training to equip family counselors with the knowledge and skills necessary to effectively engage in the neurobiologically-focused treatment of addiction.

Keywords: addiction, family counseling, neurobiology, self-efficacy, mixed methods

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According to the National Survey on Drug Use and Health (NSDUH), over 46 million people in the United States (U.S.) suffer from a substance use disorder (SUD; Substance Abuse and Mental Health Services Administration [SAMHSA], 2022). SUDs are progressive and chronic brain disorders that create compulsive use, behavior change, and significant neurobiological dysregulation (National Institute on Drug Abuse, 2020). Of those with a SUD, only 2.2 million received treatment (U.S. Department of Health and Human Services, 2016). Additionally, McLellan et al. (2000) reported that 40-60% of those in their first year of recovery after treatment will return to active substance use. The addiction treatment field, encompassing SUDS and process addictions, has attempted to respond to these issues by declaring that addiction is a brain disorder involving complex etiological, neurobiological, and environmental intersections (Heilig et al., 2021; Volkow et al., 2019). Contemporary interventions now involve medication-assisted treatment along with other evidence-based approaches such as motivational interviewing and mindfulness-based relapse prevention (Bowen et al., 2014; Madson et al., 2019). Understanding and treating the neurobiological aspect of addiction has taken a prominent and growing role in addiction treatment (Volkow et al., 2019). While literature suggests that those in addiction treatment receive a sufficient standard of care, it is unclear the degree to which family members receive adequate interventions, including those rooted in the disease model of addiction and neurobiology, more specifically.

At least 25% of U.S. families have a loved one with a SUD, and 90% of those with SUDs live in the home with their families or significant others (Board of Governors of the Federal Reserve System, 2019). Family members suffer significant emotional, physical, and financial loss from addiction. Denomme and Benhanoh (2017) reported that family members are at higher risk for depression and other mental health disorders and are more likely to experience physical health concerns such as chronic pain issues, headaches, and heart disease. However, Meurk et al. (2016) found family members' engagement in treatment assisted in their acceptance of the individual's addiction, provided a new perspective of the addiction itself, and improved their sense of well-being. Patient-identified supportive relationships enhance effective, well-rounded care and help to demystify the physiological experience of addiction, which further increases long-term treatment success for the patient (Sapp & Hooten, 2019).

Several studies highlight the importance of incorporating evidenced-based family therapy modalities in treating individuals with SUDs for the overall effectiveness of the treatment process. For example, Lander et al. (2013) discuss the use of Family Systems Theory (FST) and Attachment Theory (AT) as effective frameworks to better understand how a family's developmental stages influence its structure and dynamics (i.e., roles, relationships, patterns of interaction, and emotional bonds). These theories offer clinicians insight into the role of SUD within the family system, helping them identify its impact on family dynamics and tailor treatment approaches to meet the family's specific needs. Furthermore, Ariss and Fairbairn (2020) emphasized the importance of incorporating significant others, including family, married individuals, and even those "chosen family members" in the treatment process. The results of this study showed incorporating these family members in the treatment process through multiple modalities, such as Multidimensional Family Therapy (MFT), Functional Family Therapy (FFT), and Behavioral Couples Therapy (BCT), provided a reduction in substance-using behaviors for longer periods of time (Ariss & Fairbairn, 2020). When family members are involved in treatment for SUD, there is an increased likelihood of longer-term recovery, reduced substance use, and increased completion rates of treatment programs (Ariss & Fairbairn, 2020; McPherson et al., 2017; Slesnick & Zhang, 2016).

The benefits of family involvement in addiction treatment appear evident. However, Meurk et al. (2016) suggested that researchers have "largely neglected" the experiences of family members of those with SUDs (p. 462). This sentiment is also applicable when considering counseling modalities and interventions family counselors employ when working with family members. Several authors have conducted reviews of family counseling and interventions within the context of addiction treatment but stopped short of original data analysis (see Esteban et al., 2023; Hogue et al., 2021; Tambling et al., 2022; Varghese et al., 2020).

Similarly, literature focused on the qualifications and perceived efficacy and expertise of family counselors working with family members of those with SUDs is scant. Self-efficacy and expertise are distinct yet interconnected constructs that influence performance and decision-making in various domains. Self-efficacy, derived from Bandura's (1982) social cognitive theory, refers to an individual's belief in their ability to successfully execute tasks and achieve goals within a specific context. In contrast, expertise denotes a high level of domain-specific knowledge and skill acquired through prolonged experience, deliberate practice, and formal training (Ericsson et al., 1993). While expertise reflects objective competence, self-efficacy represents subjective confidence, meaning that individuals with high self-efficacy may attempt complex tasks despite limited expertise, whereas experts with low self-efficacy may underutilize their skills (Warren & Hale, 2016). Counseling research suggests that self-efficacy, or the perceived expertise of a counselor, is dependent mainly upon academic training, professional development, field experience, and supervision (Kozina et al., 2010; Merlin-Knoblich et al., 2024; Mullen et al., 2015; Tang, 2019; Warren & Schwarze, 2017). It remains unclear whether similar sources of efficacy apply to family counselors who provide counseling to family members of individuals with addiction.

Given the dire need for the field to better understand how family counselors engage with family members of those with SUDs, we aimed to seek answers to the following research questions: What are the educational experiences and credentials of family counselors, and is perceived efficacy related to this expertise? Which modalities of counseling do family counselors most frequently utilize? To what degree do family counselors incorporate interventions, including those rooted in neurobiology and the disease model of addiction, across modalities of counseling? Based on existing literature and relevant experiences, the following hypotheses emerged:

Hypothesis #1: A significant positive relationship exists between education and expertise and the perceived efficacy of family addiction counselors.

Hypothesis #2: Time spent on interventions will vary significantly based on the counseling modality delivered by family addiction counselors.

Furthermore, through our investigation, we sought to explore family addiction counselors' perspectives on which concepts they perceive as most effective in supporting family members with loved ones receiving substance use treatment.

Research Question: What concept(s) do family addiction counselors find most beneficial in addressing the needs of family members affected by a loved one's substance use disorder?

Method

Research Team

The research team comprised four members. Three team members held terminal degrees in counselor education and supervision. One was an associate professor at a predominantly White institution (PWI), while the other was a professor at a historically Black college and university (HBCU). The third team member was an assistant professor in the School of Medicine at a PWI. The last team member was a licensed counselor in private group practice. Regarding race/ethnicity, the research team members identified as two White males, one White female, and one biracial genderqueer. The professor conducted the quantitative analysis, while all team members participated in the thematic analysis of the qualitative data.

Design

We used a convergent mixed-method design to explore the perceived efficacy and usage of interventions by counseling modalities of family addiction counselors across the United States. This design allows researchers to synthesize qualitative findings and quantitative results to understand the phenomena under investigation (Creswell & Plano Clark, 2018). Data were concurrently collected and independently analyzed. Following data analyses, results and findings were interpreted within the context of the services provided by family addiction counselors.

Participants

Sixty-four individuals (54 women, 9 men, and 1 nonbinary identified) participated in this study. In terms of race/ethnicity, 77% ($n = 49$) identified as European American, while 16% ($n = 10$), 5% ($n = 3$), and 3% ($n = 2$) identified as African American,

American Indian, and Latinx, respectively. Participants' ages varied greatly; 68% (n = 44) were between the ages of 36 and 60, while 19% (n = 12) were between the ages of 26 and 35. Seven participants (11%) were between the ages of 61 and 75; one participant (2%) reported they were in the 18-25 age group. Participants were professionally licensed in 25 states, comprising all regions of the United States (62% South, 19% West, 12% Midwest, and 7% Northeast).

The majority of participants (86%; n = 55) had earned a master's degree (MA, MS, MSW, MA.Ed, etc.). Other participants had earned doctoral degrees (9%), bachelor's degrees (3%), and an Ed.S. (2%). Participants indicated they were licensed at various levels (e.g., associate, supervisor, etc.) as Licensed Clinical Mental Health Counselors, Licensed Marriage and Family Therapists, Licensed Clinical Social Workers, and Licensed Psychologists. Forty-five participants (70%) solely, or in addition to another license, held an addiction or substance abuse credential such as the Certified Alcohol and Drug Counselor (CADC).

Regarding the modality of addiction counseling services, 80% (n = 51) of participants reported providing individual family counseling, while 55% (n = 35) provided couples counseling. Additionally, 50% (n = 32) and 11% (n = 7) of participants provided group family counseling and multi-day counseling services, respectively. Seventeen of the participants (27%) indicated that they provide more than one counseling service (e.g., individual family counseling and group family counseling).

Procedure

The research team conducted a literature review and developed and submitted a research protocol that was reviewed and approved by the primary researcher's

Institutional Review Board (IRB). Before launching the survey, it was piloted with two licensed professionals working in the field of family addiction treatment. Feedback and data gathered from the clinicians led to minor survey adjustments to enhance clarity and consistency.

Potential participants were solicited via an email list compiled from several sources, including the North Carolina Substance Abuse Professional Practice Board, the National Directory of Drug and Alcohol Abuse Treatment Facilities (SAMHSA, 2020), and professional contacts. An email solicitation including participant inclusion criteria, informed consent, researcher contact information, and a link to the survey was sent to a total of 131 unique email addresses. Follow-up emails were sent twice over three weeks, at which time we closed the survey and cleaned the data.

All cases were reviewed to ensure participants met the inclusion criteria: licensed professionals who provide family treatment/education programs in addiction treatment settings. One hundred sixty-nine participants began the survey. Incomplete surveys and duplicate cases were removed from the dataset. We evaluated the remaining 64 cases to determine the percentage of missing data and if those data were missing randomly. Independent samples t-tests indicated that the data were missing randomly. The series mean method was used to replace missing data (Iwueze et al., 2018). Paired-sample t-tests indicated that the means of the new variables with replaced data were not statistically different from those of the old variables with missing data.

Data Sources

Demographic Questionnaire

We utilized a questionnaire to capture the demographic data of each participant. Questions included participants' age, gender, and race/ethnicity. The questionnaire also included items related to degrees earned and professional credentials held.

Effective Treatment Prompt

Participants were asked to respond to the effective treatment prompt (ETP) developed by the researchers. The prompt read: What concept(s) in substance use treatment do you think is most effective or helpful for family members to learn to support their loved ones? This prompt was intentionally situated before the survey scales below to minimize response bias.

Sense of Counseling Efficacy with Families of Clients with Substance Use Disorders Scale (SCEFC-SUD)

We reviewed the literature to determine if an instrument existed that measures the efficacy of counselors who work with families of clients with SUDs. We were unable to identify such an instrument. After expanding our search for related measures of counselor efficacy that may meet the study's goals, we determined that none were sufficient. As such, we constructed the SCEFC-SUD based on the recommendations of Bandura (2006a).

The SCEFC-SUD is a 17-item self-report measure designed to assess the perceived efficacy of licensed professionals delivering counseling services to family members of clients with substance use disorders. In alignment with Bandura (1989), we defined self-efficacy as a family counselor's perceived ability to complete a task, in this case, the provision of counseling interventions. Using Bandura (2006a) as a guide, we generated a list of potential survey items, and as a team, we engaged in several rounds of revisions. We worked to reach a consensus and ensure that each item was carefully structured to yield judgments of capability rather than emphasizing self-esteem, locus of control, or outcome expectancies. Additionally, we intentionally developed items to represent factors of substance use treatment, took steps to minimize response bias, conducted an item analysis, and modeled the response scale based on guidance offered by Bandura (2006b). Before disseminating the SCEFC-SUD, we pilot-tested the measure using two external reviewers specializing in addiction counseling and SUDs. The reviewers assessed the measure and offered suggestions to strengthen it. We incorporated this feedback to refine the instructions and improve several items. After a thorough review, we concluded that the measures were valid in terms of content and construct.

The final scale comprised items related to various interventions and modalities used to provide family counseling services. Participants were asked to rate their degree of confidence in implementing counseling interventions or modalities with family members of clients with substance use disorders. Examples of modalities and interventions included individual counseling, marriage/couples counseling, using family systems theories, and applying neuroscientific concepts when discussing substance use disorder. Sample items include “Use family systems theories in your work with family members” and “Provide psychoeducation that addresses the etiology of addiction.” In line with the recommendations of Bandura (2006b), participants reported their level of perceived efficacy using an 11-point sliding scale ranging from 0 (I am completely not confident in using this intervention or modality) to 100 (I am extremely confident with using this intervention or modality). Full-scale scores were divided by 10 to yield a range between 0 and 170. For this study, the internal consistency for the SCEFC-SUD was .91.

Addiction Intervention Usage Scale (AIUS)

The AIUS is an 11-item self-report measure designed by the researchers to assess the frequency of substance use interventions provided during the provision of various family counseling services (i.e., individual family counseling, group family counseling, multi-day/weekend counseling, and couples or marriage counseling). We carefully designed this scale to assess family addiction counselors' time spent on interventions across counseling modalities, as we were unable to identify a survey in the literature that achieved this goal. As such, we developed a list of potential survey items for inclusion in the survey. Once we agreed on the items and format of the measure, we piloted it using external reviewers with expertise in addiction and SUDs. Slight changes were made based on this feedback before finalizing the survey and determining that it had content and construct validity.

Participants completed the AIUS for each service they reported providing in their current professional practice. They used an 11-point sliding scale ranging from 0 (I never utilize this intervention) to 10 (I use this intervention frequently and regularly in my everyday practice) to indicate the percentage of time they spend utilizing interventions such as 12-step programming, spiritual recovery concepts, community referral, psychoeducation that addresses the etiology of addiction, family systems theories, and non-pharmacological interventions that affect the neurobiology of clients in treatment. For this study, the internal consistency for the AIUS was .88.

Data Analysis

During the quantitative phase of this investigation, we aimed to explore the predictive relationships between addiction counselors' expertise and perceived efficacy. Better understanding the frequency with which addiction interventions were employed across various modalities of counseling was also a focus. We used descriptive and inferential statistical data analysis to achieve these goals. Additional insights into the provision of substance use counseling were gleaned during a separate, qualitative phase. This phase served to identify themes in the participants' responses to the ETP.

Consistent with the recommendations of Corbin and Strauss (2015), we used a thematic analysis to analyze participants' descriptions of concepts in substance use treatment they believed were most effective in helping family members learn to support loved ones. We applied open coding procedures (inductive) during the analysis to generate codes and themes that emerged from the data. We participated in bracketing and engaged in copious discussions and note-taking before, during, and after the analysis to promote trustworthiness (Creswell & Poth, 2017).

Research team members independently coded the first five cases; initial codes were generated from recurring responses from participants who shared similar thematic content. We then met to explore themes and consensually agree on coding parameters. An exploratory coding framework continued to develop as we examined and aimed to synthesize the main features of the remaining data. Once all cases were coded, we reconvened to review the codes and reach a final consensus. All identified codes were converted into central themes that were consensually agreed upon by the research team members.

Results

Before conducting quantitative analyses, data were tested to ensure that basic assumptions of Pearson product-moment correlation (PPMC) and linear regression were satisfied. Stem and leaf plots and standardized residual plots were reviewed to assess for outliers and normality. Initially, we reviewed the descriptive statistics of participants' expertise, modality usage, and perceived efficacy (see Table 1). We then tested the hypothesis that statistically significant relationships existed between perceived efficacy and variables related to substance abuse counseling expertise by examining point biserial correlations using PPMC.

Results of the analysis suggested that addiction certification was significantly correlated with perceived efficacy, $r(62) = .29$, $p = .019$. However, the degree earned, accreditation status of the graduate program, and identification as a family counselor were not significantly related to perceived efficacy. Using addiction certification as a predictor variable in a linear regression analysis, 8% of the variance in perceived efficacy was explained, $R^2 = .086$, $F(1, 62) = 5.816$, $p < .05$.

Table 1
Descriptive Statistics for Counselor Expertise and Modality

Variable		Frequency	Percent	Perceived Efficacy M	Perceived Efficacy SD
Degree Program	Counselor Education	30	46.9	117.36	29.14
	Non-Counselor Ed.	34	53.1	114.64	29.63
Accreditation Status	Accredited	31	48.44	114.01	29.97
	Not accredited	33	51.56	117.70	28.80
Certification	Addiction certificate	45	70.31	121.43	24.13
	Non-addictions cert.	19	29.69	102.86	36.12
Professional Identity	Family Counselor	6	9.4	124.51	20.78
	Other	58	90.6	115.02	29.93
Counseling Modality	Individual	51	79.7		
	Couples	35	54.7		
	Individual Family	49	76.6		
	Group Family	32	50.0		

Multi-Day	7	10.9

To test hypothesis 2 that differences existed in time spent on interventions based on modality, a multivariate analysis of variance (MANOVA) was conducted. We employed a MANOVA to explore potential differences between counseling modality (independent variables) and time spent delivering interventions (dependent variables). Results of the analysis indicated no statistically significant difference in the frequency of use of interventions based on modality, $F(3, 120) = .519$, $p = .99$; Wilk's $\Lambda = .860$.

Within each modality, participants reported providing numerous interventions at varying frequencies. Most interventions presented to the participants were frequently used during multi-day counseling. The least frequently used intervention during multi-day counseling was non-pharmacological treatments that affect neurobiology ($M = 4.30$, $SD = 5.23$). The frequency of use of neurobiological mechanisms of medication-assisted addiction treatment was relatively low across couples ($M = 5.79$, $SD = 3.25$), individual family ($M = 6.33$, $SD = 3.11$), group family ($M = 5.71$, $SD = 3.08$), and multi-day ($M = 5.27$, $SD = 3.21$) counseling modalities. This intervention was employed the least frequently across all modalities, based on weighted means, followed by twelve-step programming and spiritual recovery. Table 2 offers the mean frequency of interventions delivered within each modality and the weighted average frequency across all modalities.

Table 2
Frequency of Intervention by Counseling Modality

Intervention	Couples Counseling		Individual Family		Group Family		Multi-Day Counseling		Weighted Mean
	M	SD	M	SD	M	SD	M	SD	
Twelve-Step Programming	5.03	3.02	4.92	3.36	5.39	3.12	8.23	2.67	5.89
Spiritual Recovery	5.23	2.94	5.14	3.07	5.33	3.11	8.05	2.20	5.93
Discussing Concerns with Family Members	7.66	2.48	7.11	3.16	7.94	2.65	8.80	1.87	7.88
Family Systems Theories	6.66	3.03	6.49	3.00	6.71	2.88	8.76	1.59	7.16
Community Referrals	7.91	2.41	7.10	2.96	7.88	2.09	8.63	1.63	7.88
Psychoeducation on Etiology of Addiction	7.79	2.56	7.61	3.00	8.05	2.58	8.18	2.00	7.91
Neuroscientific Concepts Use	6.93	2.93	6.40	3.17	6.70	2.98	7.96	1.95	7.00
Neurobiology Process of Addiction	7.44	3.01	7.11	3.04	7.26	2.62	7.60	1.96	7.35
Neurobiology of Post-Acute Withdrawal Syndrome	6.34	2.99	6.01	3.14	6.00	2.95	6.60	3.04	6.24
Neurobiological Mechanisms of Medication-Assisted Addiction Treatment	5.79	3.25	6.33	3.11	5.71	3.08	5.27	3.21	5.78
Non-Pharmacological Treatments Affecting Neurobiology	7.17	3.32	7.04	3.18	6.87	2.99	4.30	5.23	6.35

Thematic Analysis

Three primary themes emerged during the qualitative phase of this study. These themes describe the concepts participants believed are most effective or helpful for family members to learn about when supporting a loved one in substance use treatment. The themes include Understanding the Disease Model of Addiction, Roles and Responsibilities, and Support.

Understanding the Disease Model of Addiction

Participants shared their thoughts related to the importance of family members understanding the disease model of addiction when supporting a loved one in treatment. For example, one participant stated:

> I am passionate about helping teens and families to reduce stigma and stereotype [sic] surrounding SUD, and find that psychoeducation about disease model [sic] of addiction has been very beneficial for parents. Helping them to understand that this is a chronic and progressive illness that requires time, support, and encouragement has not only improved SUD outcomes, but also improved family relationships.

Another participant shared, “I believe that the science of addiction is very helpful information for the family members of people with substance use disorders.” Other participants referenced the importance of “understanding addiction as an illness” and educating family members on the “disease model.” The “progression of substance use into disordered use, dependence” and “psychoeducation on the disease of addiction” were additional comments offered by participants when considering family members’ support of loved ones.

Several participants focused specifically on the “neurobiology of addiction” as a key concept within the disease model family members should understand. For example, one participant reported, “I offer psychoeducation related to substance use and how it effects [sic] the brain” while another participant shared the importance of family members knowing “how it changes the brain and affects personality, decision making, etc." Still, other participants indicated the value of "education on acute intoxication, withdrawal, and post-acute withdrawal."

Roles and Responsibility

Family members must be knowledgeable of roles and responsibilities when supporting loved ones in substance abuse treatment, according to the participants in the study. Participants described these roles and responsibilities within the context of two sub-themes: family systems and family dynamics.

Family Systems

The sub-theme, family systems, encompassed concepts participants deemed important. For example, one participant described "wet/dry cycles of family behavior and emotional expression" and "complimentary [sic] symptom development and behavioral disturbance in family members" as important concepts family members should understand. Another participant explained:

> Family members also need to recognize the stages they went through with their family member [sic]. They need to learn how to communicate with their loved ones so that the client does not enter back into the same family system that contributed to the addiction.

Still, several participants referenced "family systems," "family theories," and "treatment for the entire family." One participant believed that "grounding, containment vs stuffing characteristics of healthy vs unhealthy families" were most important for family members of loved ones in substance abuse treatment to understand.

Family Dynamics

Family dynamics also emerged as a sub-theme of Roles and Responsibilities. Participants expressed the importance of family members understanding family dynamics when supporting their loved ones. Several participants referenced “codependency,” “enabling,” and how family dynamics influence recovery. One participant offered:

> I believe the most important thing for families (including the consumer) to learn is family roles. When someone stops using drugs and returns to their family system, they want to be back in the role they should be (mother, father, etc), and families have a hard time letting them back in that role usually. Families have to learn how to reintroduce the person to the role, and the consumer has to learn that it won't happen overnight.

Supports

Participants described a variety of supports they believe are most important to teach family members of loved ones in substance use treatment. Two sub-themes emerged from supports: family interventions and twelve-step group involvement.

Family Interventions

The interventions participants thought were most important for family members to know varied. Participants largely called for ensuring family members understand how to “develop appropriate boundaries” and practice “self-care.” One participant noted, “In substance use treatment, some effective interventions I use include harm reduction, mindfulness, and family therapy. I also talk with them about enabling behaviors and ways to set healthy, appropriate boundaries.” Other participants referenced the importance of “trauma responsive treatment, alternative therapies, gender-specific services, relapse prevention strategies" and "How to parent differently. Non-intuitive parenting skills must be learned to set the stage for successful treatment." Another participant explained that family members need to know,

> How to effectively support them without enabling them. Setting up good boundary work with the family members involving how to effectively communicate with their loved ones about how they're feeling and what they are and are not comfortable with doing [sic].

Twelve-Step Group Involvement

Additional support described by participants largely centered around twelve-step group involvement and "mutual aid recvoery [sic] support for the family (e.g., Al-Anon, NarAnon, Al-Ateen)," as described by one participant. Another participant said they found value in "helping family members to find their own professional or group support (Al-Anon, etc)." Participants believed this type of support was helpful for family members to understand "why peppering loved ones with questions is counterproductive (and other Al-Anon practices)." Other participants referenced "community support groups" and "recovery services" when describing their efforts to assist family members in supporting loved ones in substance abuse treatment.

Discussion

The results of this study lead to several considerations. We found that a relationship existed between perceived efficacy and addiction certification. While there is no causal relationship between self-efficacy and task effectiveness (Sitzmann & Yeo, 2013), higher levels of perceived efficacy in family addiction counseling offer the potential for a greater level (quality/effectiveness) of service. The educational and supervised experience required for addiction licensure typically require candidates to complete a degree in counseling, psychology, or a related field, alongside specialized coursework in addiction studies. For example, the National Certification Commission for Addiction Professionals (NCCAP) states that certification requires formal education in substance use disorders, including a specified number of training hours and supervised practice (NCCAP, 2023). The skills developed in these activities contribute to counselors' perceived efficacy in effectively supporting families dealing with addiction. For example, one source of efficacy is mastery experiences (Bandura, 1989). This suggests that preparation for licensure exams, additional coursework, internships, etc., that participants completed served to strengthen their perceived efficacy, beyond participants who did not engage in these types of mastery experiences.

When compared to degree program, accreditation status, and professional identity, perceived efficacy was lowest for family counselors without addiction certification or licensure. Family counselors without addiction licensure may have less knowledge and fewer experiences related to the field of addiction counseling. This lack of experience may hinder their ability to handle diverse situations with confidence, thereby depleting their perceived efficacy. Additionally, licensure laws typically require addiction counselors to maintain competency through continuing education and supervision. However, a lack of addiction-focused professional development for counselors without addiction licensure may hinder their acquisition of best practices and evidence-based interventions. Family counselors without addiction licensure may rely on foundational training that does not respond to the ever-changing landscape of addiction counseling research. This may negatively influence family members' engagement in counseling and their willingness to follow recommendations.

A majority of the participants reported that they provide individual family counseling and group family counseling. This may not necessarily reflect the vast amount of family counseling provided in treatment centers where single or multiple-day programs are the norm. In these programs, it is typical for there to be multiple families present with the primary emphasis on psychoeducation on addiction, including neurobiology. These programs may have family counselors more prepared to address the basics of the neuroscience and etiology of addiction.

Finally, time spent on interventions was not significantly different based on counseling modality. Less time was spent on twelve-step and spiritual recovery interventions during the delivery of couples, individual family, and group family counseling. This result was anticipated, however, since these interventions often lend themselves to single or multi-day services. Additionally, twelve-step and spiritual recovery interventions are typically prescriptive; family counselors may not prioritize these interventions and instead focus on relational components of treatment, given their training. Twelve-step and spiritual recovery are often considered referable interventions.

When considering weighted means of interventions across modalities, participants less frequently used interventions rooted in neuroscience. Addiction neuroscience is complicated and involves complex concepts about brain function and the dysregulation of neurological pathways. Likely, many family counselors have not received specialized training in neuroscience. As such, they may lack confidence in applying neuroscientific principles to their practice.

Psychoeducation on the etiology of addiction yielded the highest weighted mean. This suggests that family counselors know that addiction is a brain disorder. However, they may fail to use neuroscientific interventions during family counseling due to limited training and resource constraints. Additionally, family members may also drive the direction of interventions by their requests for more practical and easy-to-implement strategies that will have an immediate impact.

The findings from the thematic analysis are consistent with the quantitative results. Several participants referenced considerations for the neurobiology of addiction during their support for family members with a loved one in substance use treatment. However, very few participants suggested that the neurobiology of addiction was an important concept. This suggests that family counselors, in general, may have limited knowledge of neuroscience concepts and their application to addiction treatment. While participants described educating family members about the etiology of addiction and the disease model, the application of these concepts appeared elusive. Similar to the quantitative results, the thematic analysis revealed that participants use a variety of interventions to varying degrees during the provision of family services. Given that family counselors with addiction credentials reported higher levels of perceived efficacy; the breadth, depth, and quality of neurobiology of addiction concepts applied when working with families of individuals receiving substance use treatment is unclear.

While the addiction treatment field has determined that addiction is a brain disorder, it has not converged around a cohesive model of evidence-based addiction treatment. This is evident when consideration is given to the results and findings of this study. Family counselors render services based on their training, experience, and what they think is important; the application of neuroscientific concepts in their work with family members varies greatly.

Limitations

This study is novel; the literature offers little focus on family counselors who work with families of loved ones in substance abuse treatment. While this is a national study, the sample size is small. A larger sample would allow for greater disaggregation of data (e.g., degree, licensure type, etc.). Additionally, the data were collected via self-report using researcher-developed measures, so there is a possibility that some of the participants reported socially desirable, rather than truthful, responses. As such, the data may not accurately represent the sample under investigation. Also, a higher level of perceived efficacy does not necessarily suggest that more effective services are provided by the counselors sampled. This study does provide a glimpse into a subset of the helping profession that is typically overlooked. Finally, the authors acknowledge that some disciplines may favor alternative models (e.g., social learning, holistic, cultural) over models that favor disease and symptom explanations. As such, the survey is highly focused on the neurobiology of addiction, and those answering without this training may perform differently in their responses.

Implications

Several implications emerge based on the results of this study. Family counselors who hold addiction licensure reported higher levels of perceived efficacy; clinicians without these credentials are encouraged to reflect upon their confidence in providing addiction family counseling services. Since mastery experience is a source of efficacy beliefs, those without addiction licensure should consider participation in activities similar to the licensure requirements satisfied by family counselors holding the certification. For example, family counselors can enroll in coursework or complete professional development focused on addiction counseling.

While renewal of non-addiction licensure at the state level generally does not require clinicians to complete continuing education in addiction, we recommend family counselors without an addiction credential pursue regular professional development in this area. Additionally, family counselors without addiction licensure are encouraged to engage in consultation or supervision with experienced and licensed addiction family counselors. In a similar vein, state licensure boards for counselors, social workers, as well as marriage and family therapy are challenged to revisit continuing education requirements given the need for addiction services.

The disease model of addiction, including the neurobiology of addiction, is widely accepted as the gold standard in addiction treatment. As such, clinical training programs such as counseling, marriage and family therapy, and social work must emphasize these concepts and models in addiction coursework and within field experiences. Most counselor education training programs, for example, require minimal training and competence in SUDs (Robinson et al., 2025). It is recommended that clinical training programs require an addiction course as part of their plan of study. Alternatively, programs can integrate or embed addiction-related content and instruction throughout the plan of study.

Finally, the field of addiction is ripe for the establishment of guidance or a model that details recommended services available to family members with a loved one in addiction treatment. Understanding and treating the neurobiological aspect of addiction has taken a prominent and growing role in addiction treatment (Volkow et al., 2019). We suggest developing a model for addiction family counseling that aligns with the field's current direction. This model can also guide intervention frequency across counseling modalities and the relationship to treatment efficacy.

Future Research

While the current study offers several insights, it creates an opportunity for future research. Researchers are encouraged to explore further the practices of family addiction counselors and the provision of counseling services to family members with a loved one in substance use treatment. Moving forward, a better understanding of the lived experiences of family addiction counselors is needed. For example, a qualitative study can uncover the processes and rationales for intervention selection and support within each counseling modality for family members with a loved one in treatment. Similarly, it is essential to better understand the perceptions of family members who receive addiction counseling support. Additional inquiry into the depth and breadth of neurobiological understanding and training of family addiction counselors is needed.

Finally, an inquiry into the effectiveness of family counselors with addiction certification as compared to family counselors without an additional credential is warranted. It is vital for the addiction field to better understand the requisite training and experience for effective addiction services. Research on family addiction counselors is sparse yet needed as the profession continues to evolve and align with the science of addiction.

Conclusion

This study sheds light on the variance of counseling interventions and the perceived efficacy of family counselors providing counseling to family members with loved ones in addiction treatment. The results and findings presented underscore the need for a comprehensive approach to family counseling that centers on the neurobiology of addiction. Adequate training and credentialing grounded in the neurobiology of addiction have the potential to enhance the services family counselors provide. Family members empowered by the science of addiction have the potential to significantly improve their response to the disease and support the recovery journey of their loved ones struggling with addiction.

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