

# CHEMSEX AND MENTAL HEALTH IN A SAMPLE OF GERMAN MEN WHO HAVE SEX WITH MEN

## BACKGROUND

Chemsex is defined as the practice of using certain substances immediately before or during sexual activity to facilitate, prolong and/or intensify sexual experience <sup>1</sup>.

There are four substances typically associated with chemsex: methamphetamine (crystal meth, T, Tina), mephedrone, GHB/GBL (liquid ecstasy) and ketamine <sup>2</sup>.

There is a lot of evidence for increased rates of HIV, sexually transmitted infections and other sexual health measures among men who have sex with men (MSM) who engage in chemsex <sup>3, 4, 5</sup>.

Conversely, there has been considerably little research on the mental health of MSM who engage in chemsex. It is known that identifying as gay, bisexual or another non-heterosexual identity generally carries a higher risk for poor mental health compared to the general population <sup>6</sup>, but there has been little research on the role of substance use in a sexual context.

The aim of this study was to examine the mental health of German MSM who engage in chemsex and compare them to MSM who do not.

## METHOD

### German Chemsex Survey

- Self-completed online survey (September until December 2018)
- Targeted at MSM from Germany who use substances, particularly in a sexual setting
- For this study, a subset of the collected data was analysed

### Mental health measures

- Depressive symptoms (PHQ-9)
- Generalized anxiety symptoms (GAD-7)
- Somatization symptoms (PHQ-15)
- Primary Care PTSD Screener
- Life Events Checklist for DSM-5

### The analyses compare two groups

- Men who used at least one "chemsex substance" (methamphetamine, GHB/GBL, ketamine or mephedrone) in a sexual setting in the previous 12 months ( $n=280$ )
- Men who did not report any substance use in sexual settings (apart from alcohol and/or nicotine) in the previous 12 months ( $n=177$ )

### Statistical analysis

- Mean scores of mental health measures were compared by Mann-Whitney-U tests, since all tested attributes were not normally distributed.
- Fractions of participants who showed clinically relevant symptoms above a certain threshold in the different groups were compared by chi-square tests.

## RESULTS

### Demographics of the chemsex group

- Mean age was 40.22 (SD = 10.66)
- 92.4% identified as gay/homosexual, 15% as bisexual, 5.4% as queer
- 82.4% were born in Germany
- 77.8% were full time or part time employed
- 41.2% were HIV positive, 2.0% were infected with hepatitis C

### Depressive symptoms

- 11.9% of the participants from the chemsex group had a score of 10 or above and thus can be considered having clinically relevant depressive symptoms.
- PHQ-9 mean scores differed significantly in comparison of the groups, with higher scores for the chemsex group. The groups did not differ regarding the distribution of clinically relevant symptoms.

### General anxiety symptoms

- 8.3% of the chemsex sample had a score of 10 or above, suggesting clinically relevant anxiety symptoms.
- Neither GAD-7 mean scores, nor distribution of clinically relevant symptoms differed between the groups.

### Somatization symptoms

- 13.5% of the chemsex sample showed clinically relevant symptoms as indicated by a score of 10 or higher.
- There were significantly higher PHQ-15 mean scores being found in the chemsex group than in the non-chemsex group. The groups did not differ regarding the distribution of clinically relevant symptoms.

### Trauma

- 76.8% of the chemsex group reported experiencing at least one potentially traumatizing event from a list of twelve.
- 11.6% of the chemsex group showed clinically relevant symptoms of PTSD, as indicated by a score of 3 or above in the PTSD primary care screener.
- Participants from the chemsex group reported having experienced a traumatic event significantly more often than those from the non-chemsex group. The groups did not differ regarding the distribution of clinically relevant symptoms of PTSD.

Substances used in a sexual context in the last 12 months by chemsex user group	%
Amyl nitrite (Poppers)	87.9
GHB/GBL	84.2
Viagra	76.1
Alcohol	72.1
Ketamine	68.9
Ecstasy	59.6
Methamphetamine	56.4
THC	53.2
Cocaine	43.6
Mephedrone	42.1
Opioid anesics	5.4
Amphetamine	3.2
Heroin	1.1

Substances injected in a sexual context in the last 12 months by chemsex user group *	%
Methamphetamine	85.7
Mephedrone	40.5
Ketamine	35.7

\* 30% of the chemsex user reported injecting chemsex substances.

## DISCUSSION

There can be observed some strain on those who practice chemsex compared to those who do not, as suggested by heightened mean scores for depression, somatization and trauma events. However, these differences are not reflected in the rates of clinically relevant symptoms.

Compared to the German general population, heightened rates of clinical symptoms can be observed in the sample. Especially the rate of 11.5% in the chemsex sample that screened positive for PTSD is considerably higher compared to the general population in Germany, for which a 12 months prevalence for PTSD in men of 0.9% was measured <sup>7</sup>. But overall, it seems that the chemsex group does not differ much from other MSM groups that aren't solely comprised of men who engage in chemsex.

The rate of 41.2% HIV positive chemsex participants indicates that mental health may be negatively impacted <sup>8</sup>. On the other hand, certain characteristics of the chemsex sample suggest that participants have a high socioeconomic status overall, which might serve as a protective factor <sup>7</sup>.

### Limitations

- Cross-sectional design
- Self-selected sample with high levels of income and education overall
- The questionnaire was only available in German
- The survey was promoted by Aidshilfe (the largest HIV/AIDS self-help organisation in Germany), so the high HIV rate in the sample might be a sampling effect
- High dropout rates

### References

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