
METHADONE MAINTENANCE TREATMENT AND CORONAVIRUS PANDEMIC

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Abstract: Methadone and buprenorphine are the major modalities on the opioid substitution therapy (OST) for opioid dependence in North Macedonia. Some studies reported that coronavirus pandemic in methadone maintenance patients (MMT) increase levels of stress, anxiety, depression and craving of substance use. The negative emotions aroused by the COVID 19 outbreak and the accompanying social isolation to patients on MMT maybe are an important factor of this occurrence. The aim of this study is to evaluate the effect of coronavirus pandemic on mental health and use of legal and illegal substances in methadone maintenance patients. **MATERIALS AND METHODS:** The prospective study included two group of male patients on methadone therapy (N=30) between 20-51 years evaluated in Day hospital of heroin addicts-department of Psychiatric Hospital Skopje. The study was conducted for 6 months so the one groups of patients was evaluated before coronavirus pandemic and the second groups after six month of beginning the epidemic. The patients were assess using sociodemographic information by semi-structured questionnaire specially designed for the study. Urinary tests for determination of psychoactive substances, BDI scale to determinate depression and Zunk scale to determinate the anxiety Results of this study were determinate by descriptive methods and Students t-test. In our study we got not statistically significates results between sociodemographic characteristic in examination group. But we got statistically significates results between score of BDI and Zung scale in examination groups Also in our study we got that alcohol , tobacco use and recidivism of heroin use were statistical significantly higher in MMT patients after six months of coronavirus pandemic. **Conclusion:** Results in our studies, suggested that the psychological and behavioral changes of the patients receiving MMT during the epidemical were significant so maybe psychosocial treatment in the future, which will alleviate this conditions

Keywords: methadone maintenance treatment, mental health, coronavirus pandemic

1. INTRODUCTION

Heroin addiction in North Macedonia is represented in a high percentage. According to current knowledge, addiction is characterized by an irresistible desire to consume a substance, the development of an abstinence crisis, as well as the development of tolerance during long-term use (1,2,3). Until now, two therapeutic modalities of treatment are present in the territory of the North Macedonia: methadone and buprenorphine therapy. By applying methadone therapy in patients, the abstinence crisis is overcome and stabilization is achieved, which enables its proper functioning in society (4,5).

Some of the scientific research indicates that the COVID-19 pandemic, with the strong isolation measures (quarantine) and the deaths in the general population, had a significant impact on the mental health of the population, but also in patients on methadone maintenance treatment (6,7).

The **AIM** of this study is to evaluate the effect of coronavirus pandemic on mental health and use of legal and illegal substances in methadone maintenance patients.

2. MATERIALS AND METHODS

The prospective study included two group of male patients on methadone therapy (N=30) between 20-51 years evaluated in Day hospital of heroin addicts-department of Psychiatric Hospital Skopje. The study was conducted for 6 months so the one groups of patients was evaluated before coronavirus pandemic and the second groups after six month of beginning the epidemic. All the patients was written informed consent. The patients were assess using sociodemographic information by semi-structured questionnaire specially designed for the study. The sociodemographic data was: age, marital status, education status and employment. Urinary tests for determination of psychoactive substances, BDI scale to determinate depression (the BDI score ≥ 10) and Zunk scale to determinate the anxiety which consist of four levels (normal, mild to moderate, severe, extreme anxiety level. Results of this study were determinate by descriptive methods and Students t-test.

3. RESULTS

In our study we got not statistically significant results between sociodemographic characteristics in examination groups (Table 1).

Table 1 Sociodemographic characteristic between examination groups

parameters	Group 1	Group 2	T test	P level
Age(year)	23±41	25±31	1,71	0,09
Married status Y/N %	45%/55%	48%/52%	1,12	0,08
Employment Y/N %	25%/75%	20%/80%	2,14	0,07
Education years	11±2,3	9,±3,5	1,65	0,12

But we got statistically significant results between score of BDI and Zung scale in examination groups (table 2,3)

Table 2. Score of BDI between examination groups

group	BDI ≥10	t-test	P level
Group 1 N(%)	10 (33,4%)	1,24	0,02
Group 2 N(%)	18 (60 %)		

Table 3. Score of Zung scale between examination groups

parameters	Group 1 N(%)	Group 2 N(%)	T test	P level
Normal range	15 (50%)	8	2,18	0,002
Mild to moderate	13 (43,3%)	10		
severe	2 (6,6%)	7		
Extreme anxiety level	0 (0)	5		

Also in our study we got that alcohol, tobacco use and recidivism of heroin use were statistically significantly higher in MMT patients after six months of coronavirus pandemic.

Table 4. Distribution of psychoactive substance use in examination groups

	Group 1	Group 2	t-test	p level
Alcohol use Y/N %	25%/75%	70%/30%	2,14	0,03
Tobacco use Y/N%	42%/58%	65%/35%	1,95	0,02
Heroin recidivism Y/N %	15%/75%	55%/45%	2,18	0,05

4. DISCUSSION

The results in our study show that we got not statistically significant results between sociodemographic characteristics between examination groups. The patients were of identical age, most of them were not married and had no established employment. The patients were almost identical in years of education. The results obtained in our study clearly indicate that the pandemic had no significant impact on the sociodemographic characteristics of the examined patients.

But the psychological and behavioral changes of the patients receiving MMT during the epidemic were significant. So the score of BDI and Zung scale was higher in MMT patients after 6 months of pandemic with statistical significance ($p=0,02$; $p=0,002$). The reasons for this emotional state in our patients were probably due to the strong isolation measures (quarantine) taken by the government that prohibited any kind of movements. So in this way the social contacts were reduced as well as contacts in the wider family system. The disease was unknown, many people died, many people loss of family members, which further emphasized the fear and panic among the citizens and among the methadone patients. This results correlate with another study who reported that psychiatric patients in strict social isolation show higher levels of anxiety and depression (8,9,10).

During the observation of our patients on the pandemic, we noticed that emotional instability (anxiety, depression) contributed to increase the frequency of use of psychoactive substances. Which conclusion was confirmed by the results obtained in our study. In our study we got that alcohol, tobacco use and recidivism of heroin use were

statistical significantly higher in MMT patients after six months of coronavirus pandemic $p=0,03, p=0,02, p=0,05$. This results compare with another study (11,12,13) . .

Maybe in these patients will need psychosocial treatment in the future, which will alleviate the symptoms of tension, nervousness, low mood, reduction of volitional impulse dynamism, which would prevent the use of psychoactive substances, and recidivism of heroin use , as described in other studies(14,15).

5. CONCLUSION

Results in our studies, suggested that the psychological and behavioral changes of the patients receiving MMT during the epidemical were significant so maybe psychosocial treatment in the future, which will alleviate this conditions.

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