

The Relationship between Motivation and Mental Health among Drug Addicts in Recovery

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Abstract: To discuss the relationship between drug rehabilitation motivation and mental health of drug addicts. The Motivation for Drug Rehabilitation Scale for Compulsory Drug Rehabilitation and the Self-Reported Health Measurement Scale (SRHMS) were chosen to measure 99 drug rehabilitation patients in a drug rehabilitation center, and 98 valid questionnaires were obtained. Drug rehabilitation motivation differed in terms of occupation ($P < 0.05$), and the motivation of self-employed mandatory drug rehabilitants was higher than that of those who were unemployed. Mental health differed in work situation ($P < 0.05$), and the mental health of drug addicts with work was higher than that of drug addicts without work. (iii) Motivation for drug rehabilitation was significantly correlated with SRHMS ($P < 0.01$); sub-dimensions remorsefulness, cognitive adjustment, external boosting, and conviction were significantly correlated with SRHMS ($P < 0.01$), and external boosting was correlated with SRHMS ($P < 0.05$). There is a correlation between motivation and mental health among drug addicts, and cognitive adjustment and conviction have a positive predictive effect on mental health.

Keywords: Recovering addicts; Motivation to quit; Mental health

1. Introduction

At present, the global drug problem is deteriorating. Drugs not only cause both physical and mental damage to individuals, but also induce criminal activities such as theft, robbery and fraud, which in jeopardize society.

To summarize, this study focuses on the relationship between motivation and mental health of drug addicts through the Drug Abuse Motivation Scale (DAMS) and the Self-Reported Health Measurement Scale (SRHMS), which on the one hand, can provide reference suggestions for drug addicts to return to the society and resume a normal life, and on the other hand, it can contribute to the process of anti-drug abuse so as to make the society more prosperous and stable. The relationship between motivation and mental health is worth exploring as drug addiction motivation facilitates the transition from an addicted state to a normal human state, but mental health problems are prevalent among drug addicts.

The fundamental purpose of drug rehabilitation is to enable drug addicts to quit drug addiction, and drug motivation plays an extremely important role in the process of quitting drug addiction. Numerous studies have shown that motivation has a significant impact on the treatment of drug addiction, and studies by Opsal Anne et al. and Bina Alid et al. have shown that motivation is an important factor in treatment of drug abuse^{[1][2]}. Studies on the mental health of drug users in several regions have pointed out that the mental health of drug users is generally lower than the national norm^{[3][4]}. Moreover, after entering drug rehabilitation, isolated drug users are found to have more prominent mental health problems, with depression, obsessive-compulsive, and somatization factors being more significant^[5]. Drug rehabilitation motivation will promote drug addicts to change from addiction state to normal state, but the mental health problems of drug addicts are generally problematic, then the relationship between drug rehabilitation motivation and mental health is worth exploring.

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2. Research design

2.1 Research Purpose

In the process of drug rehabilitation, motivation plays an important role in the process of drug rehabilitation, and because the body of the rehabilitated person has already suffered from the serious erosion of drugs, and the deeper the degree of addiction, the worse the state of physical health and mental health of the rehabilitated person. Based on the fact that there are few studies on the relationship between motivation and mental health of drug addicts, and that motivation and mental health of drug addicts are the key areas of research, the present study attempts to investigate the relationship between motivation and mental health of drug addicts. Therefore, this study attempts to study the relationship between motivation and mental health of drug addicts, to find a new research angle to try to put forward some feasible suggestions for the process of drug rehabilitation, and to contribute to the normal return of drug addicts to society.

2.2 Hypothesis

Hypothesis 1: There is a difference in the motivation of recovering drug addicts with respect to demographic variables.

Hypothesis 2: There is a difference in the mental health of drug addicts in terms of demographic variables.

Hypothesis 3: There is a significant correlation between motivation to quit drugs and mental health among drug addicts, and motivation to quit drugs is positively correlated with mental health.

Hypothesis 4: There is a significant predictive effect of motivation to quit drugs on mental health among drug addicts.

2.3 Subjects

In this study, 99 male subjects were selected from drug rehabilitation centers to fill out the questionnaire, and during data analysis, 98 valid questionnaires and 1 invalid questionnaire were obtained, with a valid questionnaire recovery rate of 98.98%. The age distribution of the subjects was between 24-64 years old, with an average age of 37.33 ± 8.03 years old.

2.4 Instruments and materials

Motivation Scale for Addiction Recovery. This is a 4-point scale with 16 questions divided into four dimensions, remorse, cognitive adjustment, external facilitators, and conviction. Each question has four options that correspond to a certain score, and the distribution of scores ranges from one to four. The level of motivation for drug treatment was based on the subjects' scores on each dimension and the total score for each dimension. Remorse, the intensity of the drug addicts' remorse due to the harm caused by drug use. Cognitive adjustment, the change from positive to negative perceptions of "drugs" and "drug circles". Conviction, the extent to which the recovering addicts are convinced that they can get rid of drugs. Total Scale Score, the strength of the overall motivation of drug addicts to quit drugs.

The Self-Rated Health Measurement Scale (SRHMS) is a self-assessment scale consisting of three rating subscales, namely, self-assessed physical health, mental health and social health, which is used to measure the health of various groups of people over 14 years of age (especially the general population); it is more intuitive, comprehensive and accurate in reflecting an individual's health status from the perspective of quantification and is easy to administer and operate. Therefore, SRHMS can be widely used in many fields and is an effective means of health measurement. The scale is an 11-point

scale consisting of 10 dimensions and 48 entries, which involves a total of three aspects of an individual's physical, mental and social health, of which entries 1 to 18 comprise the self-tested physical health assessment subscale, entries 19 to 34 comprise the self-tested mental health assessment subscale, entries 35 to 47 comprise the self-tested social health assessment subscale, and the remaining 18, 34, 47 and 48 entries comprise the overall self-tested health assessment subscale. The remaining 18, 34, 47, and 48 items comprise the overall health self-assessment dimension and are not included in the calculation of the subscale and scale totals. If the total score is below 110 and the scores of all three scales are on the low side, it means that the subject's physical and mental health is low and needs additional counseling or enhanced counseling; if the total score is between 110 and 220 and the scores of the three scales are on the medium side, it means that the subject is in sub-healthy condition physically and psychologically, and needs to be paid more attention to this aspect; if there is a subscale with particularly low scores, it needs special attention; and if there is a subscale with particularly low scores, it needs to be paid more attention to this aspect. If the total score is between 220-330 and the scores of the three rating subscales are relatively average, it means that the physical and mental health of the subject is good and needs to be maintained; if there are lower scores on the subscales, it needs to be paid more attention to; if the total score is more than 330 and the scores of the three rating subscales are average, it means that the physical and mental health of the subject is very good.

3. Result

3.1 Data analysis

The data from the paper questionnaire were entered into the computer, and the statistical software SPSS 24.0 was used to filter the acquired data accordingly and then further do the descriptive analysis, independent samples t-test, correlation analysis, analysis of variance, and regression analysis.

3.2 A Descriptive Analysis of Demographics, Motivation, and SRHMS of Drug Addicts

In order to understand the basic demographic information of the subjects, a descriptive analysis of the demographics of the drug addicts was conducted, as all the subjects in this study were male and then combined with the age range of the subjects in the drug rehab center, which is in line with the division of young adulthood (17-35 years old) and middle age (36-65 years old) by Lin Chongde in *Developmental Psychology* [32]. Therefore, the motivation and mental health of drug addicts were interpreted after grouping them according to their stage of psychological development. Based on the subject data's own characteristics, the occupation before entering the hospital was divided into three main categories, working, self-employed, and unemployed, and the presence of children was divided into two categories, with and without. (see Table 1)

Table 1: Demographics of Drug Addicts

Category	Items	Number of People	Percentage(%)
Years	Youth Group(25-35 years)	55	56.1
	Middle-aged group(35-64 years)	43	43.9
Education Attainment	Secondary School	21	21.4
	Junior High School	68	69.4
	High School or Junior College	9	9.2
Any Children	Yes	22	22.4
	No	76	77.6
Marital Status	Unmarried	23	23.4
	Married	39	39.8
	Divorced	36	36.7
Previous Occupation	Work	32	32.7
	Self-employed	49	50.0
	Unemployed	17	17.3
Years of Abuse	Less than 2 years	20	20.4
	3-5 years	53	54.1
	6-10 years	21	21.4
	More than 10 years	4	4.1
Number of Detoxifications	Once	77	78.6
	Twice	17	17.3
	Three Times	4	4.1

Data from the questionnaires of the drug addicts were analyzed descriptively, and the mean and standard deviation of the dimensions, subscales, and total scores of the scale were calculated for the

Motivation for Addiction Recovery Scale and the Self-Assessed Health Rating Scale. The drug addicts scored (51.46±6.00) on motivation for drug rehabilitation, and the four sub-dimension scores, from highest to lowest, were: cognitive adjustment (16.73±2.58), remorsefulness (13.99±1.91), external facilitation (12.67±1.99), and conviction (8.20±1.60). The total score of the drug addicts on SRHMS was (366.80±71.65) and the subscale scores in descending order were Physical Health (137.24±28.52), Mental Health (111.52±24.46) and Social Health (86.95±19.92). (see Table 2)

Table 2: A Descriptive Analysis of Motivation to Quit, SRHMS

Dimension	M±SD	Items
Remorse	13.99±1.91	4
Cognitive Adaptation	16.73±2.58	5
External Boosts	12.67±1.99	4
Sense of Certainty	8.20±1.60	3
Total Score for Motivation to Quit	51.46±6.00	16
Physical Symptoms and Organ Function	49.40±13.06	7
Functions for Daily Living	45.52±8.48	5
Physical Activity Function	42.33±10.40	5
Positive Emotions	38.98±9.07	5
Psychological Symptoms and Negative Emotions	49.81±14.12	7
Cognitive Function	22.72±5.74	3
Role Activities and Social Adaptation	32.06±6.87	4
Social Resources and Social Contacts	35.86±9.47	5
Social Support	19.03±6.68	3
Self-assessment of Physical Health Subscale	137.24±28.52	17
Mental Health Subscale	111.52±24.46	15
Self-assessment Social Health Subscale	86.95±19.92	12
Total Score for SRHMS	335.71±65.46	44

3.3 Correlational Analysis of Motivation, SRHMS Among Drug Addicts in Recovery

Through the correlation analysis of the dimensions of drug addiction motivation, the total score and the subscales of SRHMS with the total score, it was found that: i. The results of the correlation analysis of the drug addiction motivation of drug addicts indicated that between the total score of the drug addiction motivation and the four dimensions, the external boost was not significantly correlated with the sense of conviction ($P>0.05$), the emotion of remorse was correlated with the sense of conviction ($P<0.05$) and the rest of them were significantly and positively correlated ($P<0.01$). Second, correlation analysis was conducted between SRHMS subscales and scores of drug addicts, and it was found that there was a significant positive correlation between each subscale of SRHMS and the total score ($P<0.01$). Third, in the correlation analysis between drug addicts' motivation to quit drugs and SRHMS, the degree of correlation between remorse and social health was not significant ($P>0.05$); the correlation between external boost and physical health was not significant ($P>0.05$); and there was a correlation ($P<0.05$) or a significant correlation ($P<0.01$) between the other dimensions.(see Table 3)

Table 3: A Correlational Analysis of Motivation, SRHMS Among Drug Addicts in Recovery

	Remorse	Cognitive Adaptation	External Boosts	Sense of Certainty	Total Score for Motivation to Quit	Physical Health	Mental Health	Social Health	Total Score for SRHMS
Remorse	1	0.691**	0.472**	0.247*	0.802**	0.325**	0.387**	0.159	0.335**
Cognitive Adaptation		1	0.408**	0.541**	0.889**	0.468**	0.566**	0.339**	0.519**
External Boosts			1	0.34	0.677**	0.192	0.254*	0.253*	0.255*
Sense of Certainty				1	0.569**	0.474**	0.464**	0.423**	0.509**
Total Score for Motivation to Quit					1	0.472**	0.554**	0.410**	0.537**
Physical Health						1	0.768**	0.633**	0.915**
Mental Health							1	0.704**	0.923**
Social Health								1	0.843**
Total Score for SRHMS									1

Note: * $p<0.05$, ** $p<0.01$, *** $p<0.001$, the same as below.

3.4 An Analysis of Demographic Differences in Motivation for Drug Rehabilitation among Drug Addicts

Differences were analyzed for the demographic variables of the drug addicts, including no demographic differences in age, education, marital status, children's status, years of drug use, and number of visits to the facility, and demographic differences in occupation prior to entry.

One-way ANOVA (one-way ANOVA) with LSD post-hoc test was conducted on the motivation of drug addicts to quit drug addiction and their occupation before admission, and the results showed that: the differences were not significant in the scores of remorsefulness, cognitive adjustment, and conviction ($P>0.05$); and in the scores of external boosters, the scores of individual drug addicts were higher than the scores of drug addicts who were working and those who were unemployed, respectively ($P<0.05$); In terms of motivation to quit, the individual's detoxification personnel scored higher than the detoxification personnel without employment ($P<0.05$).

3.5 Analysis of Demographic Differences in SRHMS among Drug Addicts

By analyzing the demographic differences in the SRHMS scores of the drug addicts, the differences between the drug addicts in terms of education, presence of children, marital status, years of drug use, and the number of times they have been admitted to the facility with the SRHMS subscales and total scores were not significant ($P>0.05$); and in terms of age, and occupation prior to admission to the facility the differences in each of the SRHMS subscales such as the scales and the total scores were significant.

In terms of physical health, the scores of drug addicts in the youth group were higher than those of the middle-aged group ($P<0.05$); there were no significant differences between drug addicts in the youth group and those in the middle-aged group in terms of total scores of mental health, social health, and SRHMS ($P>0.05$).

In terms of physical health, there was no significant difference in the scores of drug addicts working, individual and jobless ($P>0.05$); in terms of mental health, drug addicts working had higher scores than jobless ($P<0.05$), and those who were individual had higher scores than jobless ($P<0.05$); in terms of social health, drug addicts who were individual had higher scores than those who were jobless ($P<0.05$) On the total SRHMS score, drug addicts who worked scored higher than those who were unemployed ($P<0.05$), and drug addicts who were individual scored higher than those who were unemployed ($P<0.05$).

3.6 Regression Analysis of Motivation to Quit on SRHMS among Drug Addicts

Through regression analysis of SRHMS by the four sub-dimensions under the Drug Abuse Motivation Scale, the goodness of fit of this linear regression model, $R^2=0.356$, implies that the arithmetic of this regression analysis is more capable of truly and reliably responding to the influence of remorsefulness, cognitive adjustment, external boosting, and certitude on the mental health of drug abusers. There is no multicollinearity among the four independent variables, and the VIF values are all less than 5. The regression equation $F=12.872$, $P<0.001$ indicates that there is at least one of the four independent variables that can significantly affect the total SRHMS score of the dependent variable, cognitive adjustment can affect SRHMS ($\beta=0.227>0$, $P<0.05$), and sense of conviction can affect SRHMS ($\beta=0.356>0$, $p<0.05$). Finally, the regression equation was derived: $SRHMS= 46.453 + 7.019 *Cognitive\ Adjustment+14.594*Sense\ of\ Certainty$.(see Table 4)

Table 4: Regression Analysis of Motivation to Quit on SRHMS among Drug Addicts

Model	Non-standardized Parameters		Standardized Factor β	t	Significance	VIF
	B	Standard Error				
(Constant)	46.453	48.671		0.954	0.342	
Remorse	-0.257	4.160	-0.008	-0.062	0.951	2.136
Cognitive Adaptation	7.019	3.523	0.227	1.992	0.049	2.783
External Boosts	4.393	3.186	0.134	1.379	0.171	1.360
Certainty	14.594	4.223	0.356	3.456	0.001	1.537
	R^2		0.356			
	F		12.872			
	P		<0.001			
Dependent variable: Total SRHMS						

4. Discussion

4.1 Differences in Demographic Variables of Motivation to Recover from Drug Addicts

In the present study, by comparing different demographic variables, it was found that there was no significant difference in the motivation of drug addicts to quit drugs in terms of age, different education, marital status, children, years of drug abuse and number of visits to the center. This result implies that variables such as age, different educational qualifications, marital status, children, years of drug use and number of admissions to the center do not have an effect on the motivation of drug abusers to quit, and suggests that some demographic variables can be left unexplored in subsequent surveys of drug abusers' motivation to quit, so that the focus can be shifted to other variables. There is a difference in motivation among drug addicts with different pre-admission occupations, and the motivation of self-employed drug addicts is higher than that of unemployed drug addicts, which indicates that the motivation of self-employed drug addicts with a high level of work involvement is higher than that of those without work involvement, and therefore, those who have a higher level of work involvement in their lives have more motivation to quit drugs.

4.2 Differences in Demographic Variables in SRHMS among Drug Addicts

In terms of age, the youth group of drug addicts scored higher than the middle-aged group in terms of physical health, which on the one hand means that the physical functions of the body deteriorate with age, and on the other hand does not exclude that drug abuse is harmful to the body. In terms of occupation before admission, in terms of mental health, drug rehabilitees who were employed or self-employed had higher mental health scores than those who were unemployed. In terms of social health, drug addicts who were individual were higher than those who were unemployed in terms of social health. In terms of total SRHMS score, the total SRHMS score of drug addicts who have a job or are self-employed is higher than that of drug addicts who are unemployed, indicating that having a job has a correlation with the psychological and social health of drug addicts, and that drug addicts who have a job are in better psychological and social health than those who are unemployed and have no job.

4.3 Correlation Analysis between Motivation to Quit and SRHMS among Drug Addicts

In the correlation analysis between the sub-dimensions of drug addiction recovery motivation and the total score of the scale, except for the non-significant correlation between the external boosting force and the sense of certainty, all the other variables showed significant correlation, in terms of sub-dimensions and drug addiction recovery motivation, remorsefulness, cognitive adjustment, external boosting force, and sense of certainty have a contributing effect to the drug addicts' drug addiction recovery, and the addicts should be motivated by the dual work of their own thoughts and their family's thoughts in order to induce the addicts to obtain motivation for drug addiction recovery both from themselves and externally, so as to make them successfully quit drugs. We should work on both their own thoughts and the thoughts of their family members in order to motivate them to get motivated to quit drugs both from themselves and from the outside, so that they can quit drugs successfully. In the correlation analysis between the SRHMS subscales and the total scores, there was a significant correlation between physical health, mental health, social health and the total score of the SRHMS, indicating that there is a close relationship between the physical health, mental health and social health of the drug addicts. In the correlation analysis between the Motivation Scale for Drug Abuse and the SRHMS, the cognitive adjustment and conviction of drug abusers can affect the SRHMS scores, indicating that there is a certain shift in the mental health of drug abusers when they change from a positive to a negative perception of drug-related problems and when they believe that they can succeed in quitting their drug addiction.

4.4 Regression Analysis of Motivation to Quit on SRHMS among Drug Addicts

It was found that cognitive adjustment and conviction in the Drug Abuse Motivation Scale had a positive predictive effect on SRHMS, indicating that, cognitive adjustment and conviction are positively correlated with each other in terms of their effect on mental health. Then the level of mental health of drug addicts is affected by their own cognition of drug rehabilitation on the one hand, and by the degree of certainty of whether they believe they can successfully quit drugs on the other hand.

5. Shortcomings and prospects

First, in terms of demographic variables, all subjects were male, with a lack of female subjects, and the sample size was not large. For example, specific differences in mental health were found in age and occupation prior to admission, and studies with more than 1,000 data indicated that mental health was also affected by gender, education, stage of drug treatment, number of detoxifications, and drug use patterns [8]. In subsequent studies, attempts could be made to collect more data to facilitate the expansion of the sample size so that more differences in different demographic variables could be observed.

Secondly, the research method is relatively single, only the questionnaire method was adopted in this study to discuss the relationship between drug addiction motivation and mental health, because the questionnaire method is an indirect measurement, and because the questionnaire is filled out in the environment of drug addiction treatment centers, it will inevitably affect the subjects' answers to specific questions, thus affecting the validity of the questionnaire results. Subsequent relevant research sections can combine the collocation of research methods such as interview method and experimental method, so as to conduct a more comprehensive and scientific research.

Thirdly, the sample is not representative of the physical environment, the type of urban and rural residents, personality, family of origin, and a series of other factors that may affect the subjects' motivation to quit drugs and their mental health.

6. Conclusion

The results of the present study indicated that there were no significant differences in the motivation of drug addicts to quit drugs in terms of age, different educational levels, marital status, children's status, years of drug use and the number of times of admission to the center, and there were differences in the motivation of drug addicts to quit drugs in terms of different occupations prior to admission to the center. The mental health of drug addicts was correlated with their occupation before admission. There was a significant correlation between drug addicts' motivation to quit drugs and their mental health, and drug addicts' motivation to quit drugs was positively correlated with their mental health. Cognitive adjustment and assuredness in drug addicts' motivation to quit were predictive of their psychological health.

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