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Psychotherapy according to the clinical picture of alcohol dependence: what should be done?

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Abstract

The efficacy and clinical utility of some psychological interventions in the grounds of alcohol dependence have generated an extended debate. A "one size fits all" approach has historically dominated the standard treatment of alcohol and drug addictions. However, although this single treatment option has helped many individuals, it does not address the experience of all substance abusers. The multidimensional definition of subtypes of alcohol-dependent individuals (alcoholism typologies - ATs) could represent a valuable matching strategy in the search of a targeted psychological treatment. The aim of the present literature analysis was to study in what extent the clinical presentations of alcohol dependence as conceptualized by ATs moderate the design and the impact of psychological interventions. The literature was reviewed by searching all relevant electronic databases such as Sciencedirect, Web of Knowledge, PsycINFO, Medline and Cochrane Library for peer- reviewed research articles and clinical reports published until December, 2015. Psychological rationales of intervention will be discussed on the basis of typological hypothesis of alcoholism – alcoholic subtypes. Programs need to become clinically driven, which means that they should only offer the services that the client really needs, no more than as long as they are needed. Literature review suggests that when alcohol-dependent patients are properly grouped in a scientifically and valid alcohol typology, the therapeutic results seem to be much more promising. However, the current evidence is still modest. More research studies are needed to confirm if ATs have strong implications for the planning of psychological treatments.

Keywords: alcohol dependence, alcoholism typologies, psychotherapy, psychosocial interventions, psychology

REVIEW

Introduction

Drinking is a common and cultural accepted behavior in society. For that reason, some individuals do not realize that in some cases alcohol use could represent a "drug". Alcohol dependence has been described as a primary, chronic disease with biological, psychosocial, and cultural factors influencing its development and expression (White & Kurtz, 2006; Pombo *et al.*, 2013). When it concerns to treatment, usually, alcohol-dependent individuals engage in different styles of recovery: with or without "formal" treatment, medication, or psychological support. Others get involved with religious or spiritual organizations. Treatment programs normally offer fundamental or complementary services as interactional group therapy, sobriety skills training (e.g., relapse prevention, relapse recovery, and affect management), addiction education, individual therapy, family/marital therapy, medication, and case management (Hester & Miller, 2003).

Psychological treatment is given by trained practitioners on an individual or group basis, and the client's partner or family can also participate (Pombo, Barbosa, Torrado & Félix da Costa, 2010; Pombo *et al.*, 2015). Generally, psychological therapy aims to resolve ambivalence about change, improve recognition and control of alcohol use cues and urges, reduce alcohol-related harm, and prevent relapse. Therapeutic techniques should be provided within the context of a well-developed working alliance in therapy that is structured and goal-directed (NTASM, 2006).

Relapse prevention is a key aspect to be addressed in the recovery from alcohol dependence. It is now widely accepted that the efficacy of alcohol dependence treatment, in particular the pharmacological relapse prevention, depends largely on the combined psychosocial intervention (Johnson & Ait-Daoud, 2000; Kiefer, Jiménez-Arriero, Klein, Diehl & Rubio, 2008). However, the effectiveness of psychotherapeutic intervention in alcohol dependence is far from consensus (Hester & Miller, 2003). Therefore, there remains an imperative need for new, more successful and efficient treatment methods.

There is broad agreement that psychological practice needs to be based on research evidence (APA, 2006). One approach to implementing evidence-based methods in alcohol dependence clinical practice has been through the development of alcoholism typologies (ATs). Indeed, current nosological classifications may describe a syndrome of "alcoholism" that is too heterogeneous to produce prognostic treatment models. ATs

could represent a valuable paradigm in the search of a targeted psychological treatment. The paradigm of ATs, namely, the multidimensional definition of subtypes of alcohol-dependent individuals, in order to refine diagnostic classification, was developed with the intent to generate more clinically useful subgroups and promote treatment compliance and effectiveness (Hesselbrock & Hesselbrock 2006; Pombo & Lesch, 2009). A wide variety of models used to classify alcoholism have been applied in clinical and research settings. Examples include the so-called Cloninger, Bohman & Sigvardsson (1981); Lesch, Dietzel, Musalek, Walter & Zeiler (1988) and Babor *et al.*, (1992) multidimensional alcoholic typologies. Several practical functions have been assigned to ATs. For instance, ATs may be used to summarize important diagnostic, prognostic, and descriptive information in a simple, understandable classification scheme, inform and motivate the patient about the nature of the disorder in a more tailored way, and facilitate client-service-matching (Babor & Caetano 2006). It is also hypothesized that better results could be achieved if the treatment is directed to the patient specific needs (Litt, Babor, DelBoca, Kadden & Cooney, 1992; Leggio, Kenna, Fenton, Bonenfant & Swift, 2009). Indeed, the idea that certain subtypes of alcoholics could benefit from specific therapeutic interventions is rather appealing for mental health clinicians (Lesch *et al.*, 2001; 2010; Pombo *et al.*, 2015). However, in order to provide essential guides to effective psychological practice in alcohol dependence, we need reliable data on "what works for whom". For instance, some psychotherapeutic studies confirmed the existence of an interactive effect between certain alcoholic-related characteristics (for instance, psychopathic traits), the structure of treatment and their therapeutic outcomes (Kadden, Cooney, Getter & Litt, 1989; Cooney, Kadden, Litt & Getter, 1991).

Therefore, because psychological practitioners need to integrate science into their practice, particularly validated psychological rationales of intervention, the aim of the present literature analysis was to study in what extent the clinical presentations of alcohol dependence, based on scientifically validated ATs, guide psychological interventions.

Methods

The present article reviews the literature on effective and available psychological interventions for alcohol dependence subtypes – ATs. The literature was reviewed by searching all relevant electronic databases such as Sciencedirect,

Web of Knowledge, PsycINFO, Medline and Cochrane Library for research articles and clinical reports published until December 2015. Two search strategies were combined. The first literature search targeted ATs studies in general, using the search terms "typologies", "alcoholic", "subtypes", "alcoholism" and "multidimensional". The second literature search focused specifically on psychological interventions, using terms as "psychotherapy", "psychological", "treatment" and "psychology".

Literature comprises case reports, experimental and observational studies, narrative and systematic reviews that were published in peer-reviewed journals. Only studies in the English language were included. Also, it will be selected only articles that evaluated or discussed directly psychotherapy or psychological interventions according to multidimensional ATs. Books, book chapters, pharmacological trials, genetic or methodological studies were excluded. ATs were selected on the basis of their scientific foundation. For this purpose, the following requirements had to be met: development was multidimensional and based on the systematization of observations and multivariate statistical analysis. Also, the validation procedure must be present (Babor & Caetano, 2006; Hesselbrock & Hesselbrock 2006; Pombo & Lesch, 2009). Both ATs and psychological interventions will be discussed in terms of the following dimensions: efficacy, clinical utility and rationale of intervention. The treatment efficacy is the systematic and scientific evaluation of whether a treatment works. The clinical utility is the applicability, feasibility, and usefulness of the intervention in the local or specific setting where it is to be offered (APA, 2002). Rationale of intervention is the use of a specific intervention based on logic, intuitive or comprehensive approach of alcohol dependence phenotype - conceptualization (Babor & Caetano, 2006; Hesselbrock & Hesselbrock 2006).

Method

Three randomized clinical trials (Orford, Oppenheimer & Edwards, 1976; Litt *et al.*, 1992; Ball, Jaffe, Crouse-Artus, Rounsaville & O'Malley, 2000), one clinical naturalistic study (Pombo *et al.*, 2015) and two review articles in which specific psychosocial interventions were proposed for the diverse alcohol-dependent subgroups (Kogoj *et al.*, 2010; Schlaff, Walter & Lesch, 2011), were included and properly reviewed.

From the ATs that achieved great relevance in both basic research and therapy fields, namely in terms of scientific evidence and validity process, we found studies regarding the typologies of Jellinek (1960);

Cloninger *et al.,* (1981); Lesch *et al.,* (1988); Babor *et al.,* (1992) and NETER (Cardoso, Barbosa, Ismail & Pombo, 2006). A descriptive analysis of the relevant ATs is presented below:

Alcoholism typologies:

Jellinek (1960)

In 1960, Jellinek became a pioneer when first developed a modern scientific approach of the problem, systematizing five alcoholics types, from which Type 3 (*Gamma*) and Type 4 (*Delta*) are pointed out in clinical terms. *Gamma* type patients are distinguished by increased tolerance, loss of control (craving) and withdrawal from alcohol. Typical Anglo-Saxon drinker. In *Delta* type there is evidence of tolerance and withdrawal symptoms, but alcohol consumption is more stable. The individual never seems to get really drunk, because alcohol is continuously ingested in small quantities. Consumption is influenced by social and/or financial condition. Typical Mediterranean drinker.

Cloninger et al. (1981)

Based on a genetic adoption study, Cloninger *et al.,* (1981) suggested the dichotomy type I (*milieu-limited*) versus type II (*male-limited*). The first one was characterized by a slow progression, beginning after 20 years of age. Type II distinguishes a precocious onset of alcohol consumption with swift progression to dependence, associated with a marked impulsiveneness.

Babor et al. (1992)

Babor *et al.,* (1992) presented a two-type solution typology and proposed the distinction between alcoholism Type A, with late onset of alcohol-related problems and better prognosis, and Type B, categorizing an alcoholism with early onset, marked by childhood risk factors, family history of alcoholism, high level of dependence, and psychopathological comorbidity.

Lesch et al. (1988)

Lesch *et al.,* (1988) introduced a four-type solution of alcoholism based on a long-term prospective follow-up study of 18 years. Lesch *et al.,* (1988) distinguished four evolutionary types depending on the family history of alcoholism, previous personal psychopathology, and neurobiological substratum. Thus, Type I evidences the appearance of early withdrawal symptoms and craving. Alcohol is consumed to counteract symptoms of alcohol withdrawal. The Type II shows anxiety and pre-morbid conflicts. Alcohol is consumed for its sedative effects. Patient exhibits mild

somatic problems related to alcohol dependence. Type III typifies an aggressive and impulsive behavior with the existence of psychiatric co-morbidity. Alcohol is consumed to 'self-medicate' psychiatric disorders (e.g. mood and motivational disorders, sleep disturbances). Patient exhibits self-destructive tendencies (e.g. suicide attempts) whether sober or intoxicated. Type IV shows pre-morbid organic cerebral lesions associated with a deterioration of individual's psychic, organic, and social sphere (e.g. history of cerebral brain damage before the age of 14 years, history of enuresis nocturna before the age of 14 years, or history of seizure disorders that are not related to alcohol withdrawal.

Cardoso et al. (2006)

Cardoso *et al.*, (2006) achieved the NETER Alcoholic Typology (NAT), based on alcohol-dependent outpatients recruited from the alcoholism unit of Santa Maria's Universitary Hospital in Lisbon. They concluded a factorial structure organized in five dimensions: anxiopathic type, typifies anxious functioning; heredopathic type, congregates familial and environment influences on alcoholism; thimopathic type, related to affective symptomatology; sociopathic type, characterized by social disruptive behaviours; and adictopathic type, connected to younger individuals who consume alcohol and other types of psychoactive substances.

Psychological interventions:

Several psychological interventions were conducted by therapists aiming to help maintain abstinence and/or reduce drinking in alcohol-dependent patients. Group psychotherapy was the most common modality for treatment of alcohol use disorders. Group therapy is normally the treatment modality of choice for a variety of reasons. In clinical practice, it offers individuals suffering from alcohol use disorder the opportunity to see the progression of dependency in themselves and in others; it also gives them an opportunity to experience their success and the success of other group members in an atmosphere of support and hopefulness (CSAT, 2005). It is widely accepted that group experience can be a powerful agent of change. The Interactional group therapy and the cognitive-behavioral model were the psychotherapeutic interventions more frequently observed. Cognitive-behavioral treatment intended specifically to develop coping skills and interactional therapy intended to examine interpersonal relationships. Yalom´s interactional group model focused the "energy" on the relationships within the

context of group, the leader is careful not to assume a central role but, rather, recognizes that the group itself becomes the agent of change, with the leader supporting the process but not initiating it. The interactional group process provides individuals with significant information about how their alcoholic behavior affects others and how they are in turn affected by other members as well (Brown & Yalom, 1977).

The second approach, cognitive-behavioral model, is often referred to as a directive approach. Cognitive–behavioral intervention focuses on dysfunctional patterns of thinking and behavior. During years, cognitive-behavioral approaches for alcohol dependence have been demonstrating empirical support in interventions such as motivational enhancement therapies, social skills training, stress management, relapse prevention and coping-skills training (Finney & Monahan, 1996; Hester & Miller, 2003). Social learning theory made an influential donation to the understanding of alcohol use, abuse and dependence (Bandura, 1977). General cognitive-behavioural models posit that are relevant situational cues associated with drinking that influence alcohol related beliefs and coping strategies effectiveness. These operate as situationally relapse precipitants for the use of alcohol or other drugs, such as nicotine, cannabis, heroin or cocaine. Subjective craving is also regarded as a central phenomenon, contributing to the continuation of alcohol use in active drinkers and the occurrence of relapse in detoxified alcohol-dependent subjects (Pombo *et al.*, 2014). Furthermore, identifying patient's high-risk cues for alcohol or drug abuse plays an essential role in cognitive-behavioral models of treatment. For example, collecting information about risk situations for alcohol use could be crucial to understand patient's reasons to drink, difficulties to maintain sobriety after treatment and to generate an individually-tailored treatment program. Usually, high-risk situations that enhance the likelihood of substance use include intrapersonal events such as cognitions and emotional states, and interpersonal dimensions such as peer pressure (Marlatt & Gordon, 1985).

Discussion

Alcohol abusers come from a very mixed population with concomitant forms of psychopathology intertwined with substance abuse and have a wide variety of treatment needs. Indeed, treatment effectiveness depends on many variables other than the treatment modality alone. These include the client's characteristics, the severity of the substance-abuse disorder, the relative potency of the intervention, the duration of

treatment, the content of sessions and the process/course of treatment (Waltman, 1995). Research suggests that the most effective treatment programs are clear and well organized, actively involve clients in the program, provide a supportive and emotionally expressive environment, and emphasize self-direction, work, and social skills development (Haaga, McCrady & Lebow, 2006).

Apart from the biological, social and psychiatric (co-morbidity) heterogeneity of alcohol dependence, it is also recognized that alcohol-dependent patients differ in terms of their neurocognitive resources, motivation levels and personality traits (Lesch *et al.*, 2010; Pombo *et al.*, 2010; 2013). In that sense, a possible interactive effect is suggested between certain phenotypic characteristics of alcohol dependence - subtypes of alcoholic patients - and the psychological intervention needs. For instance, alcohol-dependent patients distinguished by a high level of sociopathy and/or psychopathology, seem to respond better to "coping skills training", while the alcohol-dependent patients characterized by a low level of sociopathy seem to adapt better to "interactional group therapy" (Kadden *et al.*, 1989). It is suggested that passive therapists may be ineffective when considering alcoholic sociopathic patients because they do not provide a challenge to the patient's verbalizations and psychological structure. Some other authors suggest that alcohol-dependent patients with better levels of adaptation and alcohol consumption (moderate) can benefit from psychoeducational interventions and techniques of drinking control, while other patients with a more severe profile will likely require more intensive cognitive-behavioral interventions or a broader psychotherapeutic intervention, for example, focusing on depression, anger control or assertiveness training (Salstone & Poudrier, 1989; Donovan & Marlatt, 1982; Cooney *et al.*, 1991; Wieczorek & Miller, 1992; Litt *et al.*, 2001).

Different subgroups of alcohol-dependent patients reclaim different levels of care, whether they are medical or psychotherapeutic (Lesch *et al.*, 2010). For example, Orford *et al.*, (1976), in a two-year follow-up report, found that alcohol-dependent patients classified as *gamma* (similar to Type B or Type II) obtained better results in intensive care, while patients classified as non-*gamma* (similar to type A and I) benefit more form a briefer counseling intervention.

Litt *et al.*, (1992) replicate the typology of Babor´s *et al.*, (1992) and determine whether alcoholic subtypes have

different outcomes with different treatments. Data from 79 male alcoholics who were randomly assigned to either coping skills training or interactional group psychotherapy were used to evaluate the typology's usefulness in matching patients to treatment (24-months after inpatient discharged). Response to treatment was assessed considering heavy drinking days, time until relapse and psychosocial outcomes as social functioning or employment status. Results indicated that matches had better outcomes than did mismatches ($t[1,41]$-2.02, $p<.05$). Analyses of outcome indicated that type A alcoholics fared better in interactional treatment and more poorly with coping skills training. Type B alcoholics had better outcomes with the coping skills treatment and worse outcomes with interactional therapy ($F[1,41]=4.10$, $p<.05$). The authors concluded that type B clients, defined in part by measures of sociopathy, early onset and psychiatric severity, clearly benefited more from a structured and task-oriented intervention as coping skills training. Conversely, type A clients responded better to interactional therapy, which relies heavily on forming relationships with the therapists and other group members (Litt *et al.*, 1992).

Ball *et al.*, (2000) study questioned the usefulness and efficiency of treatment matching of Type A/B theoretical model. The authors assessed the concurrent and predictive validity of Type A and B alcoholism subtypes in 246 first-time driving-while-intoxicated (DWI) offenders. Type Bs (28%) exhibited greater premorbid risk factors, alcohol and psychosocial severity, drinking consequences, psychopathology, higher stage of change, and less coping confidence in comparison to less severe Type As (72%). After baseline assessment, participants were randomly assigned to one of three 10-week group treatments (Alcohol/DWI Education, Coping Skills Training, Interactional Group Therapy), and reassessed at termination, and at 6-month and 1-year follow-ups. According to the study results, there was no evidence for patient-treatment matching effects ($p>.05$).

More than two decades of scientific research and clinical practice in various Mental Health Institutions sustained the Lesch Alcoholic Typology (Lesch *et al.*, 1988, 2010). From this body of research, came a detailed and validated phenotypic characterization as well as the definition of a number of consistent psychotherapeutic strategies for each alcoholic subtype. Here are the main psychological recommendations according to the four subtypes (Lesch *et al.*, 1988; 1990; 2010 Lesch & Walter, 1996; Kogoj *et al*, 2010; Schlaff *et al.*, 2011):

During abstinence periods Type I patients are considered to be mentally healthy, but in periods of alcohol abuse they experience extreme cravings for alcohol. The focal point of type I alcohol treatment is to inform patients thoroughly about their condition and physiological distinctiveness rather than to refer them to psychotherapy. To motivate patients to give up drinking is only sensible in conjunction with the offer of an appropriate medical treatment of the withdrawal symptoms. Patients should feel supported and protected during the initial stage of abstinence. The major goal is to form an alliance with the patient and to achieve a "we" rather than an "I and you" mode of communication. A brief behaviorally oriented intervention might be advisable for some patients. It is reasonable not to discuss long-term therapeutic aims. Instead, stick to reachable goals in the immediate future.

Considering subtype II, it is essential that the patients are aware of the link between personality traits and dysfunctional coping mechanisms. The aim of the motivational work is to make the patient aware that psychotherapy is needed in order to boost his/her low self-esteem. Patients should learn to identify anxiety as a repetitive trigger for alcohol consumption and learn to 'say no' to alcohol related situations. This should then help to single out factors related to ongoing alcohol abuse on the one side and abstinence on the other. The drinking pattern is not the focal point of the therapy, but goes further to Ego-strengthening. Taken into consideration that this type of patients tends to need the caring attention of others in a dependent way, a therapeutic approach for dependent personality disorder may be necessary. New coping mechanisms should be developed, replacing alcohol.

It is important to inform and educate type III patients about their disease. The first step in the educational work is to make the person understand that alcohol works as a "vent" for a very performance-oriented controlled life. When Type III alcoholics manage to be abstinent, they normally return to their previous lifestyle including the strategy of "work" ("keeping oneself too busy to reflect"). Many patients refuse to make profound changes to their lifestyle. Therefore, the therapist should avoid starting the psychotherapeutic process too early. Type III patients tend to avoid psychotherapy because to them gaining more self-awareness represents an undesirable risky goal. At first it is advisable to do this from a more cognitive perspective, only later emotional factors shall be incorporated. Nevertheless, psychotherapy is important, particularly to reduce both the magnitude and the number of

depressive episodes which sometimes involve suicidal tendencies. Early signs of the onset of depressive episodes have to be identified and coping strategies learned.

Type IV patients tend to suffer from impaired memory (and other cognitive dysfunctions). Therefore, the psychological work has to take the poor cognitive capacity into consideration. For instance, it can be expected that patients have difficulties to follow complex information. Type IV patients are easily influenced by their environment and have a diminished capacity to reflect. Therefore relapses have to be seen as part of the course of the illness. For these reasons, a realistic therapeutic aim is to keep the frequency and severity of relapses low ("survival is the name of the game"). Educational work relies on repetition. Therapists should repeat the didactic information several times. Patients should have a highly structured daily routine. Gradually the patients should be encouraged to set easily achievable goals. Simple strategies of how to deal with situations were an urge to drink arises should be developed and learned. The patient should be encouraged to engage in meaningful activities in protected stable places away from the usual "drinking-environment".

Behaviour-therapeutic approaches encompassing small achievable goals and strategies to control one's impulses are supportive. Training to improve cognitive functioning is beneficial to the therapeutic process. (*See table I for psychological formulation of Lesch alcoholic subtypes).*

Table I – Psychological formulation of Lesch alcoholic subtypes that hypothetically could benefit from related psychological interventions.
Font: Lesch et al. (1988; 2010); Kogoj et al., (2010)

Alcoholic Psychological Subtypes	Psychological model of conceptualization (motivations to consume…)	Rationales of Intervention
Type I	Alcohol is consumed to cope withdrawal (Neuro-adaptation)	intervention Psycho-education Brief behavioral
Type II Therapy	Alcohol is consumed to cope anxiety	Cognitive-behavioral
Type III	Alcohol is consumed to cope depression (Self-medication model) strategies	Cognitive therapy Emotional self-regulation
Type IV	Alcohol is consumed to cope environment (Neuro-organic model)	Behavioral intervention Neuro-cognitive rehabilitation

A recent study was conducted aiming to examine the possible clinical significance of ATs in the context of an ambulatory healthcare setting in a hospital. For this naturalistic study (3 months), referring to routine outpatient treatment during the period from 2010 to 2014, the drinking *status*, the use of clinical healthcare resources, and

group psychotherapy were recorded and used as objective indicators of treatment performance. Alcohol-dependent outpatients (n=201) were classified according to the Cloninger, Lesch, and NETER typologies. The psychotherapeutic group is a directive, individually focused group (1 to 2 h) with a cognitive-behavioral theoretical framework, in which the (active) group leader generally works sequentially with one group member at a time. Patients may stay in the group for as long as they wish (ongoing group). In practice, the psychological intervention combines elements of psychoeducation (education about alcoholism disease and related behaviors/consequences), inter-personal support (commitment to change), and relapse prevention (refusal techniques, coping with triggers for alcohol use and urges to drink) (CSAT, 2005; Pombo *et al.*, 2010; 2015). Patients were assessed considering the attendance to the group psychotherapy and were divided into two groups, "good compliers": if patients remained in treatment and attended therapeutic sessions on a regular basis (weekly); and "poor compliers": if patients dropped out of the group before the end of month 3 or attended therapeutic sessions intermittently. The results of the study showed that the type II (Cloninger), type IV (Lesch), and sociopathic and addictopathic (NETER) subgroups showed a worse outcome in terms of abstinence rates (p.01-.06) and clinical healthcare resource use (p.01-.05). The study failed to find any meaningful association between alcoholism subtypes and patients' adherence to group psychotherapy. However, although the results were not statistical significant, patients classified as type II (Cloninger), type IV (Lesch), and sociopathic (NETER) presented higher percentages in the dimension "poor compliers" (53.7%, 58.7% and 75.0%, respectively). In the paper, the authors speculate about the possible influences of confounded conditions such as craving, personality traits, treatment satisfaction and the personal and cultural characteristics of the subjects in the group, including pressure from the therapist or peers (family) regarding treatment (Pombo *et al.*, 2015).

(See psychological recommendations according to alcoholic subtypes in table II).

Table II – Rationales of psychological intervention according to alcoholic subtypes

Alcoholic Subtype[a]	***Rationales of Intervention***[b]
Low severity/vulnerability phenotypes: Delta (Jellinek, 1960) Type I (Cloninger et al., 1981) Type A (Babor et al., 1992 Type I/II (Lesch et al., 1988) Anxiopathic (Cardoso et al., 2006)	Consider brief and didactic therapeutic methods, as psycho-educational or counseling interventions as psychoeducational or couseling interventions Type.
High severity/vulnerability phenotypes: *Gamma* (Jellinek, 1960) Type II (Cloninger et al., 1981) Type B (Babor et al., 1992) Type III/IV (Lesch et al., 1988) Sociopathic/addictopathic (Cardoso et al., 2006)	Utilize a more directive and structured approach, namely cognitive- behavioral interventions (coping skills training, anger control, assertiveness training).

[a] Subtype commonalities based on Pombo and Lesch (2009).

[b] Always keep in consideration that in many cases, psychological intervention should be combined with medication.

There are some limitations that need to be recognized in this literature review. First, concerning the results achieved by the major psychotherapeutic research project on alcohol dependence - the Project MATCH - Matching Alcoholism Treatments to Client Heterogeneity (Project MATCH Research Group, 1993). Although the findings have shown that alcohol-dependent patients improved regardless of the psychotherapeutic method applied (Twelve steps facilitation therapy, Cognitive-behavioral coping skills therapy, Motivational enhancement therapy), the research project has disclosed results somewhat discouraging as regarding to treatment matching hypothesis. However, some "post- Project MATCH" papers argue that the study design may have minimized the possibility (reduced sensitivity) to support the treatment matching hypothesis. For example, the disproportionate use of exclusion criteria may have substantially reduced the variability of the sample and the hypothetical characteristics that may be relevant to the matching process - excess of homogeneity. Further, the exclusion requirements not only reduce the probability of recognizing important clinical information to subject's allocation, but also bind the external validity of the results. Other critics pointed to Project MATCH concern the effectiveness of the selected psychotherapeutic modalities and the lack of consideration regarding the different levels of

therapeutic intervention intensity (Humphreys & Weisner, 2000; Buhringer, 2006). Second, in general, psychosocial interventions (normally, combined with pharmacology) are poorly detailed in clinical trials, being difficult to understand the nature and extent of the intervention (Garbutt, West, Carey, Lohr & Crews, 1999). Third, because alcohol dependence tends to cause various real-life problems and significant complications, particularly organic, these issues are often thought to obstruct the psychotherapy process. Hence, it is important that health practitioners do not see alcohol dependence as an isolated psychological problem, because sometimes, in the course of the psychotherapy, these patients present serious clinical situations (withdrawal, seizures, inter-personal conflicts, suicide), which require a referral to a specialized alcohol or drug addiction unit, even when the therapist and patient have firmly established psychotherapeutic relationship. Fourth, although psychological health-care providers intend to ease the pain of individuals in distress and help them to overcome their substance use and mental problems, we have to consider that, at times, treatment also may have iatrogenic effects and contribute to patients' deterioration (Moos, 2005).

In sum, today it's consensual that a combined treatment (pharmacological and psychological) plays a substantial key role in abstinence maintenance and relapse prevention of alcohol use disorders. Nevertheless, a common error in clinical practice is to try and offer nearly everything to everyone over fixed periods of time.

The comprehensive typological models of alcoholism (ATs) have shown predictive utility and heuristic value for organizing a broad range of clinical information. Furthermore, research suggests that when alcohol-dependent patients are suitably grouped in a scientifically and valid alcohol typology, the therapeutic results seem to be much more promising. This is quite clear for pharmacological trials (Leggio *et al.*, 2009; Lesch *et al.*, 2001; 2010; Skala *et al.*, 2014). However, the evidence for the differential effectiveness of psychological interventions is still modest. For instance, the types of research evidence with regarding psychotherapeutic interventions on ATs only include "clinical opinion, observation, and consensus among recognized experts representing the range of use in the field" or "systematized clinical observation" (APA, 2002). Though, we need randomized controlled experiments to confirm if ATs have strong implications for the planning of psychological treatments.

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