

## ORIGINAL ARTICLE

# Effects of family therapy for substance abuse: A systematic review of recent research

Jessica Esteban<sup>1</sup> | Cristian Suárez-Relinque<sup>2</sup>  | Teresa I. Jiménez<sup>3</sup> 

<sup>1</sup>Facultad de Ciencias Sociales y Humanas, Campus de Teruel, Universidad de Zaragoza, Teruel, Spain

<sup>2</sup>Facultad de Ciencias Sociales, Universidad Pablo de Olavide de Sevilla, Sevilla, Spain

<sup>3</sup>Facultad de Ciencias Sociales y Humanas del Campus de Teruel de la Universidad de Zaragoza, Teruel, Spain

## Correspondence

Teresa I. Jiménez, Facultad de Ciencias Sociales y Humanas del Campus de Teruel de la Universidad de Zaragoza, Teruel, Spain.

Email: [tjimgut@unizar.es](mailto:tjimgut@unizar.es)

## Abstract

One of the most serious psychosocial problems worldwide is substance abuse because of its repercussions not only on the physical and psychological health of the abuser but also on their relational functioning. Among the well-established therapeutic approaches for the treatment of substance abuse is family therapy, which, in addition to influencing personal variables, promotes changes in family dynamics. The main objective of this study is to review the scientific literature published from 2010 to the present on the efficacy and effectiveness shown by family-based treatment approaches for substance use problems both in adolescent and adult samples. In addition, the effect on secondary variables such as family functioning and behavioral problems is evaluated. The empirical evidence accumulated in the last decade and reviewed in the present study indicates that the incorporation of family members in the treatment of substance abuse produces benefits by diminishing consumption and improving family functioning. Limitations of this study and of the research reviewed are discussed and directions for future research are provided.

## KEYWORDS

effectiveness, effects, efficacy, family therapy, substance abuse

## INTRODUCTION

Substance abuse is a global public health problem that affects a large number of people (Becoña, 2016; Rowe, 2012). The latest report issued by the United Nations Office on Drugs and Crime (UNODC, 2020) indicates that approximately 269 million people between the ages of 15 and 64 worldwide used illicit drugs at least once in 2018 (5.3% of the world population), which represents an increase of 30% of the data reported in 2009 (4.8% of the world population). Most of these numbers describe adolescents and young people. For example, concerning cannabis use, it is estimated that 5.6% of young people aged

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15–16 years of the world population used this substance during the previous year (UNODC, 2020). This fact has been related to the exploration, seeking, and experimentation behaviors that characterize the adolescent stage and, therefore, to the greater probability of engaging in risky behaviors such as substance use (Becoña & Cortés, 2016; Das et al., 2016; Gray & Squeglia, 2018). Those data indicate that the risk of coming into contact with drugs is higher between the ages of 12 and 17, and it is between the ages of 18 and 25 when abuse reaches its peak (UNODC, 2018). Thus, studies find differences in substance abuse between adolescent and adult population and, therefore, treatment needs are also different (Tanner-Smith et al., 2013). Likewise, there are gender differences in the development of this problem. Although for the most part, men tend to consume in a social context, women tend to do so alone (Burgos, 2020), and it is estimated that only 1 in 5 women receive the necessary treatment (UNODC, 2018). These data reveal the invisibility of the problem and women's difficulty to request treatment. In effect, consumption behavior is contrary to the socially expected role of caregiver and, especially, women who are mothers may be afraid of suffering legal and social consequences about the custody of their children. This also explains why men are over-represented in the samples of many of the studies (Burgos, 2020; NIDA, 2020).

The essential feature of a substance use disorder is a cluster of cognitive, behavioral, and physiological symptoms indicating that the individual continues using the substance despite significant substance-related problems (APA, 2013). Therefore, substance abuse is also considered a major social problem because of its repercussions on the consumer's physical and psychological health and the remaining spheres of their life: professional, economic, academic, relational, etc. (Becoña, 2016; Becoña & Cortés, 2016; Das et al., 2016; Kourgiantakis & Ashcroft, 2018; UNODC, 2020). For example, Baldwin et al.'s (2012) meta-analysis showed a consistent relationship between substance use and the performance of problematic behaviors such as delinquency. Given that most human behavior takes place in a social context, substance abuse is also inevitably related to problems in the person's social relationships network, especially the couple and family nucleus, so there seems to be an important link between substance use and family system functioning (Horigian et al., 2016; Klostermann & O'Farrell, 2013; Marcos-Sierra & Garrido Fernández, 2009; Romero-Martínez & Lila, 2015; Rowe, 2012; Smock et al., 2011). In this sense, several authors have studied the central role of the family both in the dynamics that trigger or maintain addiction and in its possible solutions (Garrido-Fernández et al., 2017; Gracia et al., 2010; Marcos-Sierra & Garrido Fernández, 2009; Rowe, 2012). Thus, taking as a frame of reference the biopsychosocial model, according to which several interacting factors (biological, psychological, and social) are involved in the development of substance abuse, various interventions have been proposed to treat family problems as one of the most relevant factors of change in this area (Becoña & Cortés, 2016; Fadus et al., 2019; Filges et al., 2015; Hartnett et al., 2017; Horigian et al., 2016; Marcos-Sierra & Garrido Fernández, 2009; Moral-Jiménez et al., 2005; Rowe, 2012; Smock et al., 2011; Van Der Pol et al., 2017). In this field, family therapy (hereinafter FT) is understood as a form of psychotherapy that focuses on the improvement of familial relationships and behavioral patterns of the family or couple unit as a whole, as well as among individual members and groupings, or subsystems, within the family (APA, s.f.; Sprenkle et al., 2013). In this sense, while all therapies involving at least one family member (mother, father, partner or child), some are based on a behavioral basis (e.g., Ecology-Based Family Therapy or Behavioral Family Therapy) and others on a systemic basis (e.g., Multidimensional Family Therapy) (Henggeler, 2001).

Previous reviews on the effects of FT on substance abuse are found in previous literature. First, more than 25 years ago, Liddle and Dakof (1995, p. 511) concluded that family-based addiction treatments were a “promising, but not definitive” alternative, as few studies have been published to date and they had methodological limitations. Years later, in 2003, Rowe and Liddle updated this review by synthesizing the research published in the years since the previous study, yielding results that indicated significant progress. On the one hand, FT for adolescent consumers was recognized as one of the most effective approaches for reducing consumption and improving other aspects such as family functioning. On the other hand, for adult groups, outcomes were less conclusive.

In 2012, Rowe updated the empirical literature review from 2003 to 2010. The results showed that FT had received significant empirical support. Although studies conducted with an adult sample found more consistent results than in previous reviews, studies conducted with adolescents had received more attention and maintained the previously achieved efficacy. This review highlighted the ability of family-based intervention models to impact both substance use and other related problems. Furthermore, these findings are in line with those obtained in the broader field of treatments for substance abuse, including the systematic reviews by Hogue et al. (2014) or Hogue et al. (2018), the meta-analysis by Waldron and Turner (2008), Tanner-Smith et al. (2013) or Ariss and Fairbairn (2020), or the reviews by Fadus et al. (2019), Belendiuk and Riggs (2014) and McCrady et al. (2016). Finally, Hogue et al. (2022) reviewed outcomes-focused evidence on couple and family interventions for substance abuse in the last decade. These findings suggest that couple and family-based therapies produce benefits for substance use disorders whether they are being provided as the exclusive treatment or are being delivered as part of a multicomponent substance use disorders treatment program.

## Contributions of the current review

The aim of this study is to review outcomes-focused evidence published in the last decade on systemic family interventions for substance abuse in adolescent and adult samples. The current review has five features that distinguish it from previous reviews and meta-analyses. First, no limitation was applied to geographic scope or language. Second, unlike previous reviews (e.g., Liddle & Dakof, 1995; Rowe, 2012; Rowe & Liddle, 2003), this article is a systematic review whose principal goal is to establish a research question and define search criteria in order to synthesize all information on an issue. Third, while Hogue et al.'s (2022) summarize findings according to broad intervention approach (systemic family therapy), findings of the present review are summarized according to specific treatment models (e.g., Ecologically-Based Family Therapy or Multidimensional Family Therapy) differentiating them according to the target of population (adolescent or adult sample). Fourth, a rating scale (Methodological Quality Rating Scale, MQRS; Miller & Wilbourne, 2002) to evaluate the methodological quality of each study included has been used. Each study was assessed and rated independently by two raters using the MQRS, and subsequently, Cohen's kappa ( $\kappa$ ) was used to determine interrater agreement. Fifth, since FT is related to improvements not only in the level of consumption (e.g., Ariss & Fairbairn, 2020; Hogue et al., 2022), the effects of FT on other variables with great interest, such as family functioning and behavioral problems, have been differentiated in the present study. In this regard, the last strong feature of the present review is that it establishes some hypotheses about potential mediating and moderating variables, which indicates future lines of research about how and for whom an intervention works in addition to whether it works.

## METHOD

### Search strategies

This systematic review followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Page et al., 2021; Urrútia & Bonfill, 2010). An exhaustive and systematic literature search was conducted to identify scientific articles that provided results on the effects of FT in the treatment of substance abuse. A literature search was conducted in the bibliographic databases *Dialnet*, *Pubmed*, *Web of Science (WOS)*, *Scopus*, and *Science Direct*, published from February 5 to March 5, 2021. The search string “family therapy” AND “substance abuse” OR “substance use” OR “substance misuse” OR “drug” OR “drug abuse” OR “substance use disorder” OR “addiction” was used to conduct free-text searches with no limits in all bibliographic databases. In addition, as this systematic review is a literature update, specific chronological designators were

used, January 2010 through January 2021. Finally, no limitation was applied to geographic scope or language.

## Eligibility criteria

The search included all studies published from 2010 to the present that report efficacy and effectiveness of FT for substance abuse, that is, studies designed to investigate the benefits of an intervention under ideal and highly controlled conditions (efficacy or explanatory trials) and studies designed to measure the degree of beneficial effect under “real-world” clinical settings (effectiveness or pragmatic trials) (Gartlehner et al., 2006), and meeting the following inclusion criteria: (1) the study design must be a randomized controlled trial, a quasi-experimental, a pilot study, or a single case study; (2) the study must include a sample of individuals who experience problematic substance abuse behavior and/or who meet the criteria for substance use-related disorder according to the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV, DSM-IV-TR, DSM-5); (3) the study must include family interventions with a systemic approach in which, besides the identified patient, at least one family member (mother, father, partner or child) is willing to participate in the treatment; (4) the study includes FT aimed at reducing substance abuse, the primary outcomes of which include the degree of drug use, intention to use, or readiness to change; (5) the study includes a quantitative measure of the variable substance abuse. In turn, studies were excluded if: (1) they presented a multicomponent program, a theoretical trial, a book, book chapter, meta-analysis, systematic and/or literature review, cost-effectiveness, feasibility and/or acceptability study, protocol publication, guidelines, or treatment manuals; (2) they were carried out with samples of relatives of people who have a substance use-related problem; (3) they evaluate an intervention other than FT; (4) despite evaluating a family intervention, substance use or abstinence is included as a secondary outcome measure or the study only presents qualitative results; and (5) they were outside of the field of psychology, such as social work, education, medicine, psychiatry, or biology.

## Study selection and data extraction

This search yielded a total of 2017 articles: 15 relevant records in Dialnet, 397 records in Pubmed, 434 in WOS, 594 in WOS, 594 in Scopus, and 577 in Science Direct. After eliminating duplicate articles, non-empirical studies, and works unrelated to the study population and the discipline of Psychology, 52 articles were selected for review of the inclusion criteria. Finally, 18 articles met the eligibility criteria. Figure 1 presents the flow chart of the search and selection process. A data extraction form was developed to extract relevant information from each selected study. The extracted data included authors and year of publication, study design, sample size and characteristics, treatment interventions and comparison conditions, main outcome measures and instruments for their assessment, main results, as well as follow-up time points. This information is presented in Table 1 (see Annex).

The methodological quality of each study was rated using the Methodological Quality Rating Scale (MQRS; Miller & Wilbourne, 2002). This scale assesses 13 dimensions of methodological attributes (see Table 1 in Appendix). Scores range from 0 (low quality) to 16 (high quality). The MQRS has been widely used in systematic reviews and meta-analyses examining treatments for substance misuse (e.g., Li et al., 2017). Each study was assessed and rated independently by two raters using the MQRS. The MQRS score of each study is presented in Table 2 along with other study characteristics. The MQRS scores across the 17 studies ranged between 8 and 17. The mean score was 13.9 ( $SD = 2.5$ ). Cohen's kappa ( $\kappa$ ) was used to determine interrater agreement. Any discrepancies of rating were discussed and resolved by the two raters. The raters included detailed notes of their discrepancies on any item of a study, and how they reached an agreement.

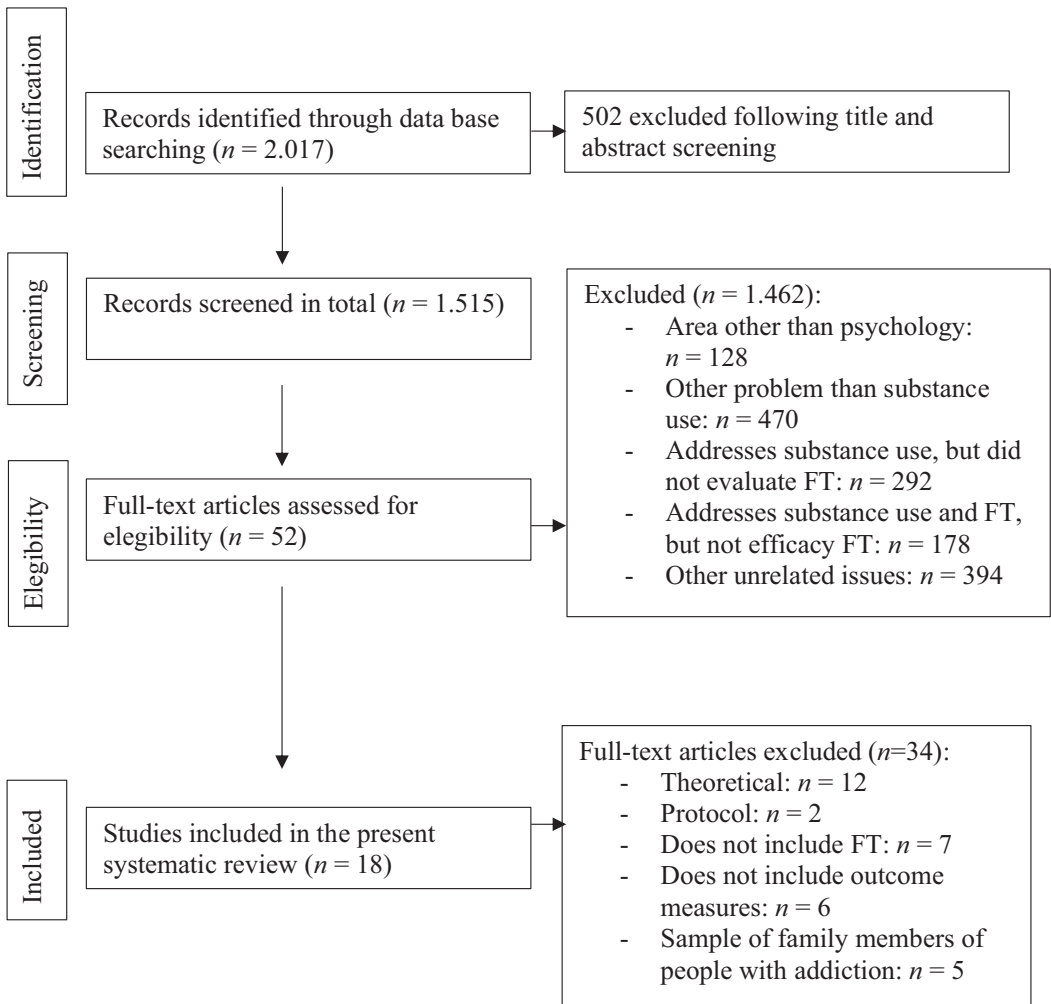


FIGURE 1 Flow chart for literature search and screening results.

## RESULTS

### Search results

Of the 18 studies included in this systematic review, a large proportion was carried out with an adolescent sample (13/18) and only five with an adult sample (5/18). All of them were randomized controlled trials (RCTs, 15/18), one was a quasi-experimental trial (QE-T, 1/18), one was a single-case trial (SCT, 1/18), and one was a pilot trial (PT) (1/18). Most of them were carried out in the United States (12/18) and Europe (5/18), and only one in Latin America (1/18). All studies have reported sample characteristics related to age, gender, and ethnicity.

In all the studies, some type of FT was applied, such as Multidimensional Family Therapy (MDFT, 7/18), Brief Strategic Family Therapy (BSFT, 3/18), Ecologically-Based Family Therapy (EBFT, 3/18), Functional Family Therapy (FFT, 1/18), Culturally-Informed and Flexible Family Treatment for Adolescents (CIFTA, 1/18), Behavioral Family Therapy (FBT, 2/18), and Multifamily Therapy (MFT, 1/18). Except for a single-case study in adult sample, in which FT was not compared with a control group, in the rest of the studies, other psychological treatments were compared, such as

TABLE 1 Methodological quality characteristics of the included studies ( $N = 17$ )

Methodological attributes	% (N)	Cohen's $\kappa$
Study design		1.000
Randomized controlled study	88.2% (15)	
Quasi-experimental study	5.9% (1)	
Pilot study	5.9% (1)	
Quality control: intervention standardization by manual, procedures, and specific training	100% (17)	1.00
Follow-up rate		1.00
85%-100%	76.5% (13)	
70%-84.9%	5.9% (1)	
<70% or longest follow-up <3	17.6% (3)	
Follow-up length		1.00
12 months or longer	76.5% (13)	
6 to 11 months	11.85% (2)	
<6 months	11.85% (2)	
Contact	70.6% (12)	0.74
Collateral informants interviewed	58.8% (10)	0.43
Objective verification of treatment outcome (e.g., urine tests)	100% (17)	1.00
Dropouts enumerated and discussed	100% (17)	1.00
Attrition enumerated and discussed	88.2% (15)	0.46
Independent: follow-up conducted by interviewers blind to group assignments	53% (9)	0.77
Appropriate statistical analyses	100% (17)	1.00
Multisite	17.6% (3)	1.00

Note: In study 10, the MQRS was not administered, as this scale is not suitable for single case studies. 31.

Cognitive Behavioral Therapy (CBT, 3/18), Motivational Interviewing (MI, 1/18), psychoeducation (2/18), individual treatment (2/18), or Residential Treatment (RT, 1/13), among others. The FT interventions ranged from 4 sessions to 24 sessions (except for two studies where it was not specified); the most commonly found was about 12 sessions distributed between 3 and 4 months (6/13). In addition, follow-up assessments were conducted at different time-points, applying measures at baseline and the end of the intervention. In most of the studies, follow-ups were also completed during and at the end of the intervention, most commonly 3 (10/18), 6 (10/18), 9 (5/18), 12 (12/18), and 18 months (7/13) after the start of treatment. This information is shown in Table 2 (see Appendix).

As presented in Table 1 (see Appendix), the methodological quality of the studies was high. Most of the studies included in the present systematic review used randomized controlled trial designs that employed appropriate statistical analyses to compare differences in outcomes between FT and alternative treatment groups (15/17; 88.2%), and most of them (9/17; 53%) performed follow-ups conducted by interviewers blind to group assignments. All of them used a manualized intervention, procedures, and specific training and clearly described the characteristics of the samples. At least two appropriate designs met the characteristics for determining that FT is a well-established intervention for the treatment of substance abuse (Chambless & Hollon, 1998).

## Effects of family therapy on substance abuse

Results found are presented below following the same structure as in previous reviews (Liddle & Dakof, 1995; Rowe, 2012; Rowe & Liddle, 2003), that is, differentiating them by type of samples



TABLE 2 Characteristics and results of included articles ( $N = 18$ )

Citation	Country	Study design	Sample and characteristics	EG	CG	Outcome variables/ Instruments	Results	Follow-up	MQRS score
1	(Dakof et al., 2015) USA	RCT	$N = 112$ Age: 16.07 Female = 11% Hispanic = 58.9% African-American = 35.7% Other = 5.4%	MDFT ( $n = 55$ )	AGT ( $n = 57$ )	-Substance abuse (TLFB, PEI and PIC) -Mental health (DISC) -Behavior problems (SRD) -Arrests (number of judicial system arrests)	<b>Substance abuse:</b> at post-treatment, decrease with both treatments. At follow-up, increases with both treatments, with a lower level in MDFT group. <b>Behavior problems:</b> decrease at post-treatment with both treatments. At follow-up, MDFT maintains improvements and decreases behavior problems further from start to finish.	6, 12, 18, 24 months.	15
2	(Garrido-Fernández et al., 2017) Spain	RCT	$N = 82$ Age: 36.79 Female = 13.4%	MFT-RT ( $n = 41$ )	Standard treatment following a methadone maintenance treatment program ( $n = 41$ )	-Severity of addiction (ASI) -Psychiatric assessment (SCL-90 R) -Family functioning (FACES III)	<b>Substance abuse:</b> MFT-RT decreases substance use and the daily dose of methadone. <b>Family functioning:</b> improves, but not significantly.	1, 3 months.	8

*(Continues)*

TABLE 2 (Continued)

Citation	Country	Study design	Sample and characteristics	EG	CG	Outcome variables/ Instruments	Results	Follow-up	MQRS score
3	(Henderson et al., 2010) USA	2 RCT	Two studies: (1) $N = 224$ (2) $N = 154$ Age: 15.4 Female = (1) 19% (2) 17% African-American = (1) 71.9% (2) 61% White non-Hispanic = (1) 17.9% (2) 17% Hispanic = (1) 10.2% (2) 22%	(1) MDFT ( $n = 112$ ) (2) MDFT ( $n = 76$ )	(1) CBT ( $n = 112$ ) (2) TAU ( $n = 78$ )	(1) -Substance abuse (TLFB, PEI and PIC) -Mental health (DISC) -Family functioning (FES) (2) -Substance abuse (TLFB and PEI) -Mental health (DISC) -Family functioning (FES)	<b>Substance abuse:</b> MDFT achieves a greater reduction in the higher severity addiction group.	(1) 6, 12 months. (2) 3, 6, 9 months.	16
4	(Hendriks et al., 2011) The Netherlands	RCT	$N = 109$ Age: 16.8 Female = 20.2% Dutch/western = 71.6% Other = 28.4%	MDFT ( $n = 55$ )	CBT ( $n = 54$ )	- Substance abuse disorder (ADI and urine test) - Behavior disorder (DISC) - Substance abuse (PEI) - Family functioning (FES) - Delinquency (SRD)	<b>Substance abuse:</b> no statistically significant differences between treatments. MDFT reduces substance abuse more in patients with high initial severity. <b>Behavior problems:</b> no statistically significant differences between treatments.	3, 6, 9, 12 months.	14



TABLE 2 (Continued)

Citation	Country	Study design	Sample and characteristics	EG	CG	Outcome variables/ Instruments	Results	Follow-up	MQRS score
5	(Hendriks et al., 2013) Germany	RCT	<i>N</i> = 109 Age: 16.8 Female = 20.2% Netherlands/ Western = 71.6% Other = 28.4%	MDFT ( <i>n</i> = 55)	CBT ( <i>n</i> = 54)	- Substance abuse disorder in previous year (ADI and urine test) - Behavior disorder in previous year (DISC) - Substance use (TLFB and PEI) - Crimes (WODC) - Behavior problems (YSR) - Family functioning (FES)	<b>Substance abuse:</b> no statistically significant differences between treatments. <b>Behavior problems:</b> no statistically significant differences between treatments. <b>Family functioning:</b> does not improve over time.	3, 6, 9, 12 months.	16

(Continues)

TABLE 2 (Continued)

Citation	Country	Study design	Sample and characteristics	EG	CG	Outcome variables/ Instruments	Results	Follow-up	MQRS score
6	(Horigian et al., 2015) USA	RCT	<i>N</i> = 480 Age: 15.47 Female = 21% Hispanic = 44% White, non-Hispanic = 31% African-American = 23% Other = 2%	BSFT	TAU	- Parental substance abuse (ASI) - Adolescent substance abuse (TLFB, DISC-SA and urine test) - Family functioning (PPQ and FES) - Psychiatric comorbidity (DISC-PS)	<b>Parental substance use:</b> parents in BSFT significantly decrease their substance use at follow-up. <b>Adolescent substance abuse:</b> BSFT was more effective in reducing use among adolescents whose parents used drugs. <b>Family Functioning:</b> statistically significant mediation (indirect) effect between FT and substance abuse.	12 months.	16
7	(Liddle et al., 2018) USA	RCT	<i>N</i> = 113 Age: 15.36 Female = 25% Hispanic = 68% African-American = 18% White, non-Hispanic = 13%	MDFT ( <i>n</i> = 57)	RT: CBT + MI ( <i>n</i> = 56)	- Substance abuse (TLFB and PEI) - Criminal behaviors (SRD and SGD) - Behavior problems (YSR)	<b>Substance abuse:</b> at post-treatment, decrease with both treatments. At follow-up increases with both treatments, with a lower level in MDFT group. <b>Behavior problems:</b> decrease with both treatments (effect size = 0.77), but MDFT shows a significantly greater decrease.	2, 4, 12, 18 months.	15
8	(Murnan et al., 2018) USA	RCT	<i>N</i> = 68 Age: 33.8 Female = 100% White, non Hispanic = 60.3% Other = 39.7%	EBFT ( <i>n</i> = 49)	PE ( <i>n</i> = 19)	- Substance abuse (Form-90) - Motivation for change (SOCRATES) - Depression (BDI-II) - Areas of Change (ACQ)	<b>Substance use:</b> EBFT reduces substance abuse faster and more intensely.	3, 6, 12, 18 months.	12

TABLE 2 (Continued)

Citation	Country	Study design	Sample and characteristics	EG	CG	Outcome variables/ Instruments	Results	Follow-up	MQRS score
9	(O'Farrell et al., 2010) USA	PT	<i>N</i> = 29 Age: 29.1 Female = 44.83% White = 89.6% Other = 10.4%	IBT + BFC ( <i>n</i> = 15)	IBT ( <i>n</i> = 14)	- Substance abuse (TLFB) - Drug Use Consequences (INDUC) - Relationship Happiness (RHS)	<b>Substance abuse:</b> the days of substance abuse decrease and the days of abstinence at post-treatment and follow-up increase (significant results and medium-large effect size).	3, 6 months.	13
10	(Plant & Holland, 2018) USA	SC-T	<i>N</i> = 1 Age: 55 Male = 100% Caucasian = 100%	FBT ( <i>n</i> = 1)	-	- Substance abuse (TLFB) - Situational Confidence (SCQ)	<b>Substance abuse:</b> FBT decreases the consumption of methamphetamines and alcohol.	Pre-post.	-
11	(Rigter et al., 2013) Europe	RCT	<i>N</i> = 450 Age: 16.3 Female = 15% Belgium = 13.4% France = 22.4% Germany = 26.7% Netherlands = 24.2% Switzerland = 13.4%	MDFT ( <i>n</i> = 212)	IP ( <i>n</i> = 238)	- Substance abuse (TLFB, ADI and urine test)	<b>Substance abuse:</b> MDFT is more effective in decreasing substance use in the highest severity addiction group.	3, 6, 9, 12 months.	15
12	(Robbins et al., 2011) USA	RCT	<i>N</i> = 48/ Age: 15.45 Female = 21.45% Hispanic/Latin = 44.5% White, non-Hispanic = 31.1% Black, non-Hispanic = 22.1% Other = 1.7%	BSFT ( <i>n</i> = 246)	TAU ( <i>n</i> = 235)	- Substance abuse (TLFB, DISC, and urine test) - Family functioning (PFQ and FES)	<b>Substance abuse:</b> no statistically significant differences between treatments at post-intervention, but statistically significant differences at 12-month follow-up. <b>Family Functioning:</b> improves with both treatments but more with BSFT, although with a small effect size.	4, 8, 12 months.	17

(Continues)

TABLE 2 (Continued)

Citation	Country	Study design	Sample and characteristics	EG	CG	Outcome variables/ Instruments	Results	Follow-up	MQRS score
13	(Rohde et al., 2014) USA	RCT	<i>N</i> = 140 Age: 16.39 Female = 22% Non-Hispanic White = 59.4% Hispanic = 28.2% Other = 12.4%	FFT	CWD	- Substance abuse (TLFB) - Depression (CDRS) - Affective Disorders and Schizophrenia (K-SADS-PL)	<b>Substance abuse:</b> FFT/CWD better results at post-treatment. <b>At follow-up,</b> no statistically significant differences between FFT/CWD and CWD/FFT.	10, 20, 46, 72 weeks.	14
14	(Santís et al., 2013) Chile	QE-T	<i>N</i> = 138 Age: 18.55 Female = 37.5%	SFOI ( <i>n</i> = 67)	OW ( <i>n</i> = 71)	- Substance abuse (ASI) -Health (GHQ-12) -Behavior problems (RBPC) -Family functioning (HIYF-Y and HIYF-P, FES, PPO and IPPA)	<b>Substance abuse:</b> SFOI significant major positive change. <b>Behavior problems:</b> no statistically significant differences between treatments. <b>Family Functioning:</b> the level of conflict reported by parents worsened.	-	8
15	(Santisteban et al., 2011) USA with Spanish-speaking people	RCT	<i>N</i> = 28 Hispanic = 100%	CIFFTA ( <i>n</i> = 14)	FTT ( <i>n</i> = 14)	- Substance abuse (TLFB and urine test) - Behavior problems (RBPC) -Parenting practices (PPO)	<b>Substance abuse:</b> CIFFTA related to significant improvements. <b>Behavior problems:</b> no statistically significant differences between treatments. <b>Family functioning:</b> CIFFTA related to significant improvements.	4, 8 months.	14

TABLE 2 (Continued)

Citation	Country	Study design	Sample and characteristics	EG	CG	Outcome variables/ Instruments	Results	Follow-up	MQRS score
16	(Slesnick et al., 2013) USA	RCT	N = 179 Afe: 15.4 Female = 52.5% African American = 65.9% White, non-Hispanic = 25.7% Hispanic = 1.7% Native American = 1.1% Asian/Asian-American = 0.6% Other = 5%	EBFT (n = 57)	CRA (n = 61) MI (n = 61)	- Substance abuse (CDISC, Form-90 and urine test)	<b>Substance abuse</b> was reduced over time in all treatments; EBFT related to more consistent changes, maintaining reductions at 18 months.	3, 6, 9, 12, 18, 24 months.	14

(Continues)

TABLE 2 (Continued)

Citation	Country	Study design	Sample and characteristics	EG	CG	Outcome variables/ Instruments	Results	Follow-up	MQRS score
17	(Slesnick & Zhang, 2016) USA	RCT	<i>N</i> = 183 Age: 33.9 Female = 100% White, not of Hispanic Origin = 53.6% African-American = 42.6% Other = 3.8%	EBFT ( <i>n</i> = 123)	PE ( <i>n</i> = 60)	- Substance abuse (Form-90) - Areas of Change (ACQ) - Motivation for change (SOCRATES)	<b>Substance abuse:</b> all participants decreased consumption over time, but EBFT was faster. <b>Family functioning:</b> improved autonomy-relatedness over time, evidenced by a decline in undermining autonomy and relatedness in both treatment conditions. However, parent-child autonomy-relatedness did not mediate the association between treatment and substance abuse.	3, 6, 12, 18 months.	15
18	(Tossmann et al., 2012) Germany	RCT	<i>N</i> = 120 Age: 16.2 Female = 17.5%	MDFT ( <i>n</i> = 59)	JUP ( <i>n</i> = 61)	- Substance abuse (TLFB, ADI, and PEI) - Behavior problems (YSR and CBCL)	<b>Substance abuse:</b> MDFT related to significant improvements. <b>Behavior problems:</b> improved with both treatments but MDFT was not superior.	3, 6, 9, 12 months.	15

Abbreviations: ACQ, Areas of Change Questionnaire; ADI, Adolescent Diagnostic Interview; AGT, Adolescent Group Therapy; APQ, Alabama Parenting Questionnaire; ASI, Addiction Severity Index; ASR, Adult Self-Report (Externalizing subscale); BDI-II, Beck Depression Inventory II; BFC, Behavioral Family Counseling; BSFT, Brief Strategic Family Therapy; CBCL, Child Behavior Checklist; CBT, Cognitive Behavioral Therapy; CDRS, Children's Depression Rating Scale-Revised; CG, Control Group; CIFFTA, Culturally Informed Flexible Family Treatment for Adolescents; CRA, Community Reinforcement Approach; CWD, Adolescent Coping With Depression Course; DISC, Diagnostic Interview Schedule for Children; DISC-PS, Diagnostic Interview Schedule for Children-Predictive Scale DISC-SA, Diagnostic Interview Schedule for Children, Substance Abuse/Dependence; EBFT, Ecologically Based Family Therapy; EG, Experimentally Based Family Therapy; FACES III, Family Adaptation and Cohesion Scales; FBT, Behavioral Family Therapy; FES, Family Environment Scale (Conflict and Cohesion subscales); FFT, Functional Family Therapy; Form-90, Form-90 Substance Use Interview; FTT, Traditional Family Therapy; GHQ-12, Goldberg's General Health Questionnaire; HYIF, How-Is-Your-Family Brief Questionnaire; IBT, Individual-Based Treatment; INDUC, Inventory of Drug Use Consequences; IP, Individual Psychotherapy; IPPA, Inventory of Parent and Peer Attachment; JUP, Psychotherapy for young people; K-SADS-PL, Schedule for Affective Disorders and Schizophrenia for School Age Children-Present and Life Version; MDFT, Multidimensional Family Therapy; MFT-RT, Multifamily Therapy with a Reflective Team; MI, Motivational Interviewing; NYS, National Youth Survey (Self-Report Delinquency Scale SRD); OW, Traditional Outreach Work; PCS, Personal Consequences Scale; PE, Psychoeducation; PEI, The Personal Experience Inventory; PIC, Personal Involvement with Chemicals, scale of PEI; PPQ, Parenting Practices Questionnaire; PT, Pilot Trial; QE-T, Quasi-Experimental Trial; RBPC, Revised Behavior Problems Checklist; RCT, Randomized Control Trial; RHS, Relationship Happiness Scale; RT, Residential Treatment; SCL-90 R, Symptom Check List 90-Reform; SCQ, Situational Confidence Questionnaire; SC-T, Single Case Study; SFOI, Systemic Family Outreach Intervention; SGD, General Delinquency Scale; SOCRATES, Stages of Change Readiness and Treatment Eagerness Scale; TAU, Treatment as usual; TLFB, Timeline Follow-Back Method; TSR, Treatment Services Review; YSR, Youth Self-Report (Externalizing and Internalizing subscales).

(adolescents and adults) and by type of outcome variables (substance use, family functioning and behavioral problems).

### Substance abuse reduction in adolescent sample

The primary outcome is abstinence or reduction of substance abuse. Therefore, studies were sought that provided quantitative values of this outcome. To assess the consumption variable, at least one of the following instruments was used in all the included studies: Timeline Follow-Back Method (TLFB, 13/18), Adolescent Diagnostic Interview (ADI, 4/18), Addiction Severity Index (ASI, 4/18), The Personal Experience Inventory (PEI, 6/18), and/or different versions of the Diagnostic Interview Schedule for Children (DISC, 6/18). Also, urine samples were collected from participants in 38.8% of the studies (7/18; 4, 5, 6, 11, 12, 15, 16). Active family involvement is developmentally crucial for effecting positive outcomes and sustaining long-term recovery among youth (Hogue et al., 2021).

### Multidimensional family therapy (7/13)

In the seven studies in which effects of MDFT were evaluated, CBT was used as a control condition (7/13; 1, 3, 4, 5, 7, 11, 18). The results showed that, at the end of the intervention, both treatments were effective in reducing consumption, with medium to large effect sizes. However, in the follow-up evaluations, most studies indicate the superiority of MDFT over CBT, with medium to large effect sizes (1, 5, 7, 11, 18). Several important aspects of these results in the follow-up phase should be highlighted. On the one hand, in two studies, participants in both conditions showed an increase in the frequency of substance use at 18 and 24 months, respectively, although remaining below baseline values (2/13; 1, 7). In one of them (1), the results indicate a nonsignificant, but moderate-sized effect favoring MDFT. Three studies showed statistically significant results in favor of MDFT, with large effect sizes, in participant consumers identified in the high severity group (3/13; 3, 4, 11). In one of them (11), no statistically significant differences were found between the two intervention conditions when participants were not differentiated according to severity of use. In Study 5, although no statistically significant differences were obtained between treatments for the variable frequency of substance use, they were found for the variable “concern about use.”

### Brief strategic family therapy (3/13)

In Study (14), it was concluded that participants in the FT condition showed significantly greater positive change at the end of the intervention compared with the control condition (proximity intervention used to decrease substance abuse). In Study (12), no statistically significant differences were found between interventions (treatment as usual including individual and/or group therapy, parent training groups, non-manual family therapy, and case management were used as the control condition). However, in Study 12, fewer drinking days were reported at 12 months. The sample from Study 12 was also used for Study 6, which showed the positive effects of substance use treatment for other family members. On the one hand, it was concluded that there were no statistically significant differences in parental use between treatments, but there were differences at the 12-month follow-up. Parents in the BSFT condition decreased their consumption significantly more over time, and these results were mediated by family functioning. On the other hand, a strong baseline association was shown between parental and adolescent substance use. BSFT was more effective in reducing substance abuse in adolescents whose parents used drugs at baseline.



## Ecology-Based family therapy (1/13)

Study 16 found no statistically significant differences between interventions (motivational intervention and community reinforcement approach were used as control treatments) in reducing the trajectory of substance use at post-treatment; that is, the included treatments were equally effective at the end of the intervention. However, at follow-up assessments, at 18 months, EBFT participants had more favorable outcomes that translated into more consistent changes while maintaining previously achieved reductions in use.

## Functional family therapy (1/13)

A single study (13) examined the effects of three treatment sequences, two serial treatments (FFT and depression-specific CBT) and one combined treatment to reduce substance use and depressive symptomatology in adolescents. The treatment period lasted 20 weeks, and follow-up was performed up to week 72. It was concluded that, at the end of the intervention and the 46-week follow-up, the FFT/CBT application sequence showed greater reductions in substance use in participants who were not diagnosed with a depressive disorder, with a large effect size. However, at the 72-week follow-up, both the FFT/CBT and CBT/FFT sequences maintained lower use, but there were no differences between the two treatments.

## Culturally informed flexible family treatment for adolescents (1/13)

Study 15 compared a traditional FT (control condition) with CIFFTA, a personalized intervention that is based on the principles of Structural Family Therapy. It was concluded that CIFFTA was superior to the control condition in reducing problematic drug use both in the post-treatment and at the different time points included in the follow-up, obtaining large effect sizes.

## Substance abuse reduction in adult sample

### *Ecologically based family therapy (2/5)*

Two studies evaluated the efficacy of EBFT compared with an educational intervention in female consumers who had dependent children (8, 17). Of note, Study 8 identified a subsample of women who engaged in prostitution from the larger sample used in Study 17. Both studies concluded that participants in EBFT showed greater (8) and earlier (17) reductions than the control condition.

### *Family behavioral therapy (2/5)*

Two studies that applied this FBT were an SCS (10) and an EP (9). Both concluded that patients in the FBT condition improved significantly at all time periods (post-intervention in both studies and, in Study 9, also at the 3- and 6-month follow-ups), as they reported a greater number of days abstinent.

### *Multifamily therapy with a reflective team (1/5)*

This study (2) used a sample of patients receiving outpatient methadone treatment who were assigned to a condition that only received individual counseling or to the MFT-RT condition. The reflective team consists of a set of professionals who are foreign to the problem and thus provide alternative perspectives (2). The results showed that patients who received MFT-RT benefited more from the intervention, as they reduced their substance abuse and daily methadone dosage more than their counterparts in the control condition (individual counseling).

## Changes in family functioning in adolescent sample

In line with previous reviews (Klostermann & O'Farrell, 2013; Rowe, 2012; Rowe & Liddle, 2003), many of studies included in this present review (6/13; Studies 3, 4, 5, 6, 12, 14, 15) include some measure of change in family functioning as a variable related to reduced substance use following FT. The most widely used questionnaires to assess this variable were the Family Environment Scale, Conflict and Cohesion subscales (FES, 7/18), and the Parenting Practices Questionnaire (PPQ, 4/18).

First, two of the studies showed the superiority of FT in improving parenting practices and family functioning (12, 15). In Study 12, both FT and the control intervention (treatment as usual that included individual and/or group therapy, parent training groups, non-manual family therapy, and case management) reported significant improvements over time. Although the effect size was small, the impact of FT on parent-reported family functioning was supported, whereas in the reports of adolescent consumers, both interventions showed improvements, with no statistically significant differences observed between them. Secondly, two studies showed opposite results to those reported previously (5, 14). Study 5 concluded that family functioning did not improve over time in either of the two treatments compared (CBT as a control treatment), while Study 14 reported an increase in the level of parent-reported conflict in the experimental condition (proximity intervention used to decrease substance abuse). Finally, although in two of these studies (3, 4), the relevant questionnaire to assess this variable was administered to participants, no results on this variable were reported. It is noteworthy that only in Study 6 were mediating effects of family functioning on the relationship between FT and substance abuse found.

## Changes in family functioning in adult sample

Most of the studies carried out with adult samples evaluated changes in this variable (4/5; 2, 9, 8, 17), reporting benefits in family functioning for participants who received FT, although two aspects should be emphasized. On the one hand, in Study 2, the small improvement observed in the FT group was not statistically significant. On the other hand, in Study 9, both the FT and the control intervention (individual treatment) reported significant improvements over time, observing almost identical results with medium effect sizes. In Study 8, it was concluded that participants in the EBFT condition significantly improved child autonomy-promoting behaviors at the 18-month follow-up compared with psychoeducation received by the control group participants (with moderate effect sizes). However, in Study 17, although autonomy- and relationship-undermining parenting behaviors were shown to be reduced, no significant treatment effects were found.

## Behavior problems reduction in adolescent sample

Seven studies carried out with adolescent samples assessed behavioral problems as a factor closely related to substance use (7/13; 1, 4, 5, 7, 14, 15, 18). The most used questionnaires to assess this variable were the Youth Self-Report, Externalizing and Internalizing subscales (YSR, 4/18) and the Self-Report Delinquency Scale (SRD, 3/18). In most of the studies in which MDFT was the experimental condition, both treatments (CBT was used as a control group in several of these studies) were shown to be effective in reducing behavior problems at the end of the intervention, with small to large effect sizes (1, 4, 5, 7, 18). However, some of these studies have found differences in long-term treatment outcomes for behavior problems in favor of MDFT (1, 5, 7). At follow-up time points (18 months in Study 7 and up to 24 months in Study 1), both treatments maintained improvements, but FT was associated with a greater reduction in behavior problems from baseline to endpoint. These benefits are also reported in Study 5. Finally, despite measuring the behavioral variable, no results on

this variable were reported in Study 14, and no statistically significant differences between treatments were found in Study 15 (traditional FT was used as a control group).

## DISCUSSION

The present study aimed to continue the line of previous reviews and update the knowledge on the effects of FT on substance abuse. The main purpose was to study the effect of this intervention approach on reducing substance abuse in both adolescents and adults. Other secondary purposes were to examine the effects of FT on family functioning and behavioral problems in both groups. To this end, a total of 18 studies were included, of which 13 were carried out with an adolescent sample and only 5 with an adult sample. Most of them compared an FT with other therapies, including cognitive-behavioral therapy, psychoeducation, or motivational intervention, for example. Treatment programs ranged from 4 to 24 sessions, with 12 sessions being the most common.

### Substance abuse reduction in adolescent sample

#### Multidimensional family therapy

Most of the studies carried out with an adolescent sample compare MDFT with CBT (7/12; 1, 3, 4, 5, 7, 11, 18). To date, both treatments have been considered as two of the most effective treatments for substance abuse in this population and, therefore, have been classified in the range of “well-established treatments” (Fadus et al., 2019; Hogue et al., 2018; Hogue et al., 2022; Rowe, 2012; Van Der Pol et al., 2017). In this sense, our findings are in line with previous literature, which has shown that MDFT maintained benefits better at the follow-up time points (Hogue et al., 2018; Rowe, 2012). This could be explained by the fact that FT works comprehensively on several domains, such as family cohesion or conflict, which go beyond individual functioning, on which CBT focuses. However, these results are opposite to those obtained in the meta-analysis by Filges et al. (2015) in which it is concluded that the effects of MDFT on the reduction of substance use achieved at 6 months were not maintained at 12 months. Caution should be exercised when interpreting these results, as the number of studies included in this meta-analysis is very small (five).

On the other hand, in the present review, as in other recent research (e.g., Fadus et al., 2019; Van Der Pol et al., 2017), the severity gradient is identified as an explanatory variable of differences in the rate of improvement after intervention and suggests that adolescents with higher baseline severity of problem use may benefit more from MDFT than from other treatments such as CBT (3, 4, 11). We can speculate about the reasons for these differences. In Study 3, it is proposed that MDFT is a more comprehensive intervention because, in addition to working with the individual presenting the addiction (like CBT), it also focuses on the family factors that may influence it, so it addresses the problem comprehensively. In this sense, Van Der Pol et al. (2017) rely on the Risk-Need-Response model to explain that people with more severe consumption are at greater risk of relapse and, therefore, need more intense treatment, such as MDFT.

#### Brief strategic family therapy, and ecologically based family therapy

BSFT was the family intervention applied in three studies carried out with adolescents (6, 12, 14) and EBFT in one (16). In Lindstrøm et al.'s (2013) meta-analysis, no empirical evidence for substance use reduction in favor of BSFT was found. Again, the limited number of studies (three) included in this meta-analysis must be taken into account. However, Rowe's (2012) review and the findings of the present paper reveal the superiority of both interventions over time in adolescents with problematic use. An argument in favor of the benefits of BSFT is that it is based on strategies aimed at changing family functioning and other systems that affect the individual and their problematic use, and not only on psychoeducation as in other treatments. Furthermore, the reported benefits of BSFT appear to

extend to other family members. Study 6 found reductions in substance use by parents of adolescents. Also, young consumers whose parents had the highest consumption rates were the ones who benefited the most from the intervention. These findings, which are in line with those found in Rowe (2012), may be explained by the parents learning and acquiring new adaptive communication or functioning strategies and skills, which improve their relationship with their children.

## Functional family therapy

Recent reviews have evaluated the efficacy of this type of FT. For example, Rowe (2012) concluded that FFT was a very promising intervention because reductions in consumption were maintained up to the 15-month follow-up. Similarly, in their meta-analysis, Hartnett et al. (2017) showed that FFT was more effective compared with no treatment or well-defined alternative treatment conditions (e.g., CBT or group therapy). In line with these results are those found for this type of intervention in the present review. Study 13 concluded that the greatest reductions in use were obtained when first applying FFT and subsequently treating comorbid depressive symptomatology in adolescents with substance use problems, both at the end of the intervention and the 12-month follow-up.

## Culturally informed flexible family treatment for adolescents

This treatment is based on Structural Family Therapy and allows adapting interventions to the clinical and cultural variations of each family, focusing on the parents' predominant parenting style, addressing aspects such as attachment, support, or conflict resolution (Santisteban et al., 2013). Findings obtained in the present review (15) are consistent with those presented in previous studies (Santisteban & Mena, 2009), as the superiority of this intervention has been shown both in the improvement of substance use and family functioning both at the end of the intervention and at follow-up.

## Substance abuse reduction in adult sample

### Functional behavioral therapy

The effects obtained in Rowe (2012) on the efficacy of FBT compared with individual interventions in adults in the treatment of substance abuse are maintained to date according to the results found in the present review (9, 10), as indicated by National Institute on Drug Abuse (2018). Although results are promising, randomized studies with a larger sample are needed to generalize the results.

### Multifamily therapy with a reflective team

In the framework of systemic family intervention in substance abuse, the use of reflective teams is currently a pioneering experience with a short trajectory (Garrido-Fernández et al., 2017). Only one of the studies included in this review (2) provides knowledge on the effects of MFT-RT for substance abuse in adults. Specifically, this study reports positive results in favor of this modality of family intervention to reduce substance use and the daily dose of methadone in adult users. Despite these promising results, there are very few rigorous studies in this field.

## Ecologically based family therapy

Although this type of therapy was effective to treat addictions in adolescent users (Rowe, 2012), its efficacy had not been proven for mothers with this problem (17). In the present review, two included studies (8, 17) showed positive effects over time.

## Improvements in family functioning

Previous studies suggest that there is a strong relationship between substance use and family functioning, and this relationship is not unidirectional, but rather mutually interrelated. For this reason, it is argued that family systems-focused substance abuse treatments may be an effective approach to reduce not only substance use but also to improve family functioning (Klostermann & O'Farrell, 2013; Rowe, 2012; Rowe & Liddle, 2003). Although family functioning was not assessed in all the included studies in the present review, the obtained results confirm this idea: receiving a family intervention was related to significant improvements in family functioning as well as in consumption (6, 8, 9, 12, 15). However, in two studies with adolescents, these results were not found, or the opposite effect was found, that is, FT did not produce improvements, as did the comparison condition (CBT) (5), and the levels of family conflict reported by parents increased (14). This might be explained by the parents' greater awareness of their children's problems. Only two studies have explicitly examined the mediating role of family functioning between treatment and substance abuse. In Study 6, a positive effect was found, whereas no effect was found in Study 17. Thus, although identifying and measuring the mediational mechanisms that underlie the behavior patterns of consumption that are trying to be changed is essential to advance in the science of psychological intervention, more research is needed to know how interventions works (Nielsen et al., 2018).

## Improvements in behavior problems

It has been found that both MDFT and CBT are equally effective in producing improvements in behavioral problems, either at the level of self-reported behavior, delinquency scales, or the number of arrests at the end of the intervention (1, 4, 5, 7, 18). These findings are in line with those obtained, for example, in Rowe and Liddle (2003) or Van Der Pol et al.'s (2018) paper. However, while these authors argue that this same efficacy is maintained in the follow-up phases, in the present review, we found that, although both treatments maintain improvements, FT is related to a greater decrease in problem behavior from baseline to end line (1, 7, 5). This effect in favor of MDFT is in line with the findings of previous studies (Baldwin et al., 2012; Schaub et al., 2014; Van Der Pol et al., 2018). The overall benefits of FT for behavior problems can be explained by the strategies used, such as supervision and behavioral management by main caregivers.

## Potential moderating variables

On the one hand, some systemic interventions, specifically MDFT, have shown better outcomes for those patients with more severe substance abuse (3, 4, 11). We do not have enough data to make a general statement, but these results lead us to thinking that the severity of substance abuse could moderate the effect of TF on substance abuse.

On the other hand, there has been clearer empirical support for family interventions in substance abuse treatment with adolescent samples for decades. However, the samples used in the studies included in this systematic review are either from an adult or an adolescent population and they have not performed explicit moderation analyses with the variable age. Only Study 5 has carried out

a moderation analysis, and its results have shown that younger adolescents benefit the most from FT. This suggests that the age variable moderates the effect of FT interventions but more studies are needed to conclude this.

Finally, the moderating effect of gender was not analyzed in any of the studies included in this systematic review, so it is advisable for future studies to take this into account. Regarding ethnicity, only two studies investigated the moderating effect of this variable (12, 16), and the results are inconsistent. Although in Study 16, ethnicity predicted changes in substance use, with minority youth showing the most reductions, in Study 12, it did not.

## CONCLUSION

The empirical evidence accumulated in the last decade and reviewed in the present study indicates that the incorporation of family members in the treatment of substance abuse produces benefits in users and the family functional system. Overall, the results of the present study are clearer for the adolescent sample and with cases of higher severity of substance abuse. Therefore, age and severity need to be considered as potential moderators of the effects of a TF and must be taken into account in treatment decisions with this population. Given that the overall quality score of the studies included in this systematic review is high, the conclusions derived from it are reliable. Moreover, the analysis of the methodological quality of the included studies allows us to conclude that FT is a well-established treatment for substance abuse, as it meets the criteria of Division 12 (APA, 2006) proposed by Chambless and Hollon, (1998).

## LIMITATIONS

Despite the methodological advances produced in the most recent research (e.g., sample size, psychometric properties of the instruments used, etc.) compared with the studies selected in previous reviews (Liddle & Dakof, 1995; Rowe, 2012; Rowe & Liddle, 2003), there are still important limitations that should be taken into account when generalizing the results. First, regarding the studies reviewed, small sample sizes remain a problem in this field (e.g., 1, 2, 7, 8, 9, 15, 16). Regarding the characteristics of the participants, there still is a higher proportion of studies conducted with adolescents than with the adult population (12/18). Therefore, it is necessary to limit the conclusions to the reference population. Furthermore, despite evidence that women also present problems with substance abuse, they still represent a small percentage in most of the included studies, most frequently between 10% and 30% (e.g., 1, 2, 3, 4, 5, 6, 7, 11, 12, 13, 14, 18). These data reveal the invisibility of the problem in this population group, and women's difficulty to request treatment. A more rigorous analysis of the potential moderating effect of gender, age, and ethnicity on efficacy and/or effectiveness outcomes is needed because the studies analyzed with a diverse sample in terms of these three variables do not include a specific analysis of their potential moderating effect. Second, some studies do not report the number of sessions included in the intervention or the duration of the sessions, which makes it difficult to know whether the results described belong to the post-intervention or follow-up (e.g., 7, 18). Third, although some studies have administered measures to assess variables other than substance use, they have not reported changes in these variables (e.g., 3, 4, 14). Fourth, in many studies, the measure of substance use was self-reported, so social desirability may influence the results. For example, in some studies, low rates of use were obtained at baseline and throughout the intervention, severely limiting the ability to identify improvements in this variable (e.g., 3, 4, 12). Finally, most studies compared an FT with another treatment approach. For this reason, although in some of the studies, both conditions reduced problematic substance use, we do not know whether these reductions could also have been achieved without treatment, as a no-treatment control group was not incorporated (e.g., 3, 4, 11, 13, 18).



The present systematic review also has some limitations that should be pointed out. On the one hand, the keywords used, the inclusion and exclusion criteria used and the search in five electronic databases may have led to not obtaining all studies on the subject carried out in the time period on which the review is focused. Furthermore, the high proportion of studies conducted in the United States (12/18) limits generalization to other countries and cultures. Despite this, the presence of included articles that have been performed with a Hispanic sample (e.g., 2, 14) is highly valued. Also, the categorization of the diversity of family intervention approaches within FT can be confusing and, therefore, we should be cautious about generalizing results of a specific type of family intervention to FT as a whole. For example, although MDFT is well represented, none of the studies selected in this review apply the Multisystemic Therapy approach (Henggeler, 2001) and others, such as EBFT and FBT, while involving family members, essentially derive from a behavioral and non-systemic approach (Henggeler, 2001). Finally, the present study synthesizes the scientific information available to date on the effects of FT for the treatment of substance addiction, without distinguishing by type of substance (i.e., alcohol and other substances). However, we recognize that making this distinction would provide more specific results. In addition, a meta-analysis of the results obtained would be advisable, as this would provide clinicians with more accurate estimates of the effects of health care and, therefore, would allow scientific knowledge to be expanded based on truly reliable elements, to provide our patients with the best and safest service. Despite these limitations, the present study meets the specific requirements for a systematic review to minimize bias in the identification, selection, synthesis, and summary of studies (Shamseer et al., 2015). In addition, an evaluation of the methodological quality of the included studies has been carried out.

## Future research

In line with the above limitations, studies that incorporate a larger sample, whose participants are of adult age and are equally distributed in both sexes, as well as being from diverse backgrounds, are necessary. This would allow the generalization of results and improve the evidence base for family-based treatment of substance abuse. Also, given that some of the studies found indications of a differential effect of FT in subgroups of lower and higher severity of problem use, it would be desirable for future research to make this distinction. Therefore, more research is needed on the different interventions based on the consumers' profiles, analyzing the moderating variables associated with treatment such as age, gender and ethnicity. In this way, professionals would have more indications to carry out a more suitable selection of treatment according to the characteristics of the patients. Finally, mediational studies are needed to explicitly analyze which variations in family functioning can explain the relationship between family-based treatments and changes in substance abuse behavior. In summary, improving the analysis of the mediating and moderating effects associated with treatments could improve our understanding of how and for whom FT is most effective.

## ORCID

Cristian Suárez-Relinque  <https://orcid.org/0000-0001-6747-6677>

Teresa I. Jiménez  <https://orcid.org/0000-0002-5187-3683>

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