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## Treatment Motivation Factor Analysis of Patients with Substance Use Disorders In Latvia

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### Abstract

Motivation plays a significant role in treatment of any illness especially for the patients with addiction problems, moreover motivation is a factor which influences patients to look for treatment possibilities, follow instructions of the treatment and particularly make prosperous long term changes. The purpose of this study is to examine the treatment motivation; stages of motivational changes and influencing factors of motivation among patients with substance use disorders in Latvia. Following research tools were used: a demographic questionnaire developed by the study authors, SOCRATES 8A/ 8D questionnaires (Miller & Tonigan, 1996) and "Treatment motivation questionnaire" (Ryan, Plant & O'Malley, 1995). Results of motivation scores in this population tended to be quite high, particularly to Internal Motivation and Help Seeking scale, furthermore average for Internal Reasons and Help Seeking increased during the treatment statistically significantly.

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### 1. Introduction

Motivation plays a significant role in treatment of any illness especially for the patients with addiction problems, moreover motivation is a factor which influences patients to look for treatment possibilities, follow instructions of the treatment and particularly make prosperous long term changes. The purpose of this study is to examine the treatment motivation; stages of motivational changes and influencing factors of motivation among patients with substance use disorders in Latvia.

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## 2. Problem statement

Motivation plays a significant role in treatment of any illness especially for the patients with addiction problems. Motivation is a factor which influences patients to look for treatment possibilities, follow instructions of the treatment and particularly make prosperous long term changes. (DiClemente, et. all.,1997)

Motivation is a first meaningful step towards changes in behaviour and plays one of the central roles in addiction treatment; moreover it is considered as an important part in the outcome of the treatment. It is known that patient motivation for reconsidering their problematic behaviour is not a synonymous with motivation to participate in the treatment.

Although for many years motivation was considered as precondition for successful treatment in many disorders, including addiction, researchers only relatively recently started empirically approving the role of motivation in this process. Explorers have examined a broad range of reasons for avoiding or seeking assistance for the problem solution processes. (Cahill, Adinoff, Hosig, Muller and Pulliam, 2003)

One of the fundamental theories describes two causal reasons of motivation – internal and external motivation. (De Charms, 1968; Heider, 1958; Ryan,Plant and O'Malley, 1995). People with internal motivation understand causality and tend to act on their own choosing, mainly based on their values and beliefs, whereas the people with external motivation understand it differently and tend to view themselves as pressured by external forces, such as interpersonal, occupational, scholastic, medical and legal pressures.

Another theory called Transtheoretical Model of Change appears to be the best candidate for further study as it represents the combination of many behaviour change models that came before it (i.e., the Health Belief Model, the Theory of Reasoned Action, and Social Learning Theory). (Whitelaw, Baldwin, Bunton, et al.,2000)

This Transtheoretical Model is a framework that depicts changes in behaviour through three major constructs: Stages, Levels and Processes of Change. (Prochaska, DiClemente and Norcross, 1992;1994;1997)

According to the Transtheoretical Model of behaviour change, individuals addicted to psychotropic drugs typically cycle through a sequence of five discrete stages (precontemplation, contemplation, preparation, action and maintenance) before achieving sustained long-term abstinence and moderation, respectively. As applied to drug abuse and dependence, the Stages of Change are: (1)Precontemplation: the individual does not recognize problems arising from drug use and is not considering changes, (2) Contemplation: the individual recognizes problems arising from drug use and is considering changes but remains ambivalent, (3) Preparation: the individual plans to change behaviour soon, (4) Action: the individual makes an overt behaviour change (e.g., stops using drugs or enters drug treatment) and (5) Maintenance: the individual works to prevent relapse and to consolidate steps taken at the Action stage. (Demmel, Beck, Richter, Reker and Eur Addict Res 2004)

There are several tools developed in order to assess patient readiness to change their behaviour towards addiction. Many studies have been carried out about the motivation of patients with substance use disorders (SUD) where the results showed that individuals with greater intrinsic motivation tend to demonstrate lower rates of dropout and better outcomes (Ryan, Plant, O'Malley, 1995). While, extrinsic motivators may increase entry for treatment and short-term retention, but do not appear to improve sustained outcome. (Stark, 1992)

In recognition of the need for conceptual and definitional coherence, Ryan et al. (1995) developed the treatment Motivation Questionnaire (TMQ) based on self-determination theory. (Deci and Ryan, 1987) This instrument was designed to determine four domains of motivation: internal perceived locus of causality, external perceived locus of causality, interpersonal help-seeking and nonconfidence in treatment.( Melissa, Cahill, Adinoff, Hosig, Kelle Muller and Pulliam,2003)

Clinically readiness to change is regarded as a dynamic factor that can be enhanced through appropriate intervention. Knowledge of a patient's current stage of change can ensure information to treatment providers regarding treatment planning. (Mitchell, Angelone, 2006)

Identifying a patient's stage of readiness may increase treatment effectiveness by focusing on an intervention appropriate to the patient's stage of change or focusing on increasing a patient's readiness by advancing them to the succeeding stage in the change process. Series of motivational interventions have been developed to relieve the treatment of substance abuses encouraging patient's movements from one stage of change to the next one. (Miller and Rollnick, 2002).

### 3. Purpose of Study

To examine the treatment motivation; stages of motivational changes and influencing factors of motivation among Patients with substance use disorders in Latvia

### 4. Methods

The study was performed in all Latvia's institutions that realize the "28 day program" (Minnesota model). Such tools were used: a demographic questionnaire developed by the study authors, SOCRATES 8A/ 8D questionnaires (Miller & Tonigan, 1996) and "Treatment motivation questionnaire" (Ryan, Plant & O'Malley, 1995). At the end of the survey, responses were categorized in three parts: recognition of substance use disorders, ambivalence and taking steps to get rid of the addiction. Results of "Treatment motivation questionnaire" were divided into 4 subscales: external reasons, internal reasons, confidence and help seeking. The study was carried out in 2 stages - when the patient joined the department, he/she received the above mentioned research tools. After the treatment, depending on their pathology, the patient received and filled SOCRATES 8A or SOCRATES 8D and treatment motivational survey. The study received permission from the Ethics Committee. The Socrates questionnaire data were processed in SPSS program and was found that the Cronbach's alpha for the questionnaire was 0.71 thus meaning that the questionnaire is consistent. In order to evaluate the internal consistency of the motivation survey, it was found that Cronbach's alpha value was 0.73, meaning that the research tool is consistent. Data were processed using ANOVA in SPSS program.

### 5. Results

In this research 108 SUD patients were asked to complete questionnaires. Participants were aged from 17 to 67;  $M = 41.03$ ;  $SD = 11.80$ ; males – 61.8%; females – 38.2%. It was found that 16.8% of patients have primary education, secondary education - 34.6% of patients, professional secondary education- 38.6%, 10.0% of patients have higher education. Only 29.7% of patients are employed, whereas others 70.3% – are unemployed.

Table 1. Factors of the Stages of Change Readiness and Treatment Eagerness Scale (SOCRATES) in dynamic 28 Days program

Factors	Before (n=99) (M±SD)	After(n=87) (M±SD)	P value
Recognition	32.25±4.38	33.65±2.24	0.013
Ambivalence	17.06±2.82	16.88±3.16	0.925
Taking Steps	33.78±5.41	36.29±3.65	0.000

SOCRATES questionnaire data analysis (Table 1) shows a statistically significant increase in the Recognition scale ( $M=33.65$ ;  $SD=2.24$ ;  $p=0,013$ ) and in the Taking steps scale ( $M=36.29$ ;  $SD=3.65$ ;  $p=0.000$ ) after the treatment of Minnesota Model (before the treatment results were  $M=32.14$ ;  $SD=4.63$  and  $M=33.60$ ;  $SD=5.57$ ). There are no statistically significant changes in the Ambivalence scale.

Table 2. Mean values of the subscales in Treatment Motivation Questionnaire before (n= 99) and after (n= 87) therapy

Factors	Before (M±SD)	After (M±SD)	P value
External reasons	3.71±1.33	3.91±1,42	0.852
Internal reasons	6.42±0.65	6.53±0.43	0.046

Confidence	5.20±1.74	4.86±1.83	0.868
Help seeking	6.18±1.07	6.47±0.92	0.001

Treatment Motivation Questionnaire results (Table 2) demonstrate a statistically significant difference in two of the treatment scales before and after the therapy. After treatment the mean indicators increase in the Internal reasons scale ( $M=6.53$ ;  $SD=0.43$ ;  $p=0.046$ )- before treatment ( $M=6.42$ ;  $SD=0.65$ ), and Help seeking scale ( $M=6.47$ ;  $SD=0.92$ ;  $p=0.001$ ) whereas before treatment ( $M=6.18$ ;  $SD=1.07$ ).

Table 3. Re-treatment scores of Stages of Change Readiness and Treatment Eagerness Scale (SOCRATES) of patients with completed Minnesota program and with dropouts from Minnesota program

Scale	Dropouts, n=31	Completed treatment, n=70
Recognition	32.50 ± 2.94	32.15 ± 4.85
Ambivalence	17.29 ± 2.59	16.97 ± 2.92
Taking Steps	34.39 ± 4.74	33.54 ± 5.66

Table 4. Pre-treatment motivation scores (TMQ) for dropouts and completers

Scale	Dropouts n=31	Completed treatment n=70
External reasons	3,25 ± 1,58	3,92 ± 1,25
Internal reasons	6,28 ± 0,85	6,43 ± 0,67
Confidence	5,77 ± 1,47	4,93 ± 1,84
Help seeking	6,18 ± 1,01	6,15 ± 1,14

## 6. Discussion

It is necessary to take into account that study participants were patients of an voluntary inpatient psychosocial treatment program (Minnesota), meaning that even a wish to take part in such treatment could be regarded as a kind of motivation. After the treatment statistically significant results were observed within the average for Recognition and Taking Steps scale. It corresponds to other researches in this field. Motivation scores in this population tended to be quite high, particularly in regard to internal motivation and help-seeking scale, mean scores for both scales being above 6 on a seven-point scale. In the Treatment motivation questionnaire (TMQ), we can see that average for Internal Reasons and Help Seeking increased statistically significantly. This can be attributed to the impact of the Minnesota model(28 Day program) to patient reduction of denial, which contributes their recognition of addiction as well as development of observational Ego parts that contribute to the recognition of internal reasons, leading to an increased willingness to seek help. This double focus - personal responsibility, recovery, together with the need to accept help - provides an effective trend, not only the transfer of responsibility for the disease from the patient's doctor. Minnesota model uses motivational interviewing, a patient-centred and directive therapeutic style that helps the patient to investigate and resolve the inconsistencies to improve his willingness to change their behaviour. Minnesota model group therapy is used to reduce the denial of the Ego defence mechanism in order to promote the formation of the motivation to teach and build relationships with other people, to express feelings and attitude- to promote actions that are difficult for addicts, because they are generally described as passive, dependent, emotionally immature individuals. Patients are educated by listening to lectures about addiction, relapse process, communication and the role of family. In this study small changes were noted in all four motivation domains after participation in the Minnesota model according to TMQ. It is possible that Minnesota model is a standard treatment in order to change behaviour of patients and is not so specific in generation of motivation. Furthermore program is probably too short to provide changes in one's motivation. It should be noted that Internal Motivation and Interpersonal Help Seeking domains did not show high scores even before entering the program, which could be related to the fact that Minnesota program is an voluntary inpatient psychosocial treatment program. These findings correspond to other researches. It is important to emphasize that most of the data were obtained through self-report measures and therefore may have included conscious or unconscious biases. Since the main tools for this researched were questionnaires, it could be possible that patients wanted to seem better by reporting they were highly motivated for treatment. Such problems are common when using self-report measures.

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