

The changes in psychosocial symptoms of opiate dependents receiving
buprenorphine/naloxone substitutional therapy

Theses

Dr. Zsolt Petke

Semmelweis University

Pathological Sciences Doctoral School



Supervisor: Dr. József Rácz, professor, D.Sc.

Opponents: Dr. Attila Németh, professor, C.Sc.

Dr. Gábor Gazdag, Ph.D.

President: Dr. Iván Forgács, Professor emeritus

Committee: Dr. Mária Hoyer, PhD

Dr. György Harmat, PhD

Budapest

2011

0

Introduction

In Hungary, the patients in need of therapy caused by intravenous drug abuse, are mostly heroin users. There is a very close connection between the problematic drug use and the psychiatric diseases, primarily personality disorders, mood disorders and psychotic problems. Amongst the significant public health effects we could mention chronic diseases caused by needle sharing, possibly lethal infections (Hepatitis B, C, HIV), or fatal overdoses.

We can establish that there is a positive correlation between the frequency of psychiatric symptoms and the risky behaviour forms. Accordingly, the more psychiatric effects one has, the more one will perform risky behavioural forms. Nevertheless, there is no definite direction of the connections between mental health disorder and problematic drug use.

68,8% of the participants in the research were male and 31,3 were female. Most of them, 75% live in major cities, 10% in towns and 7,5% in villages. Cities with a population of 100.000 or more were considered major, between 10.000 and 100.000 were considered towns, and with population under 10.000 were considered villages.

75% of the respondents live in Budapest, mainly in the inner districts. The average age of the participants were between 18 and 45. Amongst them 2,5%(2 persons) is between 18 and 20, 15% is between 21 and 25, and 37,5% is between 26 and 30, this age group has the highest frequency scores, followed by 26,7% between 31 and 35, 13,7% between 36 and 40, and only 5% belongs to the age group of 41 and 45. It is summarized in the chart below.

Consulting literature defines social exclusion as a consequence- complex, that includes derogatory physical/mental state of health, the tightening social and institutional connections, homelessness, unemployment, and committing criminal acts. These are such dimensions of personal and social exclusion, that they indicate definite connections to problematic substance use. However, the direction of these connections is still a subject of debate.

The effects of problematic drug use degrade the social connections and family ties of the user, narrowing them down to close social groups formed by people of similar status and lifestyle. Previous observations show that intravenous users tend to form social (friendly and sexual) bonds with other intravenous users. As Williams and colleagues describe: the social network of intravenous users is structured by the substance use. The structure of social

networks significantly sets back the option of therapy, and reduces the perception of therapeutic needs.

The substitutional therapy of opiate dependents is a method applied worldwide. In Hungary, the administration of buprenorphine/naloxone with partial antagonist effects began in 2007, however, there wasn't any local investigation of efficiency so far, and the results of local researches on methadon therapy are also not well documented.

Although international researches do not agree on the fact that this substance - introduced nearly three years ago – would be the first choice to recommend, it seems that its application is safer than methadone, considering that together with the buprenorphin molecule with opiate effects, the naloxone with antagonist impact gets consumed as well. This blocks the further opiate effects on the receptor, reducing the risk of overdose. The changes of psychological and social symptoms, performed by the clients receiving this treatment, act as efficiency indicators of the combined substance.

At this stage, going under substitutional treatment can be valued as a privilege among opiate users, because of the insufficient support system and the absence of specialists. Therefore, it is essential to investigate the difference between the types of therapy to raise the effectiveness of client care.

Objectives

Although, there are international research results available on the application of buprenorphine/naloxone, there is hardly any investigation carried out on the effectiveness of the combined product.

The target of our research was – beside the introduction of buprenorphine/naloxone – to monitor and analyze the efficiency of the therapy, and also to compare it with the results of clients receiving methadone. Our specific target was to answer the questions below:

1. To assess the changes of psychological symptoms (anxiety, depression, craving) of clients receiving the first 6 months therapy.
2. To evaluate the changes based on the client's degree of dependency (ASI), and compare the results to the routine-implemented methadone substitutional therapy.
3. To identify the possible predictors of staying in treatment, based on therapeutic results.

Methods

Our research was structured on the comparison of two different client population. The first research in time was carried out amongst patients entering 3months+ methadone therapy between March of 2001 and March of 2003. The investigation included 200 patients, and the leader of the research was Dr. Zsolt Demetrovics.

The other group of patients received buprenorphine/naloxone therapy, placed in six different drug outpatient centers between November 2007 and April 2008. Suboxone combines the low level and the abstinence oriented therapies, in which case, the application of it is by all means safer than methadone, considering that in Suboxone, together with the buprenorphin molecule with opiate effects, the naloxone with antagonist impact gets consumed as well. This blocks the further opiate effects on the receptor, reducing the occurrence of heroin abuse and the risk of overdose.

During the period of the research, 80 clients entered buprenorphine/naloxone therapy, and they were all included in the survey. 68% of the people examined were male (55 men) and 31,2% were female (25 women). Their average age was 30yrs (between 18 and 45). The therapy was carried out in accordance with the Suboxone Therapeutic Protocol.

The dose needed, and its rationing was set up by the attending physician, the research did not record these parameters. During the first 30 days, the clients were attending the therapy on a daily basis. Every second or third day during the following two weeks, and attended once a week after that. During the research, beside the necessary laboratory, HCV and HIV tests, we

also investigated the severity of addiction, the occurrence of comorbid psychiatric disorder and many more different parameters concerning the psychosocial status of clients.

Results

Anxiety

The STAI Anxiety Scale indicated favorable results. The most redoubtable difference could be observed during the first month, where the decline of anxiety shows significant distinction. Between the first and the second measurement points, the anxiety level of participating patients dropped notably, and later on, the consistence of the declined anxiety rate could be recorded.

Depression

The Beck Depression Scale indicated notable improvements regarding the level of depression, it showed significant movements towards the favorable direction. The most notable difference could be observed at the entry stage, then showed signs of consistence at later measurement points.

Craving

It is possible to observe remarkable decline in craving following the entry of treatment. In case of heroin craving, there were auspicious shifts towards the desire to reduce substance abuse and the conception of eventually eluding addiction. In addition, there were positive movements regarding the relief from symptoms of withdrawal and the control of substance abuse. In all cases of these indicators, there were significant signs of improvement.

The facts mentioned above define that entering therapy has favorable effects on heroin users considering their general well-being as well as their connection to heroin, and the signs of improvement that could be recorded on their physical health.

Addiction Severity Index

During the first month of treatment, a favourable transition could be observed in all seven profiles of ASI. The improvements on legal problems and family related problems were significant between the first and second point of measurement.

The results of the study reveal that the more important changes could be recorded between the first and the second measurement points, followed by less significant improvements during later stages. On the whole, supported by the ASI test results, it is safe to say that significant transformations in different aspects of the treatment receiving client's life can be detected, which can be remarkable after the first month.

The analysis of factors influencing staying in treatment

During the research of substitutional treatments – using the linear regression model – we examined the factors that influence retention in treatment, namely, which variables increase the chance for the client to stay in therapy, and identify influences which reduce or abbreviate the time spent under care. We gathered certain relevant personality related parameters and the characteristics of the patient's state at the time of entering the therapy into one model;

In both cases of methadone and buprenorphine/naloxone treatment, we considered the time spent under treatment (in weeks) as dependent, and the personality and other dimensions needed for condition measurement (anxiety, depression, well-being, craving) as independent variables.

Either cases of the two kind of therapy, our studies reveal that personality factors had no significant effect, but we can state that tendencies reveal that different substances are used successfully for different personality types: The population treated with methadone successfully was characterized with reward-dependency, and the population treated successfully with buprenorphine/naloxone was characterized with harm-reduction.

All other psychological indicators seemed to have no effect on staying in treatment, except in the case of buprenorphine/naloxone treatment, where the entering state indicator measuring depression was the only significant factor, that influenced retention in treatment.

Other psychological parameters of the entering state (anxiety, well-being, craving) had no independent effects regarding the patient's time spent under therapy.

Conclusions

Initial experiences with Suboxone indicate that this medication is well tolerated, and can successfully be applied in substitutional therapies of opiate users.

The most critical period of the treatment is the first one or two weeks, the drop-out rate is high at this stage. Nevertheless, following the successful change of medications, remaining under long term treatment can be expected. Although international researches do not share the same opinion that Suboxone should be suggested as a first choice medication, it is possible to determine that the changes of psychological and social symptoms, performed by the clients receiving this treatment, act as efficiency indicators of the substance.

During the first 6 months period, we identified positive changes in the leading psychological symptoms (anxiety, depression, craving) of the patients treated with buprenorphine/naloxone substitution. Based on the client's degree of dependency (ASI), we evaluated the changes as positive, compared to the routine-implemented methadone substitutional therapy. We identified the predictors that forecast staying in treatment.

Most of our hypothesis got confirmed, since the indicators of the clients psychosocial status did improve by the substitutional therapy.

In the view of sociodemographic, psychosocial and addiction severity measures, a very similar client population can be reached with buprenorphine/naloxone and methadone. Based on our experiences, the buprenorphine/naloxone substitutional treatment can offer a solution mostly to clients, who are open to abstinence as a therapeutic target. The intravenous drug abuse is closely linked to serious health consequences such as transmissible diseases (HIV/AIDS, hepatitis) and possible overdose. In most of the European countries, intravenous opiate abuse shows stagnating or declining status. Substitutional treatments are proven to derogate intravenous substance use, thus reducing its damage. The correctly adjusted substitutional agent can offer a chance to a total change of lifestyle, can reduce the

possibilities of committing crime connected to drug acquisition, can make one capable of returning to the employment market, and also to sort out social ties and connections.

Supported by our research, we can establish that the extension of substitutional programmes could significantly repair the social damages caused by heroin use in Hungary, from the view of the substance user as well as their surroundings.

The experiences detailed above – beside the fact that they are the results of a solitary research in Hungary carried out on problematic heroin users – can practically be useful in the clients' care by outlining the differences that are expected in the indicators of the two therapeutic process, giving an opportunity to reservedly forecast patients' motivations concerning therapy. It can also provide support to some of the more important assist and setback factors of remaining under treatment.

The limits of the research were primarily set by the low number of elements, the relatively short, six months long follow-up period, recording datas based on self avowal, and the sometimes obligate comparative methodology analysis. In my opinion, as long as we keep sight of these boundaries, and summarize our experiences according to these limits, will be able to draw valid conclusions.

Scientific publications

In the topic of the dissertation

1.

Racz J, Melles K, Márványkövi F, Lencse M, Petke Zs

Communicating the principle of "treatment instead of punishment" in Hungary on the basis of an examination of the patients at a drug outpatient clinic.

DRUGS-EDUCATION PREVENTION AND POLICY 18:(3) pp. 207-218. Paper
doi:10.3109/09687637.2010.507558. p. 11 (2011)

IF: 0.423*

2.

Petke Zsolt, Csorba József, Mészáros Judit, Vingender István, Farkas Judit, Demetrovics Zsolt, Balázs Hedvig, Hoffmann Katalin, Kovács Zsuzsanna, Menczel Zsuzsa, Pataki Zoltán, Simor Péter, Havasi Anna, Melles Katalin, Márványkövi Ferenc, Rácz József

Kezelésben maradásra ható tényezők vizsgálata metadon- és buprenorphine/naloxone terápiában részesülő opiátfüggőknél.

ADDIKTOLÓGIA - ADDICTOLOGIA HUNGARICA 10:(1) pp. 5-31. (2011)

3.

Petke Zs, Mészáros J, Vingender I, Demetrovics Zs, Farkas J, Kovács Zs, Menczel Zs, Havasi A, Simor P, Rácz J

Early dropout after one month of Buprenorphine/Naloxone maintenance therapy.

NEW MEDICINE 15:(2) pp. 72-75. (2011)

4.

Demetrovics ZS, Farkas J, Csorba J, Németh A, Mervó B, Szemelyácz J, Fleischmann E, Kassai-Farkas Á, Petke ZS, Oroján T, Rózsa S, Rigó P, Funk S, Kapitány M, Kollár A, Rácz J

Early experiences with Suboxone maintenance therapy in Hungary.

NEUROPSYCHOPHARMACOLOGIA HUNGARICA 11:(4) pp. 249-257. (2009)

Outside of the topic of the dissertation

5.

Simor P, Köteles F, Sándor P, Petke Z, Bódizs R

Mindfulness and dream quality: The inverse relationship between mindfulness and negative dream affect.

SCANDINAVIAN JOURNAL OF PSYCHOLOGY 52:(4) pp. 369-375. (2011)

IF: 1.078* , DOI: [10.1111/j.1467-9450.2011.00888.x](https://doi.org/10.1111/j.1467-9450.2011.00888.x)

6.

Kovács Zs, Pigniczkiné Rigó A, Szabó É, Sebestyén Á, Hoyer M, Fülöp E, Garamvölgyi N, Török IA, Petke Zs

The prevalence of depression and anxiety in patients with malignant breast tumour.

NEW MEDICINE 15:(2) pp. 61-66. (2011)