Article

New Approach to Early Maladaptive Schemas and its Relationship with Alcohol use Disorder. Role of Psychopathology and Prognostic Variables

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Abstract

Early maladaptive schemas (EMS), dysfunctional patterns of thought and emotions originated during childhood, latent in most mental disorders, might play a role in the onset of alcohol use disorder (AUD), although their impact on prognosis remains unknown. Our aim is to determine the presence of EMS in patients with AUD and their role in the psychopathology and course of addiction (relapse and withdrawal time). The sample included 104 patients and 100 controls. The diagnosis of AUD was made according to the Diagnostic and Statistical Manual of Mental Disorders (DSM–5) criteria, EMS were determined with the Young Schema Questionnaire in its Spanish version (YSQ–S3) and psychopathology with Symptom Checklist–27 (SCL–27). AUD group showed significantly higher scores in emotional deprivation, confused attachment, emotional inhibition and failure schemas. In addition, vulnerability schema correlated (> 0.500) with all subscales of SCL–27. Whereas social isolation, insufficient self-control and grandiosity schemas correlated with a higher number of relapses. But it was the grandiosity and punishment schemas that correlated with shorter abstinence time. These findings suggest that EMS are overrepresented in the AUD population and some correlate with psychopathology and worse AUD outcomes.

Keywords: alcohol use disorder; early maladaptive schemas; psychopathology; recovery

Alcohol consumption is a serious public health problem in Europe: 138,000 citizens aged 15–64 die each year from alcohol-related causes (World Health Organization [WHO], 2018) the direct and indirect costs derived from alcohol use amount to €600 per person per year; in fact, Spain ranks sixth in Europe in costs derived from alcohol consumption (Wittchen et al., 2011). According to the prevalence study of mental disorders in Europe, it is estimated that 5.3% of the general European population has had an alcohol-related disorder - abuse or dependence - in their lifetime (Wittchen et al., 2011).

The aetiology of alcoholism is multifactorial involving genetic, psychological and social factors (Rubio Valladolid, 2021). Among the psychological factors, the presence of early maladaptive schemas (EMS) could be a risk factor for the development of alcohol use disorder (AUD) (Young et al., 2003).

For Beck, schemas are stable cognitive patterns that form the basis for the regularity of interpretations of reality (Beck et al., 2019). These schemas are formed in childhood and are subsequently imposed in life experiences in adulthood, even if they are no longer applicable (Beck et al., 2019), giving rise to a maladaptive handling of certain situations. Indeed, Young (1999) posited the existence of "Early Maladaptive Schemas" referring to schemas that are formed through the experience of harmful and/or traumatic events, or overprotective behaviours, related to family of origin, primary caregivers or school experiences, and which are perpetuated and reinforced throughout adolescence and adulthood. In line with Young's theory, other authors such as Epstein (1998) and Grawe (1998) also focus on the idea that early experiences can give rise to cognitive schemas or dysfunctional thinking patterns that affect perceptions of self and others. Thus, schemas are considered to be pervasive and highly resistant to change (Young et al., 2003). He characterised them as unconditioned and enduring negative thoughts and beliefs about self, others and the world, which organise interpretations of life events and behaviour (see Table 1).

According to this model, EMS stems from unmet emotional needs in childhood. These are basic needs that every child requires to have met and must learn to compensate for with parents, family

Table 1. EMS Grouped by Domain and Domain Explanation

Unmet Emotional Needs	Definition	Domain	Emotional Schemas (EMS)
Secure Bonds with Others	Expectations of not meeting one's own needs for security, acceptance, and respect.	Disconnection and Rejection	Abandonment/Instability, Imperfection/Shame, Distrust/Abuse, Social Isolation, Emotional Deprivation.
Autonomy, Competence, and Sense of Identity	Expectations that interfere with one's ability to function independently or achieve success.	Deterioration in Autonomy and Performance	Dependence/Incompetence, Confusing Attachment, Vulnerability to Danger, Failure.
Freedom to Express Valid Needs and Emotions	Excessively focused on others' desires at the expense of one's own needs.	Directed at the Needs of Others	Subjugation, Self-Sacrifice, and Approval Seeking.
Realistic Boundaries, Self-Control, and Frustration.	A deficiency in internal boundaries, responsibilities towards others, or long-term goals.	Deterioration in Boundaries	Grandiosity and Insufficient Self-Control.
Spontaneity and Play	Excessive emphasis on controlling spontaneous feelings and behaviors to avoid mistakes.	Overvigilance and Inhibition	Negativity, Emotional Inhibition, Unattainable Goals, and Punishment.

Note. Table adapted from Quiñones et al., 2018.

and peer group in order to achieve optimal development and adaptive functioning throughout life.

Each unmet need refers to a domain and each domain encompasses several schemes (Young & Klosko, 2007) (see Table 1).

Young's conceptualisation assumes that when there is a predominant symptomatology a pathological schema may underlie it (Wells, 1997; Jovev & Jackson, 2004). Moreover, a maladaptive schema does not arise in isolation, as its dysfunctionality occurs in interaction with other schemas (Young et al., 2003). Leading authors Beck, Epstein, Grawe and Young have emphasized and consider that these are often underlying features of most mental disorders, as demonstrated in the study of Nicol et al. (2020), as well as seen in depressive and anxiety disorders studies of Calvete and Orue (2008), Calvete et al. (2013) and Shute et al. (2019), and especially in chronic and resistant disorders such as personality disorders (Hulbert et al., 2011) and substance abuse (Ball, 1998; Brotchie et al., 2007).

Indeed, it has been suggested that substance abusers may do so to avoid the emotional pain associated with these maladaptive patterns (Ball, 1998). Previous findings seem to confirm that attempts to cognitively and behaviourally avoid EMS in the disconnection/rejection domain are associated with increased substance use (Brotchie et al., 2007). Although studies about the presence of these schemas in patients with alcohol use disorder (AUD) has not been very numerous, there is agreement that alcohol consumption may be a way of coping with the distress triggered and sustained by emotional inhibition and emotional deprivation schemas (Ball, 2007; Rafaeli et al., 2010; Roper et al., 2010). Thus, Ball proposes that treating enduring negative beliefs about self, others and the world could improve the outcomes and efficacy of alcohol use disorder treatment (Arntz & Jacob, 2012; Ball, 2007). This would result in a decrease in the severity of EMS during treatment, as a possible explanatory mechanism for increased therapeutic efficacy (Roper et al., 2010; Shorey et al., 2013), reducing relapse, or secondary symptoms such as anxiety or sadness (Ball, 2007; Rafaeli et al., 2010; Roper et al., 2010).

However, the studies cited above have not included clinical variables related to alcohol use disorder such as severity, prognosis, or length of time in abstinence, as it is possible that at least the severity of maladaptive patterns is related to these variables. Therefore, they do not allow suggesting clinical recommendations for improving psychotherapeutic treatment.

In summary, little is known about the prevalence of EMS in AUD and their relationship to psychopathology and the course of AUD, and certainly no study so far has addressed this problem in our country.

Therefore, the main objective of the present study is to evaluate the differences in the EMS in a group of patients with AUD compared with a control group, as well as to determine which EMS are most relevant in the clinical group.

As secondary objectives, we will test the possible relationships between EMS with clinical variables in the AUD group, such as psychopathology, prognosis of the disease (greater number of relapses) or time in abstinence. In relation to this last issue, although the EMS appear to be stable over time, we intend to evaluate whether people with AUD differ according to the length of abstinence in the presence of EMS.

Method

Experimental Design

This is a non-experimental, ex post facto, quantitative, case-control study to explore patterns of EMS in a population of patients who sought treatment for AUD. On one hand, 100 individuals with AUD, that attended outpatients programs, either at the Psychiatry Servece of 12 de Octubre Hospital, or self-help groups of the Community of Madrid, were included in the study. On the other hand, 104 healthy controls took part of the study, and they were matched in age, gender and educational level.

All procedures performed in the study for both groups were approved by the Ethics Committee of the Hospital Universitario 12 de Octubre de Madrid (NºCEIm: 21/614).

Participants

This is a non-experimental, ex post facto, quantitative, case-control study to explore patterns of EMS in a population of patients who sought treatment treatment for AUD.

The total research sample consists of 204 subjects, divided into two groups: The clinical and the control group.

The group of people diagnosed with AUD was recruited from the Alcoholism Treatment Programme of the Hospital Universitario 12 de Octubre in Madrid and the mutual-help groups of the

Table 2. Descriptive Data and Mean Differences in Sociodemographic Variables between Patients and Controls

Variable	Patients (n = 100) M (± SD)	Controls (n = 104) M (± SD)	t (df)	p	d
Age	51.33 (10.34)	50.00 (12.40)	0.833 (198.06)	.407	1.330
	n (%)	n (%)	χ^2 (df)	p	d
Gender			12.948 (1)	**< .0001**	−.248
Male	71 (71.00%)	48 (46.20%)			
Female	29 (29.00%)	56 (53.80%)			
Education Level			43.895 (7)	**< .0001**	−1.508
Primary	25 (25.00%)	10 (9.60%)			
Secundary/FP	54 (54.00%)	31 (29.80)			
University	21 (21.00%)	63 (60.6%)			
Emplyment Status			33.266 (4)	**< .0001**	.795
Active	42 (42.00%)	80 (76.90%)			
Unemployed	58 (58.00%)	24 (23.10%)			
Marital Status			11.067 (5)	.050	−.084
Single	27 (27.00%)	16 (15.40%)			
Married/Partner	54 (54.00%)	70 (67.30%)			
Separated/Divorced/Widower	19 (19.00%)	18 (17.30%)			

Note. M = mean; SD = standard deviation; t = student t index; χ^2 = chi square index; df = degrees of freedom; p < .05; d = Effect size small (d = 0.21–0.49), medium (d = 0.50–0.79), and large (d > 0.80).

Alcoholic Associations of FA.CO.MA (Federación de Alcohólicos de la Comunidad de Madrid). The control group consisted of 100 subjects aged 26–76, with a mean age of 51.33 years (71% men) (see Table 2). The number of months of abstinence was recorded and the subjects were then grouped into 6 subgroups: 1–3 months (18.6%); 4–6 months (16.3%); 7–12 months (11.6%); 1–2 years (15.1%); 2–4 years (17.4%) and more than 4 years (20.9%).

On the other hand, the control group included 104 participants without AUD, recruited in a non-probabilistic manner using the snowball technique. This group consisted of subjects aged 18–72, mean age 50 years (46.2% male).

All subjects were differentiated by gender, educational level and employment status. In order to control for their effect, they were introduced into the statistical analysis in those tests where they were significan (see Table 2).

Regarding inclusion and exclusion criteria for participants, subjects with a severe neurological or psychiatric history such as psychotic and affective disorders present at the time of assessment were excluded from *both groups*.

For the *clinical group*, subjects meeting SAD criteria according to DSM–5 were included. Subjects with nicotine use disorders and occasional use of other substances were also included.

For the *control group*, those with non-problematic alcohol consumption (CAGE cut-off point) were included.

Instruments

Maladaptive schemas were assessed using the Young Schema Questionnaire *(YSQ–S3)*, in its Spanish version by Cid and Torrubia (2010). It consists of 90 items related to past and present experiences of schemas in everyday life (Young et al., 2003), obtaining a score for each of the EMS pointed out in Table 1. The YSQ–S3 has satisfactory psychometric properties in different languages and cultures (Brotchie et al., 2004; Roper et al., 2010; Shorey et al.,

2015), with a Cronbach's alpha of .91 for its Spanish version (Calvete et al., 2013). In our sample, the questionnaire obtained a Cronbach's alpha of .967.

The severity of alcohol addiction was determined by the number of addiction criteria listed in the Diagnostic and Statistical Manual of Mental Disorders (5th Ed., *DSM–5*, American Psychiatric Association [APA], 2013) present in the patient when he/she was recruited.

To determine the presence of alcohol problems in the control population, the *CAGE* (Cut, Annoyed, Guilty, Eye-opener) (Ewing, 1984), the Spanish version was used by Rodríguez-Martos et al. (1986). It consists of 4 questions on alcohol consumption. Used as a screening tool for AUD, a score of 1 is considered indicative of alcohol problems, and scores of 2–4 indicate alcohol use disorder. It has a high sensitivity (65–100%) and specificity (88–100%) (Ewing, 1984).

In addition, the number of relapses from the start of treatment to the baseline assessment was recorded. A relapse was understood as the consumption of more than five drinks or 40 g of ethanol per day (Rubio et al., 2001). Patients attended the hospital three times a week and were monitored by the nursing service using a breathalyzer.

Psychopathology was determined using the Symptom Checklist–27 (SCL–27) scale. It is an inventory of 27 items taken from the Derogatis Symptom Checklist, Revised (SCL–90–R) (Hardt & Gerbershagen, 2001), which assesses symptomatology present in the last week, grouped into 6 dimensions: Depressive Symptoms, Dysthymia, Vegetative Symptoms, Agoraphobia, Social Phobia, and Mistrust. The scale provides a Global Severity Index. It is a questionnaire with good reliability and validity characteristics, with a Cronbach's alpha of .92 (Góngora & Castro Solano, 2021).

Procedure

For the recruitment of the AUD group, a non-probability convenience sampling strategy was used. Recruitment took place between

September 2022-February 2023. We had the collaboration of researchers from the Hospital Universitario 12 de Octubre in Madrid and the technicians responsible for the alcohol associations of FA.CO.MA. The evaluation included a series of items about sociodemographic and clinical characteristics of interest, in addition to standardised questionnaires. Participation was voluntary. At both sites, the questionnaires were given to participants to fill in at the recruitment site and in the presence of a technician to answer any possible doubts when answering the questionnaires. Participants answered the questionnaires individually, taking an average of 30–40 minutes each. Once this process was completed, the questionnaires were collected together with the informed consent form.

The control group was recruited using the non-probability snowballing technique. The questionnaires on EMS, psychopathology and absence of alcohol problems, as well as the self-report on socio-demographic variables were completed via an online link.

Data analysis

First of all, a descriptive analysis of the variables, expressed as means and standard deviations, was performed. To test whether there were statistical differences between groups in the socio-demographic variables and in the early maladaptive schema scores, Student's t-test was performed for independent samples in the case of quantitative variables and Chi-square in the case of nominal or ordinal variables. In the case of comparisons of scale scores, type I error correction for multiple comparisons False Discovery Rate (FDR) was applied, using the Benjamini-Hochberg procedure with a significance level q set at 0.05.

To identify the characteristic patterns of the clinical population, a backward stepwise binary logistic regression was performed with the group variable (AUD vs. control) as dependent variable. The model was accepted when the Hosmer and Lemeshow goodness-of-fit test did not reach statistical significance ($p > .05$), the omnibus test was statistically significant ($p < .05$) and the classification index was above 70%.

To examine correlations between EMS scores in the clinical population and psychopathology variables, a partial correlation study was conducted controlling for gender and age. Correlational values were considered low ($< .3$), medium ($.3–.5$) and large ($> .5$) (Hernández Lalinde et al., 2018).

Partial correlation analyses were conducted to examine whether there is a relationship between the EMS and abstinence time or the number of relapses.

To test for differences in EMS according to time of abstinence, an analysis of variance (ANOVA) was performed for the clinical sample. Subjects were grouped according to time of abstinence: 1–3 months; 4–6 months; 7–12 months; 1–2 years; 2–4 years and more than 4 years. Post-hoc inter-group comparisons were performed using the Bonferroni test, with the significance level taken as $p < .05$.

All statistical analyses described used a minimum p-$value < .05$ as a criterion.

All analyses were carried out using SPSS statistical analysis software.

Results

Differences in Sociodemographic Variables between Patients and Controls

Subjects of the clinical group were mostly male, with a primary school education, unemployed and married. In contrast, subjects of the control sample were gender-matched, with the majority of participants being university graduates, employed and married.

Group Differences in EMD Scores and Psychopathology

Subjects with AUD had statistically significantly higher scores on all EMS, with larger effect sizes for emotional inhibition ($d = .684$), withdrawal/instability ($d = .884$) and insufficient self-control ($d = .738$) (see Table 3).

The AUD group also scored higher on all subscales of the SCL–27, especially on distrust ($d = .549$) and depression ($d = .591$) (see Table 4).

Regression Analysis to Determine the Variables to Identify the Clinical Group

A binary logistic regression was carried out, considering membership or not of the clinical group as the dependent variable, and EMS as independent variables. The final model included the EMS: Emotional inhibition, confused attachment, emotional deprivation and failure, in addition to gender and age (Omnibus test: $\chi^2 = 72.842$; $p < .001$), and explaining 40% of the variance (R^2 Nagelkerke = .40). The model allowed to correctly classify with 77.5 % accuracy whether a subject belongs to the clinical group (see Table 5).

The schema that had the most weight for belonging to the alcohol group was emotional inhibition: Odds ratio (OR) adjusted for the rest of the model's variables, indicating the effect size or Exp (B) = 3.037, followed by confused attachment schema, Exp (B) = 2.485 and finally emotional deprivation, Exp (B) = 1.554. With respect to the failure schema, although its score was not significant, it remained in the model as an adjustment variable.

In relation to the gender variables: Being male increased the risk of belonging to the alcohol group threefold, Exp (B) = 3.168, also, the older the age, the higher the probability of belonging to the alcohol group, Exp (B) = 1.040.

Correlations between EMS Scores and Psychopathology

Different correlations were found between several of the EMS with different subscales of the SCL–27. Among them, several EMS correlated with all subscales of the SCL–27: vulnerability to danger and negativity-pessimism. In addition, they correlated significantly with all subscales of the SCL–27 except the depression subscale, the EMS imperfection/shame and insufficient self-control (see Table 6).

Relationship between EMSs and Recovery Variables: Number of Relapses and Time to Abstinence

In order to test whether there is a correlation between relapses of AUD subjects during the course of recovery and EMS, a partial correlation was carried out, in which it was detected that a higher number of relapses correlated with the EMS of imperfection/shame ($r = .22$), negativity/pessimism ($r = .22$), insufficient self-control ($r = .22$), emotional deprivation ($r = .23$) and grandiosity ($r = .25$). In relation to time of abstinence, a negative correlation was detected with the grandiosity schema ($r = −.240$).

On the other hand, in order to test the possible influence of the time of abstinence on the presence of the EMS, we divided the sample into the 6 groups described in the participants section. Table 7 shows the results of the ANOVA, which indicates the existence of statistically significant intergroup differences in the EMS of punishment ($p = .006$) and grandiosity ($p = .026$) with a large effect size in both (See Table 7).

Table 3. Descriptive Data and Mean Differences in EMS between Patients and Controls

Variable	Patients M (± SD)	Controls M (± SD)	t (df)	p	d
Emotional deprivation	.82 (1.25)	.21 (.60)	4.37 (140.83)	**< .001**	.608
Abandonment/Instability	1.23 (1.53)	.35 (.84)	5.06 (152.55)	**< .001**	.884
Mistrust/Abuse	.62 (1.15)	.11 (.36)	4.25 (118.10)	**< .001**	.514
Social isolation	.59 (.98)	.23 (.54)	3.20 (152.84)	**< .001**	.359
Imperfection/Shame	.45 (.80)	.12 (.40)	3.72 (143.75)	**< .001**	.335
Failure	.40 (.89)	.05 (.29)	3.73 (118.88)	**< .001**	.352
Dependence/Incompetence	.46 (.73)	.08 (.30)	4.86 (130.78)	**< .001**	.383
Vulnerability to danger	.72 (1.10)	.25 (.60)	3.75 (152.17)	**< .001**	.470
Confusing attachment	.60 (.96)	.11 (.43)	4.68 (137.15)	**< .001**	.494
Subjugation	.60 (1.10)	.14 (.45)	3.84 (130.10)	**<.001**	.456
Self-Sacrifice	1.38 (1.49)	.93 (1.26)	2.30 (193.78)	**.02**	.447
Approval seeking	1.10 (1.43)	.48 (1.07)	3.46 (183.46)	**.03**	.619
Emotional inhibition	.78 (1.07)	.10 (0.35)	6.03 (119.54)	**< .001**	.684
Unreachable goals	1.57 (1.27)	1.05 (1.21)	2.99 (200.58)	**< .001**	.552
Negativity/Pessimism	.97 (1.18)	.32 (0.77)	4.63 (170.19)	**< .001**	.653
Punishment	.76 (1.01)	.29 (0.64)	3.93 (167.12)	**< .001**	.472
Grandiosity	.94 (1.07)	.38 (0.74)	4.36 175.19)	**< .001**	.565
Insufficient Self-Control	.95 (1.40)	.21 (0.58)	4.87 (131.44)	**< .001**	.738

Note. M = mean; SD = standard deviation; t =student t index; df = degrees of freedom; p < .05; d = effect size small (d = 0.21–0.49), medium (d = 0.50–0.79), and large (d > 0.80).
p values highlighted in bold indicate statistical significance (FDR correction, q = 0.05)

Table 4. Differences in Scores Obtained by Patients and Controls in the Subscales of SCL–27

Variable	Patients M (± SD)	Controls M (± SD)	t (df)	p original	d
SCL-Depression	1.19 (1.19)	.60 (.61)	4.43 (146.67)	**< .001**	.591
SCL-Agoraphobia	.76 (.83)	.36 (.49)	4.23 (159.46)	**< .001**	.406
SCL-Dysthymia	1.47 (1.02)	1.08 (.82)	2.96 (189.99)	**< .001**	.388
SCL-Distrust	1.21 (.99)	.66 (.71)	4.49 (178.90)	**< .001**	.549
SCL-Social Phobia	1.15 (1.06)	.62 (.71)	4.11 (171.56)	**< .001**	.525
SCL-Vegetative Symptoms	.86 (.85)	.59 (.69)	2.47 (190.89)	**< .001**	.268
SCL-Severity Index	1.08 (.82)	.64 (.56)	4.41 (173.18)	**< .001**	.439

Note. M = mean; SD = standard deviation; t = student t index; df = degrees of freedom; p < .05; d = effect size small (d = 0.21–0.49), medium (d = 0.50–0.79), and large (d > 0.80).
p values highlighted in bold indicate statistical significance (FDR correction, q = 0.05).

Bonferroni post hoc analysis indicates that AUD groups with more than 4 years of abstinence and those with 1–3 months of non-use, differ significantly in punishment (p = .033) and grandiosity (p = .012) scores, with higher EMS scores for the group with less time of abstinence.

Discussion

The aim of this study was to test for the existence of EMS in AUD patients, and to assess their relationship with the presence of psychopathology, relapse on alcohol use and finally to show whether time of abstinence varied the levels of EMS. Our main findings show that AUD have higher scores on all the EMS, although it was emotional inhibition, confused attachment,

emotional deprivation and failure that allowed us to classify AUD more accurately. In addition, they also show higher scores on the psychopathology scales. And although there are several significant correlations between the two constructs, it is significant that the greater the vulnerability to danger and the greater the negativity/pessimism, the greater the psychopathology in general.

In relation to the course of AUD, we have detected that a greater number of relapses is related to higher levels of the EMS of imperfection/shame, negativity/pessimism, insufficient self-control, emotional deprivation and grandiosity. Moreover, subjects with more than 4 years of abstinence versus those with a short period of abstinence show lower scores on the EMS of punishment and grandiosity.

The evidence in favour of high scores on all schemas in the AUD population is in line with those found in other studies

Table 5. Stepwise Binary Logistic Regression

	B	SE	Wald	df	p	Exp (B)	95% CI for Exp B LL	UL
Step 15								
Gender	1.153	.363	10.070	1	.002	3.168	1.554	6.457
Age	.039	.016	5.683	1	.017	1.040	1.007	1.074
Emotional deprivation	.441	.218	4.100	1	.043	1.554	1.014	2.382
Confusing attachment	.902	.350	6.654	1	.010	2.485	1.242	4.893
Emotional inhibition	1.111	.331	11.249	1	.001	3.037	1.587	5.843
Failure	.564	.383	2.166	1	.141	1.757	0.829	3.722
Constant	3.370	.941	12.822	1	< .0001	29.075		

Note. In the table, the following variables are shown: Step 15 = refers to the number of steps that the statistical method required to achieve the most fitted regression model; B = slope; SE = standard error; Wald Statistic = individual contribution of each predictor variable to the model; df = degrees of freedom; Exponential of B or Exp (B) = odds ratio (OR) adjusted for the rest of the model's variables, indicating the effect size. If OR = 1.68–3.47, the effect size is small; if OR = 3.47–6.71, the effect size is moderate; if OR > 6.7, the effect size is large. 95% CI for Exp B = Confidence Interval. $p < .05$.

Table 6. Partial Correlations between Scores on EMS in Clinical Subjects and Subscales of SCL–27

Scheme	SCL-Depression	SCL-Dysthymia	SCL-Vegetative Symptoms	SCL-Agoraphobia	SCL-Social Phobia	SCL-Distrust	SCL-Severity Index
Emotional deprivation	.340*	.262	.271	.144	.360*	.354*	.343*
Abandonment/Instability	.252	.375*	.257	.289	.211	.275	.327*
Mistrust/Abuse	.315*	.266	.268	.309*	.246	.437*	.362*
Social isolation	.249	.229	.234	.256	.323*	.310*	.315*
Imperfection/Shame	.278	.317*	.433*	.368*	.367*	.343*	.419*
Failure	.184	.172	.261	.138	.276	.117	.231
Dependence/Incompetence	.134	.279	.277	.289	.161	.142	.255
Vulnerability to danger	.463*	.397*	.507**	.537**	.447*	.500**	.566**
Confusing attachment	.255	.352*	.217	.389*	.187	.207	.316*
Subjugation	.181	.267	.292	.302*	.325*	.230	.315*
Self-Sacrifice	.044	.104	.134	.004	−.003	.015	.063
Approval seeking	.167	.234	.177	.296	.316	.261	.282
Emotional inhibition	−.005	.167	.137	.088	−.006	.000	.077
Unreachable goals	.048	.013	−.054	−.045	.034	.003	−.002
Negativity/Pessimism	.372*	.308*	.337*	.352*	.360*	.443*	.429*
Punishment	.207	.237	.234	.253	.259	.258	.285
Grandiosity	.244	.278	.263	.209	.291	.377*	.327*
Insufficient self-control	.252	.385*	.349*	.358*	.372*	.325*	.402*

Significance Levels.
* $p < .05$. ** $p < .01$.

(Chodkiewicz et al., 2018; Cid Colom, 2016; Decouvelaere et al., 2002). However, our results differ in terms of the predominant schemas in subjects with AUD. In our sample, the most significant EMS were emotional deprivation, emotional inhibition, confused attachment and failure. Emotional inhibition was higher in people with SAD in the study by Brotchie et al. (2004), but the other schemas are not shared in the other studies (Ball et al., 2005; Brotchie et al., 2004; Cid Colom, 2016; Shorey, 2013). The reasons for this dissonance could be due to the clinical and psychosocial characteristics of the samples included in them:

Homeless people (Ball et al., 2005), young people in the early stages of addiction (Shorey, 2013) and the small sample size of some studies (Decouvelaere et al., 2002, Ball et al., 2005 and Brotchie et al., 2004). Our study is the only one with a sample of 100 subjects diagnosed with AUD.

Based on schema theory, Young (2003) proposes that substance-using individuals have EMS that are related to maladaptive coping styles such as flight or escape from threatening situations.

These subjects use alcohol as a strategy to avoid the negative feelings produced by maladaptive schemas (Melgar-Velázquez,

Table 7. Differences Between Abstinence Groups in EMS Scores

Variable	G1 M (± SD)	G2 M (± SD)	G3 M (± SD)	G4 M (± SD)	G5 M (± SD)	G6 M (± SD)	F	df	p	η²
Emotional prevention	1.24 (1.45)	.93 (1.53)	.83 (1.25)	.46 (.66)	.59 (1.33)	.63 (.96)	.993	5	.427	.050
Abandonment/Instability	1.48 (1.19)	1.73 (1.87)	1.27 (1.79)	1.46 (2.02)	1.00 (1.32)	.53 (1.17)	1.418	5	.225	.070
Mistrust/Abuse	.88 (1.33)	.40 (.91)	.73 (1.68)	1.00 (1.35)	.35 (.61)	.37 (.89)	1.030	5	.405	.052
Social isolation	.88 (1.20)	.40 (.51)	1.00 (1.41)	.62 (.96)	.35 (.79)	.32 (.75)	1.449	5	.214	.072
Imperfection/Shame	.44 (.77)	.53 (.74)	.45 (.69)	.46 (.66)	.24 (.56)	.58 (1.21)	0.357	5	.876	.019
Failure	.64 (1.31)	.27 (.45)	.18 (.60)	.31 (.48)	.47 (1.07)	.32 (.67)	.622	5	.684	.032
Dependence/Incompetence	.56 (.65)	.40 (.63)	.36 (.67)	.85 (1.21)	.29 (.59)	.32 (.58)	1.215	5	.308	.061
Vulnerability/Danger	.84 (1.14)	.67 (.90)	.91 (1.45)	1.15 (1.40)	.41 (.94)	.47 (.84)	.990	5	.428	.050
Confusing attachment	.80 (1.23)	.67 (.90)	.64 (.92)	.69 (1.18)	.41 (.80)	.37 (.60)	.593	5	.705	.031
Subjugation	1.04 (1.48)	.33 (.72)	.73 (4.42)	.46 (.66)	.47 (.80)	.37 (.95)	1.278	5	.280	.064
Self–Sacrifice	1.76 (1.66)	1.13 (1.30)	1.27 (1.01)	1.69 (1.65)	1.41 (1.70)	.89 (1.32)	.927	5	.467	.047
Approval seeking	1.60 (1.68)	1.40 (1.55)	1.09 (1.58)	1.15 (1.46)	.76 (1.03)	.47 (1.02)	1.700	5	.142	.083
Emotional inhibition	1.00 (1.19)	.87 (.92)	.91 (1.38)	.69 (1.11)	.47 (.87)	.68 (1.06)	.573	5	.720	.030
Unattainable goals	1.76 (1.13)	1.67 (1.29)	2.00 (1.48)	1.77 (1.59)	1.35 (1.22)	1.05 (1.08)	1.180	5	.325	.059
Negativity/Pessimism	1.32 (1.28)	1.07 (1.22)	1.00 (1.41)	1.31 (1.49)	.47 (.80)	.63 (.76)	1.635	5	.158	.080
Punishment	1.28 (1.14)	.60 (.73)	1.00 (.89)	.94 (1.32)	.53 (1.01)	.16 (.37)	3.466	5	**.006**	.156
Grandiosity	1.40 (1.12)	1.07 (.96)	1.00 (1.00)	1.08 (1.32)	.71 (1.04)	.32 (.67)	2.674	5	**.026**	.125
Insufficient self–control	1.20 (1.58)	1.13 (1.41)	.82 (1.47)	1.54 (1.85)	.53 (.87)	.53 (1.02)	1.364	5	.245	.068

Note. The table displays the six abstinence subgroups: G1 = 1–3 months; G2 = 4–6 months; G3 = 7–12 months; G4 = 1–2 years; G5 = 2–4 years; and G6 = more than 4 years. It includes the mean (*M*) and standard deviation (± *SD*) values. The *F* statistic value is provided. Degrees of freedom (*df*). Partial Eta² (η²) refers to the eta-squared values, indicating the effect size: small > 0.01, medium 0.01–0.06, and large > 0.06. Values marked in bold indicate significant data (*p* < .05).

2022). In this way, the maladaptive schema is maintained by negative reinforcement (Kober, 2014; Watkins et al., 2015).

Among the EMS that characterise the sample assessed are emotional deprivation, confused attachment and emotional inhibition. With regard to the emotional deprivation schema, it involves the expectation that the desires for emotional support (care, empathy or protection) will not be adequately satisfied (Young, 2003). This schema could be related to the high frequency of situations of physical, sexual abuse or emotional neglect found in adolescent populations with substance polyabuse (Álvarez-Alonso et al., 2016).

Confusing attachment appears to be related to addictive behaviours (Allen, 1996; Cooper, 1998). Thorberg and Lyvers (2010) found that possessing an insecure attachment style is a risk factor for AUD, independent of hereditary risk for alcoholism. In fact, studies show that insecure attachment is associated with alcohol use disorder (Bermúdez Monsalve & Paredes Pino, 2016).

Finally, emotional inhibition is a frequent EMS in people who excessively control their emotions and actions, which hinders their interaction with others. Alcohol consumption, for these people, could have a facilitating function for social interaction and disinhibition (Gantiva-Díaz et al., 2010, see review in Domínguez-Centeno & Rubio Valladolid, 2021; Rotgers, 2003).

Lastly, the failure schema within the model is not significant, but maintains a relevant role as an adjustment variable. It refers to the belief that one has failed, will inevitably fail or is fundamentally inadequate in relation to peer groups (Young, 2003). In fact, there is a frequent relationship between feelings of failure and AUD diagnosis (Armeli et al., 2015), where low perceived self-efficacy correlates with relapses, and longer recovery processes (Minda-Mina, 2021).

On the other hand, our results show a clear relationship of the different schemas with psychopathology, in particular, the schema of vulnerability to danger. This EMS refers to thoughts of anticipation of catastrophes and danger. It elicits emotions ranging from medium-low level fear to full-blown anxiety crises (Young, 2003). Believing oneself to be in a situation of potentially high, unpredictable and uncontrollable danger favours the emergence of distress and various psychopathologies (Mineka & Kihlstrom, 1978).

In the analysis of variables related to the course of recovery we observed that the EMS directly and significantly related to the number of relapses were grandiosity, insufficient self-control, emotional deprivation, negativity/pessimism and imperfection/shame.

In relation to the first two schemas, grandiosity could favour an analysis of situations far removed from the realistic limits of the person him/herself, making it difficult to correctly identify risk situations, which, together with insufficient self-control, typical of addictions, could be a cause of relapse (Aragues et al., 2011; Rubio et al., 2008). Within the grandiosity EMS, the control fantasy present in patients with addictions can be described. This is because the success achieved in establishing abstinence can lead to the misconception that their achievements bring them closer to a position of control over their use, which is a frequent relapse situation (Parra et al., 2013).

With reference to the emotional deprivation scheme, the expectation of not finding emotional support from other people, not perceiving support networks to remain abstinent, which has been

shown to be one of the main risk factors for relapse (Grau-López et al., 2014), stands out.

Ultimately, the schemas of negativity/pessimism (negative expectation that things will go wrong by focusing on the negative aspects of life) and imperfection/shame (feeling that one is inferior or that one would cease to be liked if one shows oneself as one is) (Young, 2003), refer to the difficulties widely described in the literature in relation to the management of negative emotionality in this type of pathology (González-Yubero et al., 2021). Relapse processes in addictive disorders are usually associated with the same three high-risk situations: Negative emotional states, interpersonal conflicts and social pressure (Marlatt & Gordon, 1985).

A particularly relevant result of the study was that the length of abstinence correlated with the grandiosity and punishment scheme. But in addition, patients with more time in abstinence had lower scores on grandiosity and punishment than those in the 1–3 month group. These results could be in line with other clinical research, which has evaluated similar concepts at a qualitative level, such as humility (Rubio et al., 2018), and which seem to reflect the growth that occurs in values throughout the therapeutic process. Thus, after several years of abstinence, and due among other things to acceptance, arrogance is transformed into humility, at least in the face of alcohol (Rubio et al., 2018), decreasing the EMS of grandiosity and punishment.

Throughout the recovery process, patients learn to forgive themselves and understand that they are responsible for what has happened, but not guilty (Alcoholics Anonymous World Services [AAWS], 2007; FA.CO.MA, 2016), as the principle of guiltlessness is a therapeutic principle, it is consistent that this scheme occurs in subjects with little time of abstinence and not in those who have already been on the road for a long time (AAWS, 2007; FA.CO.MA, 2016).

One of the most relevant aspects of this research is based on having included clinical variables specific to AUD, such as relapses, severity and time of abstinence. All of these were collected by expert professionals when the patients came for treatment. The fact of including a psychopathological assessment offers a point of view that has been overlooked in previous studies, with a larger sample than those used so far. Moreover, to our knowledge, it is the first research work carried out in our country on a sample with AUD requesting treatment.

Among the limitations of the present study is the cross-sectional nature of the data, which means that causal inferences cannot be made. In other words, it is possible that these schemas were present in the subjects before they developed the addiction, but it could also be the case that the addiction itself had served to amplify them. On the other hand, and due to the small number of women in the clinical sample, other studies including a larger sample size with a larger number of women would be necessary to verify the findings obtained in our study.

Another limitation of the present study is due to the differences between the clinical sample and the controls. As there are sociodemographic differences and the results could be biased as they are not equivalent. However, all analyses have been adjusted for these variables.

The sample evaluated presents significant alterations in their EPD, therefore, these patterns could constitute important vulnerability factors for the development of AUD or could also have been caused by AUD during the course of the disorder. The relationship of these schemas with the detected psychopathology could be evidence in support of the frequent comorbidity of AUD with other mental disorders.

The schemas that best classified the clinical sample were: Emotional deprivation, emotional inhibition, confused attachment and failure. The difficulties in emotional control that characterise them should make us think about the importance of emotional regulation programmes for the treatment of subjects with AUD. Therefore, we hypothesise that, if we work on relapse prevention by placing special emphasis on aspects such as impulsivity, the promotion of a support network, the regulation of negative emotions and work on cognitive distortions, the number of relapses in our patients would be quantitatively lower.

The assessment of these EMS in clinical samples could be used to personalise the treatment of these patients in the short-medium and long term.

References

Álvarez-Alonso, M. J., Jurado-Barba, R., Martínez-Martín, N., Espín-Jaime, J. C., Bolaños-Porrero, C., Ordóñez-Franco, A., Rodríguez-López, J. A., Lora-Pablos, D., de la Cruz-Bértolo, J., Jiménez-Arriero, M. A., Manzanares, J., & Rubio, G. (2016). Association between maltreatment and polydrug use among adolescents. *Child Abuse & Neglect*, **51**, 379–389. https://doi.org/10.1016/j.chiabu.2015.07.014

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th Ed.). http://doi.org/10.1176/appi.books.9780890425596

Alcoholics Anonymous World Services (2007). *Alcoholics Anonymous fact file.*

Allen, J. P., Hauser, S. T., & Borman-Spurrell, E. (1996). Attachment theory as a framework for understanding sequelae of severe adolescent psychopathology: An 11-year follow-up study. *Journal of Consulting and Clinical Psychology*, **64**(2), 254–263. https://doi.org/10.1037/0022-006X.64.2.254

Aragues, M., Jurado, R., Quinto, R., & Rubio, G. (2011). Laboratory paradigms of impulsivity and alcohol dependence: A review. *European Addiction Research*, **17**, 64–71. https://doi.org/10.1159/000321345

Armeli, S., Sullivan, T. P., & Tennen, H. (2015). Drinking to cope motivation as a prospective predictor of negative affect. *Journal of Studies on Alcohol and Drugs*, **76**(4), 578–584. http://doi.org/10.15288/jsad.2015.76.578

Arntz, A., & Jacob, G. (2012). *Schema therapy in Practice: An introductory guide to the Schema mode approach*. Wiley-Blackwel.

Ball, S. A. (1998). Manualized treatment for substance abusers with personality disorders: Dual focus schema therapy. *Addictive Behaviors*, **23**, 883–891. https://doi.org/10.1016/S0306-4603(98)00067-7

Ball, S. A. (2007). Cognitive-behavioral and schema-based models for the treatment of substance use disorders. In L. P. Riso, P. L. du Toit, D. J. Stein, & J. E. Young (Eds.), *Cognitive schemas and core beliefs in psychological problems: A scientist-practitioner guide* (pp. 111–138). American Psychological Association. https://doi.org/10.1037/11561-006

Ball, S. A., Cobb-Richardson, P., Connolly, A. J., Bujosa, C. T., & O'neall, T. W. (2005). Substance abuse and personality disorders in homeless drop-in

center clients: Symptom severity and psychotherapy retention in a randomized clinical trial. *Comprehensive Psychiatry*, **46**(5), 371–379. http://doi.org/10.1016/j.comppsych.2004.11.003

Beck, A. T., Wright, F. D., Newman, C. F., & Liese, B. S. (2019). *Cognitive therapy of drug dependence*. Paidós.

Bermúdez Monsalve, M. D., & Paredes Pinos, M. M. (2016). *Attachment styles in adults with alcohol use disorder in the canton of Cuenca* [Bachelor's thesis, Universidad del Azuay]. Repositorio Institucional de la Universidad del Azuay. https://dspace.uazuay.edu.ec/bitstream/datos/6491/1/12630.pdf

Brotchie, J., Hanes, J., Wendon, P., & Waller, G. (2007). Emotional avoidance among alcohol and opiate users: The role of schema-level cognitive processes. *Behavioural and Cognitive Psychotherapy*, **35**(2), 231–236. http://doi.org/10.1017/S1352465806003511

Brotchie, J., Meyer, C., Copello, A., Kidney, R., & Waller, G. (2004). Cognitive representations in alcohol and opiate abuse: The role of core beliefs. *British Journal of Clinical Psychology*, **43**, 337–342. https://doi.org/10.1348/0144665031752916

Calvete, E., & Orue, I. (2008). Ansiedad social y esquemas cognitivos disfuncionales [Social Anxiety and dysfunctional cognitive schemas]. *Psicología Conductual*, **16**(1), 5–21.

Calvete, E., Orue, I., & González-Díez, Z. (2013). An examination of the structure and stability of early maladaptive schemas by means of the Young Schema Questionnaire–3. *European Journal of Psychological Assessment*, **29**, 283–290. https://doi.org/10.1027/1015-5759/a000158

Chodkiewicz, J., & Gruszczyńska, E. (2018). Maladaptive schemas among people addicted to alcohol: Heterogeneity but not specificity? *Alcohol and Alcoholism*, **53**(6), 682–687. http://doi.org/10.1093/alcalc/agy047

Cid, J., & Torrubia, R. (2010). *Spanish version of the Young Schemas Questionnaire–3*. [Unpublished manuscript]. Departamento de Psiquiatría y Medicina Legal de la Facultad de Medicina, Universidad Autónoma de Barcelona.

Cid Colom, J. (2016). *El Esquema como organizador de la personalidad y sus trastornos: Estudio psicométrico de la adaptación Española del Young Schema Questionnaire-Short Form* [The Schema as an organizer of personality and its disorders: Psychometric study of the Spanish adaptation of the Young Schema Questionnaire-Short Form]. [Doctoral dissertation, Universitat Autònoma de Barcelona]. Departament de Psiquiatria i de Medicina Legal. http://hdl.handle.net/10803/370109

Cooper, M. L., Shaver, P. R., & Collins, N. L. (1998). Attachment styles, emotion regulation, and adjustment in adolescence. *Journal of Personality and Social Psychology*, **74**(5), 1380. https://doi.org/10.1037/0022-3514.74.5.1380

Decouvelaere, F., Graziani, P., Gackiere-Eraldi, D., Rusinek, S., & Hautekeete, M. (2002). Hypothesis of the existence and evolution of maladaptive cognitive schemas in alcohol-dependent individuals. *Journal de Thérapie Comportementale et Cognitive*, **12**(2), 43–48.

Domínguez-Centeno, I., & Rubio Valladolid, G. (2021). Vergüenza, consumo de alcohol y dependencia alcohólica [Shame, alcohol consumption and alcohol dependence]. In G. Rubio Valladolid (Coord.), *Alcohol, alcoholismo y emociones sociales* [Alcohol, alcoholism and social emotions] (pp. 79–93). Ediciones Delta.

Epstein, S. (1998). Emotions and psychopathology from the perspective of cognitive-experiential self-theory. In W. F. Flack, Jr., & J. D. Laird (Eds.), *Emotions in psychopathology: Theory and research* (pp. 57–69). Oxford Academic. http://doi.org/10.1093/oso/9780195093216.003.0004

Ewing, J. A. (1984). Detecting alcoholism: The CAGE Questionnaire. *JAMA*, **252**(14), 1905–1907. https://doi.org/10.1001/jama.1984.03350140051025

Federación de Alcohólicos de la Comunidad de Madrid. (2016). *Ayúdate, ayúdanos* [Help yourself, help us]. https://www.facoma.org/?r3d=ayudate-ayudanos

Gantiva-Díaz, C. A., Bello Arévalo, J., Vanegas Angarita, E., & Sastoque Ruiz, Y. (2010). Relación entre el consumo excesivo de alcohol y esquemas maladaptativos tempranos en estudiantes universitarios [Relationship between excessive alcohol consumption and early maladaptive schemas in university students]. *Revista Colombiana de Psiquiatría*, **39**(2), 362–374. http://www.scielo.org.co/scielo.php?script=sci_serial&pid=0034-7450

Góngora, V., & Castro Solano, A. (2021). Validación del SCL–27 en población general y en población clínica argentina [Validation of the SCL–27 in Argentinean general and clinical population]. *Psicodebate*, **21**(1), 49–60. https://doi.org/10.18682/pd.v21i1.4018

González-Yubero, S., Lázaro-Visa, S., & Palomera, R. (2021). ¿Qué aporta la inteligencia emocional al estudio de los factores personales protectores del consumo de alcohol en la adolescencia? [What does emotional intelligence contribute to the study of personal protective factors for alcohol consumption in adolescence?]. *Psicología Educativa*, **27**(1), 27–36. https://doi.org/10.5093/psed2020a13

Grau-López, L. (2014). *Factores predictores de recaída en pacientes adictos y la importancia de la evaluación y tratamiento del insomnio para mantener la abstinencia* [Predictors of relapse in addicted patients and the importance of assessment and treatment of insomnia to maintain abstinence]. [Doctoral dissertation, Universitat Autònoma de Barcelona]. Tesis Doctorals en Xarxa. https://www.tdx.cat/bitstream/handle/10803/283644/lgl1de1.pdf;sequence=2

Grawe, K. (1998). *Psychologische therapie* [Psychological therapy]. Hogrefe.

Hardt, J., & Gerbershagen, H. U. (2001). Cross-validation of the SCL–27: A short psychometric screening instrument for chronic pain patients. *European Journal of Pain*, **5**(2), 187–197. https://doi.org/10.1053/eujp.2001.023

Hernández Lalinde, J. D., Espinosa Castro, F., Rodríguez, J. E., Chacón Rangel, J. G., Toloza Sierra, C. A., Arenas Torrado, M. K., Carrillo Sierra, S. M., & Bermúdez Pirela, V. J. (2018). Sobre el uso adecuado del coeficiente de correlación de Pearson: Definición, propiedades y suposiciones [On the proper use of Pearson's correlation coefficient: Definition, properties and assumptions]. *Archivos Venezolanos de Farmacología y Terapéutica*, **37**(5), 587–595.

Hulbert, C. A., Jennings, T. C., Jackson, H. J., & Chanen, A. M. (2011). Attachment style and schema as predictors of social functioning in youth with borderline features. *Personality and Mental Health*, **5**, 209–221. https://doi.org/10.1002/pmh.169

Jovev, M., & Jackson, H. J. (2004). Early maladaptive schemas in personality disordered individuals. *Journal of Personality Disorders*, **18**(5), 467–478. https://doi.org/10.1521/pedi.18.5.467.51325

Kober, H. (2014). Emotion regulation in substance use disorders. In J. J. Gross (Ed.), *Handbook of emotion regulation* (Vol. **2**, pp. 428–446). The Guilford Press.

Marlatt, G. A., & Gordon, J. R. (1985). *Relapse prevention: Maintenance strategies in the treatment of addictive behaviors*. Guilford Press.

Melgar-Velásquez, V. (2022). *Esquemas disfuncionales tempranos y su relación con el consumo de alcohol en jóvenes universitarios de una universidad privada de Arequipa-Perú* [Early dysfunctional schemas and their relationship with alcohol consumption in young university students from a private university in Arequipa-Peru]. [Doctoral thesis, Universidad Católica de Santa María]. Repositorio de Tesis de la Universidad Católica de Santa María. https://repositorio.ucsm.edu.pe/bitstream/handle/20.500.12920/12053/76.0478.PS.pdf?sequence=1&isAllowed=y

Minda-Mina, J. J. (2021). Self-efficacy and risk of relapse in drug addicts. *Scientific Journal Challenges of Science*, **5**(11), 44–56.

Mineka, S., & Kihlstrom, J. F. (1978). Unpredictable and uncontrollable events: A new perspective on experimental neurosis. *Journal of Abnormal Psychology*, **87**(2), 256–271. http://doi.org/10.1037/0021-843X.87.2.256

Nicol, J., Mak, A. S., Murray, K., Walker, I., & Buckmaster, D. (2020). The relationships between early maladaptive schemas and youth mental health: A systematic review. *Cognitive Therapy and Research*, **44**(6), 715–751. https://doi.org/10.1007/s10608-020-10092-6

Parra, Á., Santos, J., & Serrano, C. (2013). *Re significación del estilo y proyecto de vida en la prevención de recaídas posterior al proceso de rehabilitación por consumo de alcohol* [Re-significance of lifestyle and life project in the prevention of relapse after the alcohol rehabilitation process]. [Doctoral thesis, Universidad de La Sabana]. CORE. https://core.ac.uk/download/pdf/323258473.pdf

Quiñones, A., Ramírez, P., Cid, J., Melipillán, R., Ugarte, C., & Florenzano, R. (2018). Young's schema questionnaire CEY–S3: Psychometric properties in a mixed Chilean sample. *Terapia Psicológica*, **36**(3), 144–155.

Rafaeli, E., Bernstein, D. P., & Young, J. E. (2010). *Schema therapy: Distinctive features*. Routledge. http://doi.org/10.4324/9780203841709

Rodríguez-Martos, A., Navarro, R., Vecino, C., & Pérez, R. (1986). Validación de los cuestionarios KFA (CBA) y CAGE para el diagnóstico del alcoholism [Validation of the KFA and CAGE questionnarires for the diagnosis of alcoholism]. *Drogalcohol*, **11**(4), 132–139.

Roper, L., Dickson, J. M., Tinwell, C., Booth, P. G., & McGuire, J. (2010). Maladaptive cognitive schemas in alcohol dependence: Changes associated

with a brief residential abstinence program. *Cognitive Therapy and Research*, **34**(2), 207–215. https://doi.org/10.1007/s10608-009-9252-z

Rotgers, F., Morgenstern, J., & Walters, S. (2003). *Treating substance abuse theory and technique*. The Guilford Press.

Rubio, G., Jiménez, M., Rodríguez-Jiménez, R., Martínez, I., Ávila, C., Ferre, F., Jiménez-Arriero, M. Á., Ponce, G., & Palomo, T. (2008). The role of behavioral impulsivity in the development of alcohol dependence: A 4-year follow-up study. *Alcoholism: Clinical and Experimental Research*, **32**(9), 1681–1687. https://doi.org/10.1111/j.1530-0277.2008.00746.x

Rubio, G., Jiménez-Arriero, M. A., Ponce, G., & Palomo, T. (2001). Naltrexone versus acamprosate: One year follow-up of alcohol dependence treatment. *Alcohol and Alcoholism*, **36**, 419–425. https://doi.org/10.1093/alcalc/36.5.419

Rubio, G., Marín, M., Arias, F., López-Trabada, J. R., Iribarren, M., Alfonso, S., Prieto, R., Blanco, A., Urosa, B., Montes, V., Jurado, B., Jiménez-Arriero, M. Á., & Rodríguez de Fonseca, F. (2018). Inclusion of alcoholic associations into a public treatment programme for alcoholism improves outcomes during the treatment and continuing care period: A 6-year experience. *Alcohol and Alcoholism*, **53**, 78–88. http://doi.org/10.1093/alcalc/agx078

Rubio Valladolid, G. (2021). *Alcohol, alcoholismo y emociones sociales* [Alcohol, alcoholism and social emotions]. Delta.

Shorey, R. C., Elmquist, J. W., Anderson, S., & Stuart, G. L. (2015). The relationship between early maladaptive schemas, depression, and generalized anxiety among adults seeking residential treatment for substance use disorders. *Journal of Psychoactive Drugs*, **47**(3), 230–238. http://doi.org/10.1080/02791072.2015.1050133

Shorey, R. C., Stuart, G. L., Anderson, S. B., & Strong, D. R. (2013). Changes in early maladaptive schemas after residential treatment for substance use. *Journal of Clinical Psychology*, **69**(8), 912–922. https://doi.org/10.1002/jclp.21968

Shute, R., Maud, M., & McLachlan, A. (2019). The relationship of recalled adverse parenting styles with maladaptive schemas, trait anger, and symptoms of depression and anxiety. *Journal of Affective Disorders*, **259**, 337–348. http://doi.org/10.1016/j.jad.2019.08.048

Thorberg, F. A., & Lyvers, M. (2010). Attachment in relation to affect regulation and interpersonal functioning among substance use disorders in patients. *Addiction Research & Theory*, **18**(4), 464–478. http://doi.org/10.3109/16066350903254783

Watkins, L. E., Franz, M. R., DiLillo, D., Gratz, K. L., & Messman-Moore, T. L. (2015). Does drinking to cope explain links between emotion-driven impulse control difficulties and hazardous drinking? A longitudinal test. *Psychology of Addictive Behaviors*, **29**(4), 875–883. http://doi.org/10.1037/adb0000127

Wells, A. (1997). *Cognitive therapy of anxiety disorders: A practice manual and conceptual guide*. Wiley & Sons.

World Health Organization (WHO). (2018). *Global status report on alcohol and health 2018*. https://www.who.int/publications/i/item/9789241565639

Wittchen, H. U., Jacobi, F., Rehm, J., Gustavsson, M., Svensson, M., Jönsson, B., Olesen, J., Allgulander, C., Alonso, J., Faravelli, C., Fratiglioni, L., Jennum, P., Lieb, R., Maercker, A., van Os, J., Preisig, M., Salvador-Carulla, L., Simon, R., & Steinhausen, H.-C. (2011). The size and burden of mental disorders and other disorders of the brain in Europe 2010. *European Neuropsychopharmacology*, **21**(9), 655–679. https://doi.org/10.1016/j.euroneuro.2011.07.018

Young, J. E. (1999). *Cognitive therapy for personality disorders: A schema-focused approach* (3rd Ed.). Professional Resource Press/Professional Resource Exchange.

Young, J. E., & Klosko, J. E. (2007). Schema therapy. In J. M. Oldham, A. E. Skodol, & D. S. Bender (Eds.), *A treatise on personality disorders* (pp. 289–308). Elsevier Masson.

Young, J. E., Klosko, J. S., & Weishaar, M. E. (2003). *Schema therapy. A practitioner's guide*. The Guilford Press.