

## Early maladaptive schemas and level of depression in alcohol addicts

### Wczesne nieadaptacyjne schematy a poziom depresji u osób uzależnionych od alkoholu

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#### Abstract

**Purpose:** The purpose of the study was to determine whether a link exists between early maladaptive schemas identified by Young et al. and depression in alcoholics. The relationships of schemas with selected alcohol dependence variables and suicidal thoughts in alcoholics were also checked. **Material and methods:** Seventy-seven alcohol addicts participated in the study – 19 women and 58 men. Young Schema Questionnaire (YSQ-S3), Beck's Depression Inventory (BDI) and Michigan Alcoholism Screening Test (MAST) were used. **Results:** Based on the results obtained, 16 out of 18 schemas are positively and statistically correlated with depression among alcoholics. The strongest relationships were noted for emotional deprivation, social isolation/alienation and subjugation. Correlations between the schemas and the severity of addiction and the age of drinking initiation were also found. Differences in the intensity of some schemas occurred between people experiencing suicidal thoughts and people without these thoughts. **Conclusions:** There is a need to consider inclusion therapy focused on changing maladaptive schemas in alcoholics. This is especially true of the schemas of social isolation, emotional deprivation and subjugation. There is also a need for further research in this area.

**Keywords:** alcohol addiction, depression, early maladaptive schemas

#### Streszczenie

**Cel:** Celem przeprowadzonego badania było sprawdzenie, czy istnieje związek między wczesnymi nieadaptacyjnymi schematami wyróżnionymi przez Younga i współpracowników a depresją u osób uzależnionych od alkoholu. Podjęto też próbę odpowiedzi na pytanie o związki schematów z wybranymi zmiennymi dotyczącymi uzależnienia od alkoholu, a także występowaniem tendencji suicydalnych u alkoholików. **Materiał i metody:** W badaniu wzięło udział 77 osób uzależnionych od alkoholu – 19 kobiet oraz 58 mężczyzn. Zastosowano Kwestionariusz Schematów Younga (Young Schema Questionnaire, YSQ-S3), Skalę Depresji Becka (Beck's Depression Inventory, BDI), Michigan Alcoholism Screening Test (MAST). **Wyniki:** Na podstawie otrzymanych wyników można stwierdzić, iż 16 z 18 schematów jest powiązanych dodatnio i istotnie statystycznie z poziomem depresji u osób uzależnionych od alkoholu. Najsilniejsze związki odnotowano w przypadku schematu deprywacji emocjonalnej, izolacji/wyobcowania i podporządkowania. Stwierdzono także związki schematów z głębokością uzależnienia oraz wiekiem rozpoczęcia picia. Różnice w natężeniu niektórych schematów występowały również między osobami doświadczającymi myśli samobójczych i osobami bez tych myśli. **Wnioski:** Należy rozważyć włączenie do terapii odwykowej pracy ukierunkowanej na zmiany destrukcyjnych schematów poznawczych występujących u osób uzależnionych. Dotyczy to zwłaszcza schematu izolacji społecznej, deprywacji emocjonalnej i podporządkowania. Istnieje również potrzeba prowadzenia dalszych badań tego obszaru problemowego.

**Słowa kluczowe:** uzależnienie od alkoholu, depresja, schematy poznawcze

## INTRODUCTION

Numerous studies of alcohol addicts show that in this group coexistence of psychiatric disorders, especially affective, anxiety and personality disorders, is significantly higher than in the general population (Burke et al., 1990; Regier et al., 1990; Weitzman and Kawachi, 2000). US research by Kessler et al. (1996) shows that 24% of men and 49% of women addicted to alcohol suffer from depressive disorders. Other researchers estimate that about 80% of alcohol addicts meet affective disorders criteria (half of them the criteria for depression) at some point in their lives (Shivani et al., 2002). On the other hand, the problem of alcohol dependence or its harmful use in people with bipolar disorder can affect up to 60% of patients (Grabski, 2005). The relationship between alcohol dependence and depression can be seen in two ways. Firstly, according to the theory of self-treatment, people suffering from depression may use alcohol as a remedy for their symptoms. On the other hand, depression may develop as a consequence of prolonged use of alcohol and the progressive degradation of personal life and changes in the central nervous system (Cierpiałkowska, 2010).

Beck's popular theory assumes that people who suffer from depression have negative thoughts about themselves, the world and the future. It is called Beck's cognitive triad. According to Beck, at the basis of the negative thoughts are located core beliefs (or cognitive schemas) and dysfunctional attitudes (Beck, 1967). Jeffrey Young proposed another understanding of cognitive schemas (Young et al., 2014). According to his concept, a schema is a multi-threaded pattern (and not just a belief) present on many levels of an individual's life including the person him-/herself and interpersonal relationships. Maladaptive schemas develop in childhood as a result of deprivation of basic needs. They are maintained throughout life, and largely contribute to the development and maintenance of disorders. Young distinguished the 18 most common maladaptive schemas, which are comprised of 5 domains: disconnection/rejection, impaired autonomy and/or performance, impaired limits, other-directedness, overvigilance/inhibition. The first domain concerns disconnection and rejection, and the schemas that comprise it include emotional deprivation, abandonment, mistrust, social isolation/alienation and defectiveness. People with schemas in this domain have difficulty creating safe and satisfying relationships with other people. They are also convinced that their basic needs, such as safety, love, etc. will not be met. The second domain is associated with impaired autonomy. It includes schemas of failure, dependency, vulnerability to harm or illness, and enmeshment. Individuals with these schemas have difficulty separating themselves from parental figures. Usually, these people in childhood experienced overprotectiveness, or otherwise a complete lack of concern. Third domain refers to other-directedness and includes schemas, such as subjugation, self-sacrifice

and recognition-seeking. People with schemas in this domain are focused on meeting other people's needs, omitting their own. Such an attitude can be dictated by the need for recognition, approval, the maintenance of a close emotional relationship, or the desire to avoid revenge. The fourth domain relates to impaired limits. It includes entitlement and insufficient self-control. Individuals with these schemas are characterised by a lack of sufficient self-discipline. They often have difficulty respecting the rights of others and cooperating. They may also have difficulty meeting their commitments and long-term goals. They are perceived as pampered and selfish. The last domain is overvigilance/inhibition. The domain consists of unrelenting standards, emotional inhibition, negativity and punitiveness. A characteristic feature for those who exhibit these schemas is a lack of spontaneity. They often face excessive demands, even at the expense of their own happiness and fulfilment. Young Schema Questionnaire (YSQ) was developed to examine the schemas (Young et al., 2014). On the basis of his concept, a new form of therapy has been developed, called Schema Focused Therapy (SFT). It is used primarily to treat personality disorders and chronic or recurrent disorders.

A number of studies have been conducted on the relationship of maladaptive schemas with affective and anxiety disorders and, to a lesser extent, alcohol use and addiction. These studies indicate that drinking alcohol can be one way of dealing with maladaptive schemas. This applies in particular to emotional inhibition, emotional deprivation and defectiveness/shame (Ball, 2007; Rafaeli et al., 2010; Roper et al., 2010). Research has also shown that alcoholics are more likely to have higher scores of almost all maladaptive schemas compared to healthy people. The intensity of certain schemas decreases during addiction therapy (i.e. Roper et al., 2010). The association of maladaptive schemas with the depression level in addicts has been scarcely analysed so far. This problem has not been a subject of research in Poland. One of the few available examples is a study by Shorey et al. (2015). The authors have shown a positive association between depression and all the five domains (the strongest correlation with disconnection/rejection and impaired limits) among hospitalised alcoholics.

This study has been aimed at broadening our knowledge of this problem. The analysis of early maladaptive schemas in alcoholics is also justified in relation to treatment of these individuals, as a modified version of SFT designed especially for addicted people is available (Ball and Young, 2000).

## AIM OF THE STUDY

The purpose of the study was to determine whether there is a relationship between early maladaptive schemas and depression in alcoholics. An attempt was also made to answer the question about the relationship of the schemas with selected variables related to alcohol dependence (dependence severity, drinking age, duration of treatment) and suicidal tendencies among alcoholics.

## MATERIAL AND METHODS

### Studied group and procedure

The study involved 77 alcohol addicts – 19 women and 58 men. The subjects were patients of addiction treatment centres, including Addiction Treatment Centre in Czarny Bór and Centre for Prevention and Education in Kielce. The study was anonymous. It was conducted at the turn of 2015/2016. The subjects were diagnosed with an ICD-10 addiction. Participation in the study was voluntary. Tab. 1 shows the demographic details of the study group.

### Instruments

The following research tools were used in the study:

- **The Young Schema Questionnaire Short form 3 (YSQ-S3)**. The questionnaire consists of 90 questions related to both past experience and feelings currently experienced (Young et al., 2014). The original method and its adaptations in many countries are characterised by good psychometric properties. The test is in the process of being adapted to Polish conditions, preliminary work shows its reliability and accuracy to be satisfactory (Oetingen et al., in process).
- **Beck Depression Inventory (BDI)**. BDI is a self-examination questionnaire consisting of 21 items. BDI is a widely used tool for measuring the severity of depression, and numerous studies have proven its reliability and accuracy. BDI has a high internal consistency with alpha Cronbach  $\alpha = 86$  for psychiatric patients and  $\alpha = 81$

		<i>n (%)</i> <i>M ± SD</i>
<b>Sex</b>	<b>Female</b>	19 (25)
	<b>Male</b>	58 (75)
<b>Age</b>		43 ± 12
<b>Education</b>	<b>Elementary</b>	24 (31)
	<b>Vocational</b>	18 (24)
	<b>High school</b>	27 (36)
	<b>Higher</b>	7 (9)
<b>Marital status</b>	<b>Single</b>	22 (29)
	<b>Married</b>	40 (52)
	<b>Divorced</b>	10 (13)
	<b>Widow/widower</b>	3 (4)
<b>Dependents in the family</b>	<b>Yes</b>	44 (57)
	<b>No</b>	33 (43)
<b>Drinking age</b>		28 ± 12
<b>Length of treatment (in years)</b>		3.3 ± 6.4

Source: elaboration own.

Tab. 1. Characteristics of the studied group

in healthy population (Beck et al., 1996). The Polish adaptation was carried out by Parnowski and Jernajczyk (1977). Normal results are below 11 points, average intensity of depression is between 12–25 points, 26 and more points indicate severe depression.

- In addition, the **Michigan Alcoholism Screening Test (MAST)** was used. MAST is one of the most commonly used tools for assessing the severity of alcohol dependence. The questionnaire consists of 24 questions. It was constructed as a screening tool allowing to quick-

<b>Domains</b>	<b>Schemas</b>	<b>BDI</b>	<b>MAST</b>	<b>Drinking age</b>	<b>Length of treatment</b>
I. Disconnection/Rejection	Emotional deprivation	0.51**	0.05	-0.15	0.09
	Abandonment	0.35**	0.05	-0.02	-0.03
	Mistrust	0.35**	0.29**	-0.04	0.12
	Social isolation/alienation	0.51**	0.30**	-0.38**	0.18
	Defectiveness	0.48**	0.26**	-0.18	0.16
II. Impaired Autonomy	Failure	0.46**	0.14	-0.28*	0.24*
	Dependence	0.38**	0.02	-0.33**	0.16
	Vulnerability to harm or illness	0.44**	0.14	-0.10	0.10
	Enmeshment	0.24*	0.04	-0.16	0.17
III. Other-directedness	Subjugation	0.51**	0.09	-0.10	0.07
	Self-sacrifice	0.16	-0.19	0.23*	-0.04
	Recognition-seeking	0.07	-0.12	-0.04	0.10
IV. Impaired limits	Entitlement	0.25*	-0.04	0.17	-0.07
	Insufficient self-control	0.31**	-0.01	0.06	0.02
V. Overvigilance/inhibition	Unrelenting standards	0.28*	-0.01	-0.08	-0.11
	Emotional inhibition	0.46**	0.04	0.21	-0.16
	Negativity	0.39**	-0.02	-0.04	-0.02
	Punitiveness	0.34**	-0.06	0.11	-0.06

Source: elaboration own.  
\* Correlation significant at 0.05.  
\*\* Correlation significant at 0.01.

Tab. 2. Pearson correlation between early maladaptive schemas, depression and alcohol dependency variables

ly and accurately assess the degree of addiction and recognize life problems caused by addiction. MAST can be used both for scientific purposes and in clinical practice (Selzer, 1971). The Polish adaptation of the method by Falicki et al. (1986) was applied. Five or more points indicate that a given person meets the alcoholism criteria. There was also a questionnaire containing sociodemographic questions and data about alcohol drinking/treatment.

## RESULTS

In the first step, the average outcomes in the questionnaires used were calculated. The average score in the BDI test was 15.81 ( $SD = 9.90$ ). The mean score for women ( $M = 20.74$ ,  $SD = 8.70$ ) was statistically significantly higher ( $t = 2.59$ ,  $p < 0.05$ ). Forty-eight people (62%) achieved scores above 11 points, which may indicate depression in these individuals. The average score in the MAST test is 36.6 ( $SD = 13.37$ ). All subjects received scores of more than 5 points, thus indicating addiction. In the case of the Young Schema Questionnaire, the highest scores were obtained for abandonment ( $M = 16.97$ ,  $SD = 5.93$ ), insufficient self-control ( $M = 16.70$ ,  $SD = 5.79$ ), recognition-seeking ( $M = 16.55$ ,  $SD = 6.16$ ) and self-sacrifice ( $M = 16.31$ ,  $SD = 5.03$ ). The lowest score was obtained in enmeshment ( $M = 10.95$ ,  $SD = 4.25$ ). There was a number of statistically significant differences in mean schemas for men and women

(women had higher scores), but due to the small women sample size, gender division was not included in further analyses.

Pearson correlation was used to examine the relationship between early maladaptive schemas and depression and alcohol dependency variables (Tab. 2).

Based on the results obtained, 16 out of 18 schemas are positively and statistically associated with depression. The strongest relationships were noted in the case of emotional deprivation, social isolation/alienation and subjugation. On the other hand, the severity of dependence was positively correlated with 3 schemas in the domain of disconnection and rejection. Four schemas were correlated with the age of drinking initiation, interestingly including one positive correlation (self-sacrifice). Only one schemas (failure) showed a (positive) relationship with the length of treatment.

In the next step, we identified 3 groups of people – with depression within a normal range (29 persons, 38% – group 1), a range of 12–25 points indicating average depression (30 persons, 39% – group 2), and with above 26 points – this outcome indicated severe depression (18 people, 23% – group 3).

The groups were compared in terms of the severity of the schemas as well as the variables related to dependence. For this purpose, we used a one-way analysis of variance (ANOVA). The results have been presented in Tab. 3.

Variable	1. Lack of depression <i>n</i> = 29		2. Average depression <i>n</i> = 30		3. Severe depression <i>n</i> = 18		<i>F</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Drinking age	29.00	13.48	29.50	13.07	24.94	9.23	0.83	0.43
Length of treatment (in years)	1.48	1.99	4.57	8.97	4.11	5.35	1.96	0.14
MAST	34.83	13.83	36.97	12.35	38.83	14.60	0.51	0.602
Emotional deprivation	10.57	4.84	14.29	5.26	19.05	6.91	13.56	0.001abc*
Abandonment	14.24	5.35	18.07	4.91	19.56	6.88	5.98	0.01bc*
Mistrust	11.38	5.84	13.83	4.96	15.72	5.93	3.61	0.03b*
Social isolation/alienation	10.03	4.71	13.03	5.55	17.28	6.71	13.24	0.001abc*
Defectiveness	9.03	3.94	12.20	4.97	15.11	6.56	8.31	0.001bc*
Failure	9.66	3.09	13.30	4.62	14.72	6.18	9.62	0.001bc*
Dependence	10.45	4.63	13.03	4.98	14.72	5.78	4.29	0.02b*
Vulnerability to harm or illness	10.07	4.95	13.73	4.47	15.56	5.67	7.74	0.001bc*
Enmeshment	8.72	3.79	12.07	4.84	11.39	4.38	4.66	0.02c*
Subjugation	10.34	4.25	13.47	4.74	16.22	5.31	9.16	0.001abc*
Self-sacrifice	15.97	4.61	17.23	5.12	18.06	6.48	0.94	0.39
Recognition-seeking	15.34	5.01	17.13	6.96	16.06	6.72	0.61	0.54
Entitlement	13.59	4.47	14.33	4.36	15.94	5.02	1.49	0.23
Insufficient self-control	13.14	5.06	14.80	5.54	17.00	6.76	2.58	0.08
Unrelenting standards	13.34	5.24	14.83	4.05	16.39	5.26	2.26	0.11
Emotional inhibition	11.76	4.59	13.10	5.73	18.11	5.44	8.50	0.001b*
Negativity	12.66	5.80	16.43	5.37	19.22	6.88	7.27	0.001bc*
Punitiveness	13.83	5.13	17.13	4.78	17.44	4.77	4.41	0.02bc*

Source: elaboration own.

\* Tukey's post hoc test: a –  $p < 0.05$  group 3 vs. 2, b –  $p < 0.05$  group 3 vs. 1, c –  $p < 0.05$  group 2 vs. 1.

168 Tab. 3. Comparison of mean scores in given groups

Variable	People without suicidal thoughts (n = 58)		People with suicidal thoughts (n = 19)		t	p
	M	SD	M	SD		
Emotional deprivation	10.57	4.81	16.23	6.26	-4.10	0.001
Social isolation/alienation	9.81	4.78	15.30	6.31	-3.87	0.001
Defectiveness	10.91	4.65	14.05	7.19	-2.30	0.02
Subjugation	12.17	4.78	15.26	5.74	-2.16	0.02
Emotional inhibition	11.28	4.42	15.88	5.74	-3.47	0.001
Punitiveness	14.07	5.08	17.47	4.31	-3.07	0.01

Source: elaboration own.

Tab. 4. Comparison of mean scores among people with suicidal thoughts and those without suicidal thoughts – according to selected schemas

As Tab. 3 shows, there are statistically significant differences in most of the analysed schemas. People with BDI scores indicating severe depression compared with those without depression received higher scores in 12 out of 18 maladaptive schemas. Emotional deprivation, social isolation and subjugation were the most sensitive to differences in depression, where significant differences occurred between all analysed groups. Interestingly, addictive variables did not differentiate the groups.

Individuals were also asked about the current occurrence of suicidal thoughts. The comparison of those who reported such thoughts and those who did not are located in Tab. 4. The groups did not differ as regards the data related to alcohol dependence but only in some schemas. Tab. 4 shows only those six schemas that were statistically significant among the groups.

## DISCUSSION

The purpose of this study was to answer the question about a potential association of early maladaptive schemas identified by Young et al. (2014) with the depression level in alcohol addicts. It has been shown that schemas included in 4 out of 5 domains show statistically significant associations with the depression level in this group. The strongest relationships (correlation above 0.5) were related to emotional deprivation and social isolation (disconnection and rejection domain) and subjugation (other-directedness). Only slightly weaker associations with depression were reported in the case of defectiveness and failure. This means that the stronger the belief in alcoholics that their needs of bonding and support will never be satisfied (emotional deprivation), the greater the feeling of their own mismatch to society (social isolation), and the greater belief that they need to surrender to others in order to avoid rejection (subjugation), the higher the level of depression. A constant feeling of being worse (defectiveness) and a belief that the efforts made will not produce results (failure) also play an important role. Interestingly, the feeling of isolation was the only schema that showed positive associations not only with depression, but also with the severity of addiction. Also the significant relationship of this schema with the age of drinking initiation (the more intense

the schema of social isolation, the lower the age of drinking initiation) is also important. In addition, isolation schema set apart people with current suicidal thoughts from those without them. It seems that this schema and work on its healing (according to Beck's concept, the schemas can be healed, their total change is often impossible) should be paid particular attention in the treatment of alcoholics, and should also be included in the study of factors related to recurrent alcohol use. According to Young et al. (2014), people with social isolation schema can either continually avoid contact with others, or adjust to the group by surrendering to it completely without expressing their own opinion. It should be acknowledged that such coping strategies can lead to both depression and drinking. It is also worth noting that research has shown social isolation to be negatively correlated with mental health and well-being (Almedom and Glandon, 2008; Bassett and Moore, 2013; De Silva et al., 2005) and positively with depression (Tomita and Burns, 2013) and suicide (Helliwell, 2007). It is also indicated that social isolation is a frequent cause of alcohol dependence (Weitzman and Kawachi, 2000). Traditional therapy attempts to break through the isolation of patients by inducing them to participate in AA meetings, but whether such participation contributes to a change of deep-rooted beliefs about their own distinctiveness is a question that requires further investigation.

Out of other significant schema, emotional deprivation and subjugation (strong relationships with depression and suicidal thoughts of both schemas) should be emphasized. Young et al. (2014) report that a person with a high intensity of the first schema may be afraid of harm, and avoid close relationships, while someone with a strong subjugation schema may succumb to the environment and everything it expects and asks of him/her, or on the contrary – rebel against the environment and refuse any help. Such attitudes often lead to anger overlap, which is also not expressed explicitly, but in the form of outbursts of anger, passive tendencies, acting out behaviours, and abuse of addictive substances (Young et al., 2014). It therefore seems obvious that also these ways of coping with schemas can show strong associations with mood lowering and interruption of therapy and abstinence. These relationships, however, require confirmation in future studies.

The question arises whether our correlations are specific to addicts, or are common to all cases of depression. Analysis of studies conducted in different groups of depressed people indicates a strong correlation of depression with schemas of emotional deprivation, social isolation, defectiveness, failure, subjugation and emotional inhibition (i.e. Cooper et al., 2005; Eberhart et al., 2011; Harris and Curtin, 2002; McGinn et al., 2005). These relationships are similar to those demonstrated in the present study, which suggests a similar background of depression in different patient groups (including alcoholics). However, if we take into account the documented association of depression with alcohol craving, interruption of therapy and return to drinking (i.e. Gamble et al., 2010; Greenfield et al., 1998; Witkiewitz et al., 2011), the resulting relationships gain new meaning – the intensity of the maladaptive schemas can be both a predictor and, by association with depression, mediator or moderator of these unfavourable phenomena. It opens a field for further research.

Mącik and Shchehelska (2015) conducted a study on the relationship of early maladaptive schemas with well-being and a sense of life i.a. among people with depression. To investigate existential attitudes, such as purpose, internal coherence, accepting their own mortality, controlling their lives, existential emptiness and setting goals, they used Life Attitudes Profile – Revised (LAP-R) in Polish adaptation by Klamut (2010). Their research provided results that are, in a sense, consistent with those obtained in this study. Namely, in people with depression, the attitudes mentioned above are negatively correlated with almost all maladaptive schemas, most strongly with emotional deprivation, vulnerability to harm and subjugation. It can be assumed that alcohol addicts are also likely to exhibit negative life attitudes, such as a lack of purpose, incoherence, a lack of control, disregard for their own mortality, and experience of inner emptiness (cf. Mellibruda and Sobolewska-Mellibruda, 2006). Maladaptive schemas and life attitudes can lead to both depression and alcohol consumption, but verification of these relationships requires further research.

The presented study has its limitations. First of all, women were under-represented in the studied group, hence the analysis was conducted without the gender difference. In the future, it would be worth analysing these results by gender, as there are studies showing the differences in the level of schemas in addicted women and men (Brotchie et al., 2004; Shorey et al., 2015). In addition, the study was conducted at the beginning of therapy, hence many patients had a higher level of depression. In the future, it would be worth checking whether similar correlations also occur at the end of treatment, and whether the change occurring during therapy affects the schemas.

Finally, one more aspect needs pointing out – according to Young et al. (2014), maladaptive schemas are persistent and difficult to change, and their activation, which results from the experiences of difficult, stressful events,

can lead to psychopathological symptoms. At the same time, destructive schemas, even if not activated, contribute to the emergence of interpersonal difficulties and reception of neutral situations as stressful. For these reasons, investigating this area among alcoholics can contribute a substantial body of knowledge about the recurrence of drinking, the tendency to “swap” addictions, and the difficulty of pursuing a satisfying life.

## CONCLUSIONS

1. Sixteen out of 18 schemas are positively and statistically associated with depression among alcoholics. The strongest relationships were noted for emotional deprivation, social isolation/alienation and subjugation.
2. There is a need to consider inclusion therapy focused on changing maladaptive schemas in alcoholics. There is also a need for further research in this area.

### Conflict of interest

*The authors do not report any financial or personal relationships with other persons or organizations that could adversely affect the content of the publication and claim rights thereto.*

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