

Response to methadone maintenance treatment: what is the role of personality?

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Purpose of the study

The role of personality characteristics in the response to methadone maintenance treatment is controversial area. The objective of this study is to explore the temperament and character characteristics of opioid dependent patients under methadone maintenance treatment (MMT) according the response to MMT in terms of illicit opioid use.

Methods

The study recruited 91 opioid-dependent patients attending an MMT program in a drug abuse outpatient center in Barcelona, Spain. A close-ended questionnaire was used to record patients' sociodemographics characteristics, history of substance use and previous psychiatric treatment. Substance use disorders and other psychiatric disorders were diagnosed according to DSM -IV criteria, using the Spanish version of the Psychiatric Research Interview for Substance a Mental Disorders (PRISM-IV). The Spanish version of the Temperament and Character Inventory (TCI) based on the model of Cloninger's personality, was used.

Urinalyses to detect heroin use were randomly performed every one or two weeks at the center, under the supervision of the nursing staff. According to urinalyses patients were classified as Responders or Nonresponders to MMT. Responders were those who had negative results for illicit opioids. Nonresponders were those with two or more positive results in the last four urine test.

Results

Table 1. Main characteristics of the study groups

	Responders N= 68	Nonresponders N= 23	P*
Male (%)	49 (72)	17 (74)	1.000
Age, mean (SD)	38 (7)	37 (9)	0.395
Years at school, mean (SD)	9 (2)	9 (4)	0.522
Single (%)	32 (48)	10 (44)	0.389
Legal background (%)	38 (57)	11 (52)	0.804
Live with family (%)	48 (72)	16 (76)	0.541
Offspring, mean (SD)	0.9 (1.1)	0.8 (1.0)	0.774
Employed (%)	19 (28)	10 (48)	0.187
Illicit opioid consumption in months, mean (SD)	148 (86)	89 (56)	<0.001
Other substances dependence disorder – lifetime prevalence (%)			
Alcohol	19 (29)	6 (26)	1.000
Sedatives	17 (26)	7 (30)	0.786
Stimulants	3 (5)	1 (4)	1.000
Cannabis	13 (20)	3 (13)	0.753
Cocaine	44 (67)	12 (52)	0.223
Days of heroin consumption in the last 30 days, mean(SD)	0.4 (1.26)	10.0 (11.8)	<0.001
Days of cocaine consumption in the last 30 days, mean(SD)	1.7 (5.0)	8.5 (11.)	0.012
Psychiatric comorbidity (lifetime prevalence) (%)	50 (75)	15 (65)	0.424
Months in MMT, mean (SD)	40 (43)	29 (41)	0.293
Methadone dosage, mean (SD)	106.27 (70.96)	90.00 (49.86)	0.313

*Bold numbers represent significant P-values, after Bonferroni correction / SD: standard deviation

Table 2. Temperament and Character in Responders vs Non responders to methadone maintenance treatment

	Responders N: 68	Nonresponders N: 23	P value	
Temperament scales	Harm avoidance	58.3 ± 9	51.1 ± 7	<0.001
	Novelty seeking	53.1 ± 9	50.2 ± 9	NS
	Reward dependence	46.1 ± 9	54.2 ± 8	<0.001
	Persistence	43.0 ± 9	43.0 ± 9	NS
Character scales	Self-directness	41.9 ± 11	57.8 ± 5	<0.001
	Cooperativeness	42.7 ± 10	34.3 ± 9	<0.001
	Self-transcendence	42.7 ± 10	34.3 ± 9	<0.001

NS: No significant differences

Conclusions

- The group of Nonresponders to the methadone maintenance treatment for opioid dependence, also have higher consumption of cocaine in the last 30 days. The group of responders to MMT have higher harm avoidance and reward dependence lower than the non-responders group.
- Responders to MMT have higher self-transcendence to cooperativeness with the group of non-responders. Is considered that the use of cocaine in the past 30 days is an important confounding factor in the results. Especially scores higher self-direction of non-responding patients may be a result of this confounder.
- Further studies are needed with larger number of participants to do a subgroup analysis.

References

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