

## QUALITY OF LIFE OF METHAMPHETAMINE USERS IN THE SOUTH BOHEMIAN REGION

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Submitted: 2021-05-21

Accepted: 2021-06-25

Published online: 2021-06-30

### Abstract

*Background:* Long-term methamphetamine use has consequences for different areas of users' lives. It is not only useful to study the quality of life of drug users from the fundamental research perspective, but also because lowered quality of life can cause a relapse.

*Aim:* The objective of the study is to analyze the factors influencing the quality of life of these methamphetamine users. In our study, we explore how age, sex, education, and length of drug use impact the quality of life of this target group.

*Methods:* Quantitative research design was used, the design used a standardized questionnaire WHOQoL. The research sample consisted of methamphetamine users in the South Bohemian Region ( $N = 437$ ). The collected data was then statistically processed using the SPSS program via descriptive statistics and further testing of relations between individual variables.

*Results:* The findings show that long-time female users have the worst quality of life. This group is the most vulnerable and should therefore become a bigger target for organisations that focus on working with drug addicts. It is interesting that some variables that significantly influence the quality of life of other populations groups (age, education) were not significant within this target group.

*Conclusions:* Programs focused on working with metamphetamine users can prevent deterioration of the quality of life of their clients in different areas within direct social work with the given target group.

**Keywords:** Drug abuse; Methamphetamine; Quality of life; Social exclusion; South Bohemian region

### INTRODUCTION

The objective of the study is to analyze the factors impacting the quality of life of methamphetamine users in the South Bohemian Region.

Using and producing methamphetamine has a long history in the Czech Republic. In the 1980s, methamphetamine became a relatively accessible drug to a large share of the population due to the black market (Růžička et al., 2012). After

the general social loosening in 1989 and the opening of the borders which enabled a huge import of "traditional" drugs, the drug scene became completely open in the Czech Republic (Růžička et al., 2012).

In the Czech Republic, methamphetamine was the second most often confiscated drug in 2016. 90,718 g of methamphetamine were confiscated (Národní protidrogová centrála SKPV Policie ČR, 2017). According to Mravčík (2019), the usage of methamphetamine has been in-

creasing in the Czech Republic. The estimated consumption of methamphetamine in the Czech Republic in 2010 was cca. 5 tons; in 2016, it was cca. 6.5 tons. According to the European Monitoring Centre for Drugs and Drug Addiction (2019), there were 298 illegal laboratories producing methamphetamine in Europe in 2018, and 264 of those were located in the Czech Republic.

The Oxford Dictionary defines quality of life as: the standard of health, comfort, and happiness experienced by an individual or group (Theofilou, 2013). Testa and Simonson (1996) define the quality of life as a term that relates to the physical, psychological, and social dimensions of health. These dimensions are also further influenced by an individual's experience, faith, expectations, and perceptions. These subjective factors are different for each of us, which is why individuals can perceive the same situation differently, or why people in two different situations can be equally happy with their quality of life (Testa and Simonson, 1996). In their publication, Cella and Tulsky (1990) also point out the complexity of measuring the quality of health. According to them, attempts at measuring the quality of life often fail. There are two fundamental reasons for such failure: (1) differences in definitions, in which two researchers define the term differently and therefore measure different parameters; and (2) insufficient information about available measuring scales, which leads to researchers choosing the wrong (incomplete) tests. Verster et al. (2008) also point out the complexity of measuring and defining the quality of life. Defining and measuring the quality of life is difficult and interdisciplinary – not everyone however agrees on the importance of health as a factor. The different criteria of evaluating the quality of life are: health, well-being, culture, value systems, goals, expectations, living standard, fears, freedom, happiness, art, environment, innovation, spirituality, etc. According to the authors, studying the quality of life is also related to other subjects, such as: sociology, psychology, communication, political science, marketing, management, economics, education, public administration, health care, environmental science, medicine, etc. Michalos (2003) also points out the role of social comparison or differences between what an individual owns and what the majority of oth-

ers in the close vicinity own. These differences impact perceived happiness and satisfaction the most.

Research shows the decrease of the quality of life of drug users in comparison to the non-users (Tracy et al., 2012). When comparing different addictions, it is also clear that the specific addictive substance does not profoundly influence the change of QoL – e.g. Santos et al. (2017) compared the QoL of individuals addicted to alcohol and other substances and came to the conclusion that the QoL of both groups is the same. The decrease of QoL was also proven in users of legally available painkillers (Abrahamsson et al., 2015), cannabis users (Goldenberg and Danovitch, 2017), and users of opiate maintenance substances such as methadone (Zamboni et al., 2019), etc. He et al. (2016) point out that the QoL of this population is not lowered by the addictive substance itself, but is a result of a combination of overall specific socio-demographic factors including lower education, unstable employment, family situation, as well as personal traits and the social stigma. Costenbader et al. (2007) also discuss the difficulty in defining the extent of the substance's direct influence on decreasing the quality of life. The authors state that the overall QoL of this specific group is often negatively impacted by the co-morbidity with various mental illnesses.

Rafiq and Sadiq (2019) add that QoL is not only lower for the actual drug users but also for the members of their family. Another hallmark of this group is that the QoL of drug users increases in the short-terms when using the drug and decreases again when the effects of the drug disappear (De Maeyer et al., 2009).

The evaluations of QoL of drug users in treatment are very interesting. The research on this topic describes protective factors of various types of therapy – outpatient treatment (Ambroziak, 2016) or group therapy. Such research primarily points out how patients were satisfied with their own lives or with the better management of their own lives (Ambroziak, 2016). QoL is also influenced by the effectiveness of treatment (Ghalesefidi et al., 2019), as well as actual detoxification (Manning et al., 2019).

Kalina et al. (2015) state that one of the areas in which long-term methamphetamine

use can show itself is physical and mental health. Users can experience panic attacks, toxic psychosis, and other health risks. Drug abuse is connected, among other things, with an impact on social life. It affects partner and family relationships, job, and hobbies. Loss of interest in family and friends is also evident. All funds available are spent on the drug. School or work are markedly neglected. Misunderstandings emerge in relationships. Even problems with the law and with the police may occur. The habit-forming substance progressively becomes a priority. The individual subordinates all areas of life to it, devoting almost all of his or her time to it (Nešpor, 2007).

## MATERIALS AND METHODS

A quantitative research design was chosen due to the study objective. The design uses a standardized questionnaire expanded by several new questions about the socio-demographic character and the drug history of the respondents. The research sample consists of methamphetamine users in the South Bohemian Region. According to Mravčík (2019), in 2018 the population of problematic users in that Region was 2,500 persons. The representative sample with a  $p$ -value of 95% and the confidence interval of 4 consists of 484 persons. In cooperation with contact centers and other services for users of addictive substances, we were able to acquire a sample of 450 persons who were willing to participate in the survey. The research also involved residents of the South Bohemian Region. The quality of life of drug users is most often evaluated via the standardized WHOQoL questionnaire (e.g. Ghalesefidi et al., 2019). Other used questionnaires based on specific research goals are, for example the QLI (e.g. Santos et al., 2017), the Quality of Life Scale – QOF-26 (e.g. Rafiq and Sadiq, 2019), or the SF-12 (e.g. Hallit et al., 2019). In our case, we chose the universal anonymous WHOQoL questionnaire in its shortened BREF version. The WHOQoL questionnaire was published by the World Health Organisation in 1991. Its shortened and simplified version is called WHOQoL-BREF. The WHOQoL questionnaire was simplified so that it could be applicable to a wider respondent sample. The WHOQoL-BREF is the most often used

questionnaire when researching the quality of life (Rapley, 2003). It consists of 26 questions that measure the fundamental dimensions of the quality of life (physical health, experiences, environment, social relations). A five-point Likert scale was used to answer 25 of the questions. 24 questions represent all aspects of the respondents' lives; two questions serve to independently evaluate the quality of life and overall health of the respondents. Reliability analyses of the WHOQoL-BREF showed good domains internal consistency from 0.65 to 0.85, and mean test-retest reliability for domains 0.774 (Dragomirecká and Bartoňová, 2006a). The basis for population norms (common population) are norms stated in the user manual of the WHOQOL questionnaire in the Czech Republic (Dragomirecká and Bartoňová, 2006b). Filling out the WHOQoL-BREF questionnaire usually takes between five and ten minutes. The administrative part – in the form of an interview – then lasts around 15–20 minutes (Šťastná, 2007). Ethical principles were assured via several measures. Participants were informed of the survey and participated voluntarily. As part of the services for drug addicts, the clients are registered under codes, which contributed to the anonymity of research. If the participants did not understand a technical term, it was explained to them.

Data collection was carried out in the field and at contact centers between 2017 and 2019. The collected data was then statistically processed using the SPSS program via descriptive statistics and further testing of relations between individual variables. The SPSS tables were also converted into the formats of the Microsoft Office Word 2010 programs. With regards to the character of the data, we used the following statistical procedures: a  $t$ -test for two independent variables and correlations.

## RESULTS

After removing incomplete questionnaires, the resulting number of completed questionnaires was 437, of which 289 were men and 148 women. The average age was 27, the youngest respondent was 18, the oldest 52. The average length of methamphetamine use was 6.5 years, the shortest length was one

year, the longest 17 years. The majority of the respondents additionally used another addictive substance, mostly alcohol (95%), nicotine (92%), and cannabis (75%). The majority of the respondents had secondary education without graduation (41%), primary education (39%), secondary education with graduation (15%), and some had finished tertiary education (8%). Regarding the socio-economic situation of the respondents, the majority of them were unemployed (56%), had regular or irregular jobs (27%), and 17% were receivers of some type of pension or welfare, etc.

For the results of individual domains of QoL of this population, see Table 1.

When it comes to *physical health*, methamphetamine users usually have the highest score in the category “dependent on medical care” (3.66). The lowest score was in the

“sleep” (3.22) category. The overall score in the physical health category was 13.69.

In the category *mental health*, the highest value for methamphetamine users was 3.62 – meaning of life. The lowest score was in the category “negative feelings” (2.81). The overall score in the mental health category was 13.46.

When it comes to *social relations*, the lowest score was in the category “support from friends” (3.49). The question of sexual life scored the highest for the addicts (3.65). The overall score in this category was 14.25.

In the category *living conditions*, the lowest score was the question of energy and tiredness (2.41). The highest value for the users of methamphetamine was in the category “personal safety” (3.41). The overall score in the living conditions category was 12.15.

**Table 1 – Individual item scores of the WHOQoL-BREF questionnaire**

Domain	Question	Sample of methamphetamine users		
		N	Average	STD
Physical health	Pain and uncomfortable feelings	437	3.35	1.23
	Dependence on medical care	437	3.66	1.32
	Energy and tiredness	437	3.29	1.14
	Mobility	437	3.65	1.18
	Sleep	437	3.22	1.22
	Everyday activities	437	3.39	1.11
	Work performance	437	3.31	1.19
	Overall score	437	13.69	3.25
Mental health	Enjoyment of life	437	3.44	1.13
	Meaning of life	437	3.62	1.15
	Focus	437	3.24	1.10
	Accepting physical appearance	437	3.38	1.19
	Self-satisfaction	437	3.39	1.03
	Negative feelings	437	2.81	1.21
Overall score	437	13.46	3.16	
Social relations	Personal relations	437	3.61	1.11
	Sexual life	437	3.65	1.15
	Support from friends	437	3.49	1.09
Overall score	437	14.25	3.55	
Living conditions	Personal safety	437	3.41	1.05
	Environment	437	3.06	1.21
	Energy and tiredness	437	2.41	1.14
	Access to information	437	3.15	1.19
	Hobbies	437	2.87	1.37
	Environment near place of residence	437	2.93	1.23
	Health care availability	437	3.28	1.19
	Transportation	437	3.26	1.28
Overall score	437	12.15	3.13	

The quality of life was further tested in relation to selected socio-demographic variables, see Table 2. On the level of physical and mental health and social relations, a statistically relevant relation to sex was detected – women scored significantly worse than men. Another statistically relevant relation exists

between the length of use and physical/mental health. The length of use worsens the QoL in these areas. Despite expectations, when it came to the other tested variables and areas there were no additional statistically relevant relations.

**Table 2 – Relation of scores between individual areas of the WHOQOL-BREF questionnaire and selected socio-demographic variables for the metamphetamine using population**

Domain	Variable	<i>p</i>	<i>t/r</i>	
Physical health	Sex	0.002	0.243	Women 13.12 Men 13.57
	Education	0.584	0.071	
	Age	0.231	0.021	
	Length of use	<b>0.005</b>	0.215	
Mental health	Sex	0.001	0.112	Women 13.08 Men 13.38
	Education	0.235	0.211	
	Age	0.378	0.254	
	Length of use	<b>0.001</b>	0.185	
Social relations	Sex	<b>0.003</b>	0.204	Women 14.01 Men 14.24
	Education	0.445	0.168	
	Age	0.521	0.032	
	Length of use	0.385	0.078	
Living conditions	Sex	0.425	0.157	
	Education	0.397	0.114	
	Age	0.488	0.089	
	Length of use	0.526	0.143	

## DISCUSSION

The results of testing show that women's quality of life is worse than men's in three out of four QoL areas. This result coincides with the results of similar studies that made use of different measuring tools, comp. e.g. Moreira et al. (2013). Moreira et al. (2013) also states that women using addictive substances face stress or other health problems more often than men who are also users. Safari (2004) states that female users suffer from severe illnesses (e.g. hepatitis) and STDs such as AIDS more often than female non-users. Women are also less likely to receive support from their families and friends.

Rohde et al. (2007) state that if individuals only use substances during puberty, their quality of life in adulthood is not significantly affected. Rohde et al. (2007) does however support the results that the quality of life in adulthood is significantly affected by the long-term use of substances – if this use starts in puberty and continues in adulthood. When it comes to population norms, the QoL is the lowest in the oldest age category but there is no linear tendency (Dragomerická and Bartoňová, 2006b).

Rooks (2010) dealt with the relation between the level of quality of life of addicted persons and the support chain – such as family, friends and surroundings. The surprising

finding is that no link has been found between the length of drug use and the quality of life in social relations. In our opinion, this may be due to the fact that methamphetamine users perceive themselves as part of a social group, which is, however, objectively marginalized.

In their study, Moreira et al. (2013) state that individuals with higher education have an overall better quality of life. Various domain indexes of individuals in this study who attended school for less than eight years were lower than the indexes of the groups who attended school longer.

Methamphetamine users show a statistically significantly lower quality of life than non-users. These are not surprising results. Ventegodt and Merrick (2003) discussed the correlation between using amphetamine and quality of life for its users (which was slightly lower than of the rest of the population). Ventegodt and Merrick explain that amphetamines are used to increase confidence in social interactions but that they also negatively influence the quality of life of their users. The correlation between lower quality of life and substance use can also be found in cocaine users (Lozano et al., 2008; Ventegodt and Merrick, 2003). A lower subjective quality of life was also discovered in opiate users. The quality of life of hallucinogen users is also lower than the QoL of the general population (Goldenberg and Danovitch, 2017; Ventegodt and Merrick, 2003). On the other hand, according to Senbanjo et al. (2007), the quality of life increases over the first three months of treat-

ment. The speed of the increase then slows down after the first three months.

A possible limitation of the study is the fact that only methamphetamine users who were clients of services targeted at drug addicts participated. Therefore this group does not represent the entire demographic of methamphetamine users in the South Bohemian Region.

## CONCLUSIONS

The findings of this study are important for the area of tertiary prevention. Programs focused on working with metamphetamine users, including, for example, contact centres, field programs, advisory centres for addicted persons, etc., can prevent the deterioration of the quality of life of their clients in different areas. The findings show that long-time female users have the worst quality of life. This group is the most vulnerable and should therefore become a larger target for organisations that focus on working with drug addicts. It is interesting that some variables that significantly influence the quality of life of other population groups (age, education) were not significant within this target group. The reasons why should be targeted in further research.

## Conflict of interests

The authors have no conflict of interests to declare.

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## REFERENCES

1. Abrahamsson T, Berglund M, Håkansson AC (2015). Non-medical prescription drug use (NMPDU) and poor quality of life in the Swedish general population. *Am J Addict* 24(3): 271–277. DOI: 10.1111/ajad.12184.
2. Ambroziak A (2016). Subjective quality of life in drug-addicted patients: A cross-treatment comparison. *Heroin Addict Relat Clin Probl* 17(1): 91–98.
3. Cella DF, Tulsky DS (1990). Measuring quality of life today: methodological aspects. *Oncology (Williston Park)* 4(5): 29–38.
4. Costenbader EC, Zule WA, Coomes CM (2007). The impact of illicit drug use and harmful drinking on quality of life among injection drug users at high risk for hepatitis C infection. *Drug Alcohol Depend* 89(2–3): 251–258. DOI: 10.1016/j.drugalcdep.2007.01.006.
5. De Maeyer J, Vanderplasschen W, Broekaert E (2009). Exploratory Study on Drug Users' Perspectives on Quality of Life: More than Health-Related Quality of Life?. *Soc Indic Res* 90: 107–126. DOI: 10.1007/s11205-008-9315-7.

6. Dragomirecká E, Bartoňová J (2006a). Dotazník kvality života Světové zdravotnické organizace WHOQOL-BREF. Psychometrické vlastnosti a první zkušenosti s českou verzí [WHOQOL-BREF World Health Organization Quality of Life Questionnaire. Psychometric properties and first experience with the Czech version]. *Psychiatrie* 10(3): 144–149 (Czech).
7. Dragomirecká E, Bartoňová J (2006b). WHOQOL-BREF: Příručka pro uživatele české verze dotazníků kvality života světové zdravotnické organizace [WHOQOL-BREF: Handbook for users of the Czech version of the World Health Organization's quality of life questionnaires]. Praha: Psychiatrické centrum Praha (Czech).
8. European Monitoring Centre for Drugs and Drug Addiction (2019). Evropská zpráva o drogách 2019: Trendy a vývoj [European Drugs Report 2019: Trends and Developments]. Lucemburk: Úřad pro publikace Evropské unie (Czech).
9. Ghalesefidi MJ, Maghsoudi J, Pouragha B (2019). Effectiveness of gratitude on psychological well-being and quality of life among hospitalized substance abuse patients. *Electron J Gen Med* 16(2): em128. DOI: 10.29333/ejgm/94091.
10. Goldenberg M, Danovitch I (2017). Quality of life and recreational cannabis use. *Am J Addict* 26(1): 8–25. DOI: 10.1111/ajad.12486.
11. Hallit S, Haddad C, Obeid S, Kazour F, Nabout R, Darwich MJ, Tahan FE (2019). Identification of Factors Affecting the Quality of Life Among Patients with Addiction in Lebanon. *J Nerv Ment Dis* 207(5): 378–383. DOI: 10.1097/nmd.0000000000000982.
12. He Y, Li N, Liu D, Zhao L (2016). Quality of life and negative moods of females enrolled in compulsory detoxification in China. *Int J Clin Exp Med* 9(8): 16981–16991.
13. Kalina K, et al. (2015). *Klinická adiktologie [Clinical addictology]*. Praha: Grada, 696 p. (Czech).
14. Lozano O, Domingo-Salvany A, Martinez-Alonso M, Brugal MT, Alonso J, de la Fuente L (2008). Health-related quality of life in young cocaine users and associated factors. *Qual Life Res* 17(7): 977–85. DOI: 10.1007/s11136-008-9376-8.
15. Manning V, Garfield JBB, Lam T, Allsop S, Berends L, Best D, et al. (2019). Improved Quality of Life Following Addiction Treatment Is Associated with Reductions in Substance Use. *J Clin Med*. 8(9): 1407. DOI: 10.3390/jcm8091407.
16. Michalos AC (2003). *Essays on the quality of life*. Boston: Kluwer Academic Publishers, 492 p.
17. Moreira TC, Figueiró LR, Fernandes S, Justo FM, Dias IR, Barros HM, Ferigolo M (2013). Quality of life of users of psychoactive substances, relatives, and non-users assessed using the WHOQOL-BREF. *Ciencia e Saude Coletiva* 18(7): 1953–1962. DOI: 10.1590/s1413-81232013000700010.
18. Mravčík V (Ed.) (2019). *Výroční zpráva o stavu ve věcech drog v České republice v roce 2018 [Annual Report on Drug Situation 2018 – Czech Republic]*. Praha: Úřad vlády České republiky, Národní monitorovací středisko pro drogy a závislosti, 252 p. (Czech).
19. Národní protidrogová centrála SKPV Policie ČR (2017) [National Drug Headquarters of the Criminal Police and Investigation Service of the Police of the Czech Republic]. *Výroční zpráva 2016 [Annual Report 2016]*. Praha: Národní protidrogová centrála, 48 p. (Czech).
20. Nešpor K (2007). *Návykové chování a závislost [Addictive Behavior and Addiction]*. 3rd ed. Praha: Portál (Czech).
21. Rafiq M, Sadiq R (2019). Caregivers stress and quality of life among female family members of poly drug abusers. *RMJ* 44(1): 106–108.
22. Rapley M (2003). *Quality of Life Research: A Critical Introduction*. Thousand Oaks: SAGE, 154 p.
23. Rohde P, Lewinsohn PM, Seeley JR, Klein DN, Andrews JA, Small W (2007). Psychosocial functioning of adults who experienced substance use disorders as adolescents. *Psychol Addict Behav* 21(2): 155–164. DOI: 10.1037/0893-164X.21.2.155.
24. Rooks L (2010). *The relationship between life satisfaction and substance use in adolescence*. Graduate Theses and Dissertations, University of South Florida. [online] [cit. 2020-01-22]. Available from: <https://scholarcommons.usf.edu/etd/1754/>
25. Růžicka M (Ed.), et al. (2012). „Dokážu to?“. Pervitin – koncepce školení pro terapeuty [Can I do it? Pervitin: training concept for therapists]. Olomouc: P-centrum, 77 p. (Czech).
26. Safari F (2004). *Addiction and Women, Gender differences in substance abuse treatment*. Tehran: Iranian national center for addiction study.
27. Santos AC, Pimenta GF, Santos CB (2017). Perception of quality of life of people with drug addiction. *Millenium* 4(2): 69–77.

28. Senbanjo R, Wolff K, Marshall J (2007). Excessive alcohol consumption is associated with reduced quality of life among methadone patients. *Addiction* 102(2): 257–263. DOI: 10.1111/j.1360-0443.2006.01683.x.
29. Šťastná L (2007). Dotazník kvality života WHOQOL-BREF a WHOQOL-100 [WHOQOL-BREF and WHOQOL-100 questionnaire on quality of life] [online] [cit. 2020-04-11]. Available from: <https://www.adiktologie.cz/dotaznik-kvality-zivota-whoqol-bref-a-whoqol-100> (Czech).
30. Testa MA, Simonson DC (1996). Assessment of quality-of-life outcomes. *N Engl J Med* 334(13): 835–840. DOI: 10.1056/NEJM199603283341306.
31. Theofilou P (2013). Quality of Life: Definition and Measurement. *Eur J Psychol* 9(1): 150–162. DOI: 10.5964/ejop.v9i1.337.
32. Tracy E, Laudet A, Min MO, Kim HS, Brown S (2012). Prospective patterns and correlates of quality of life among women in substance abuse treatment. *Drug Alcohol Depend* 124(3): 242–249. DOI: 10.1016/j.drugalcdep.2012.01.010.
33. Ventegodt S, Merrick J (2003). Psychoactive drugs and quality of life. *Sci World J* 3: 694–706. DOI: 10.1100/tsw.2003.57.
34. Verster JC, Pandi-Perumal SR, Streiner DL (Eds) (2008). *Sleep and quality of life in clinical medicine*. Totowa: Humana Press, 534 p.
35. Zamboni L, Franceschini A, Portoghese I, Morbioli L, Lugoboni F (2019). Sexual Functioning and Opioid Maintenance Treatment in Women. Results from a Large Multicentre Study. *Front Behav Neurosci* 13: 97. DOI: 10.3389/fnbeh.2019.00097.

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