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A mixed-methods analysis of online NPS user discussion in Hungary

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Abstract

Aim: Our study's aim was to identify a method which can properly reveal the different layers of the novel psychoactive substances (NPS) phenomenon appearing in the online discussion fora. Besides (i) evaluating the extent of potential peer-help harm reduction within NPS fora discussants, we also aimed (ii) to understand the main purposes of NPS use among the discussion participants, (iii) to chart their knowledge of and attitude towards the legality of the substances traded and used and (iv) to explore the feelings and consumer decision making processes on the NPS market.

Methods: A mixed-methods analysis and a sequential explanatory strategy were applied on the dataset of Hungarian NPS discussion fora. The initial qualitative data collection, netnography and thematic analysis were carried out to reveal emerging topics.

Findings: The discussion's main topic was vendor reliability and fraud, with more negative than positive phrases attached. Discussants showed low levels of literacy, weak knowledge of substance legality and inadequate resources to provide peer-help harm reduction. Drug use purpose was mainly to "escape from reality", not positively toned recreation.

Conclusion: Efficient indicated prevention interventions and harm reduction measures are needed to target disadvantageous online NPS user groups having little or no resources for self-help.

Keywords

New psychoactive substances,
mixed-methods analysis, drug user fora

History

Received 14 November 2016

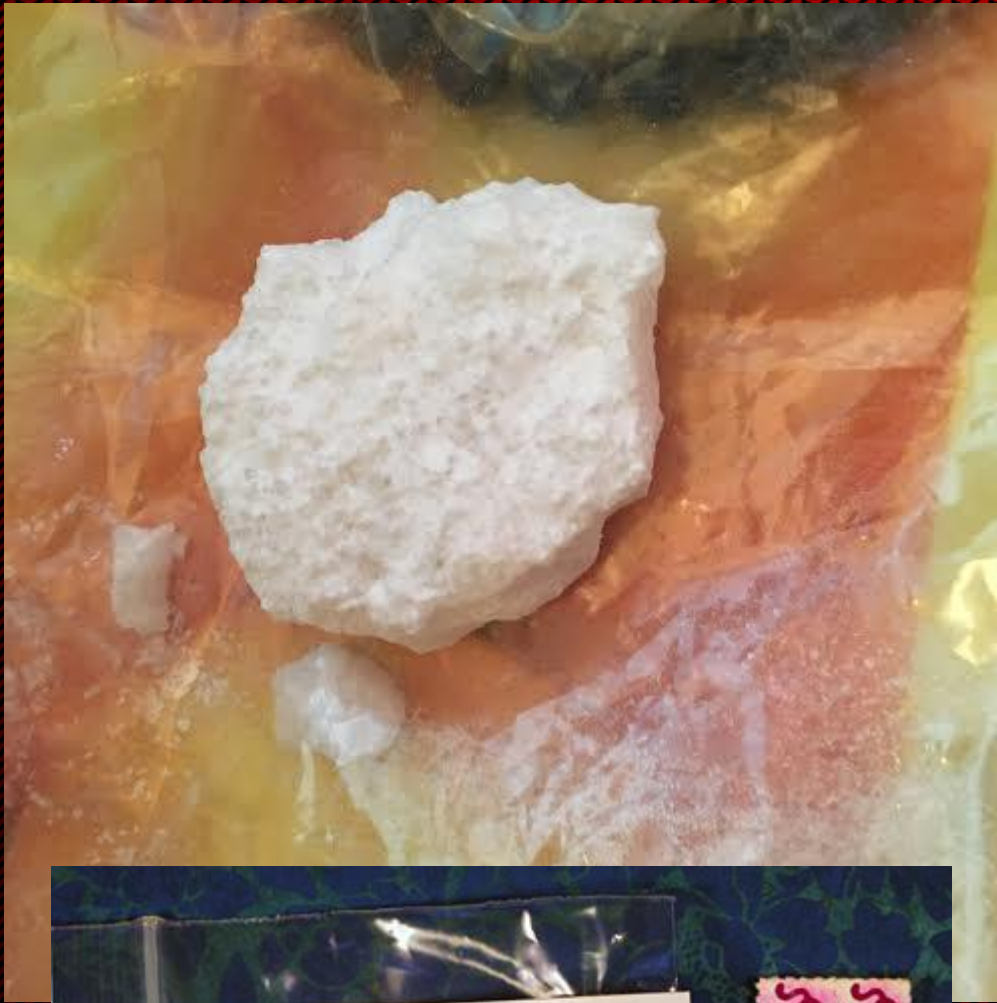
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The NPS phenomenon

- **essentially connected to the Internet**
- **drug discussions became an important source of information**
- **digital/virtual/online/internet ethnography: 'netnography'**
- **information could enhance targeted prevention**
- **community-based user-led harm reduction interventions**

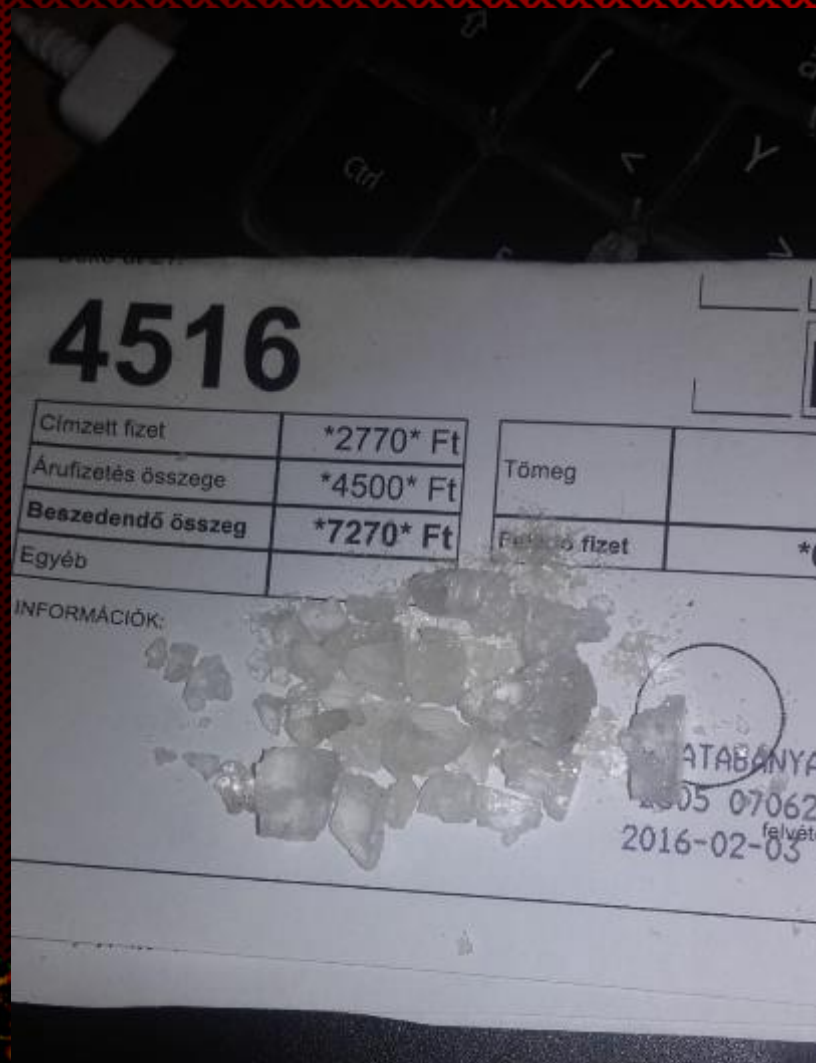


NPS situation in Hungary

- **NPS era began in 2010 with mephedrone**
- **"crystal" = synthetic cathinones (oral, nasal, i.v.) LTP 1.3%**
- **"herbal" = synthetic cannabinoids on plant (smoked) LTP 1.9%**
- **NPS LTP in 15-16 yo: 4% (~EU average)**
- **2010-14: heroin/amphetamine injection 99% to 17%**
- **NPS injection: 0% to 80%, frequent, syringe reuse, HCV up**
- **'drug of the poor'**

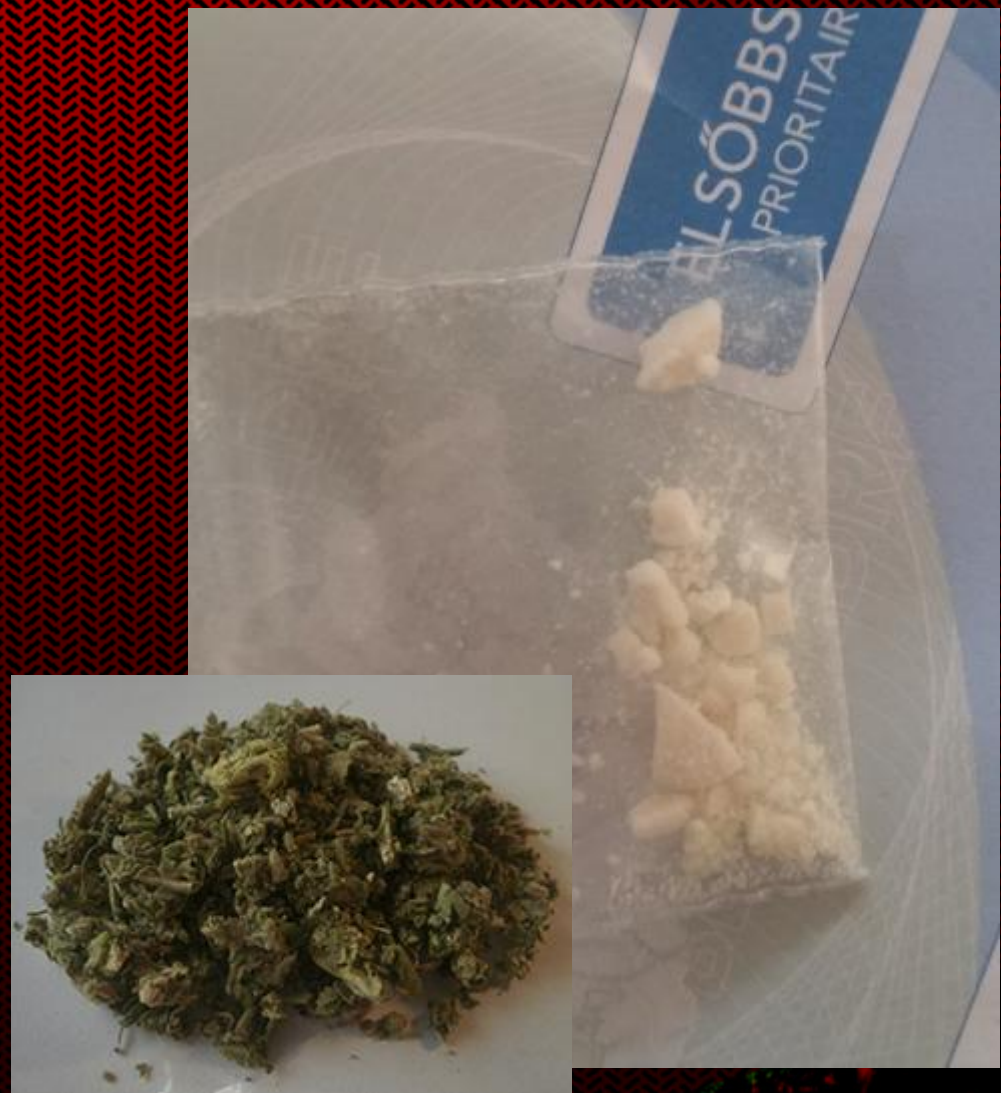
"crystal"

(cathinones)



"herbal"

(cannabinoids)



Netnographic methodologies

- **quantitative: ESPAD, Global Drug Survey**
- **qualitative: telephone interview, online chat**
- **online fora:**
 - **‘empirical phenomenological psychological’ method**
 - **categorical coding of passively observed forum discussion**
 - **actor network theory**
 - **‘explorative virtual participatory’**

Objectives

To identify a method to reveal the different layers of the NPS phenomenon appearing in the online discussion fora.

- extent of peer-help harm reduction within NPS fora?**
- main purposes of NPS use among fora discussants?**
- knowledge and attitude: legality of the substances?**
- feelings and consumer decision making processes?**

Dataset acquisition

- **pseudonymous registration: 7 Hungarian NPS discussion fora**
- **2 fora survived, others shut down by police/operator**
- **chosen forum: community-like nature**
- **automatized mass download (anonymous IP addresses)**
- **Linux command line scripts to find text fields in webpages**
- **metadata: comment ID, date/time, user nickname**
- **export to comma-separated format, import to MS Excel**
- **32% from 68,923 lines were copy-pasted advertisements**
- **47,023 individual comment lines from 2,920 nicknames**

Korrekt eladók listája

Név:	Hozzászólás:
<input type="text"/>	<input type="text"/>
E-mail cím:	
<input type="text"/>	
<input type="button" value="Mehet!"/>	
[ikonok] [url] [kép]	

Listázás fordított időrendi sorrendben

GoldHerbal 2016. jan. 26. 09:40 | [Válasz](#) | [#55749](#)

2-3 hetente mindig új herbink van, mert így nem unnak rá az emberek. persze mindig van 1-2 ember akinek nem tetszik..... de hat egy zeneszerző sem komponált meg olyan zenét ami mindenkinek tetszett. sajnos ezt mi sem tudjuk megcsinálni. De Torekszunk ra!!! (:

@ Iszmi 2016. jan. 26. 09:41 | [Válasz](#) | [#55750](#)

Akkor lehet rendelék egy kóstolót :p

[Válasz 'GoldHerbal' üzenetére \(#55747\)](#)

MR 2016. jan. 26. 09:47 | [Válasz](#) | [#55751](#)

Inkább PC a gold füstje pedig a szokásos

[Válasz 'Iszmi' üzenetére \(#55748\)](#)

Pixa 2016. jan. 26. 09:49 | [Válasz](#) | [#55752](#)

Amíg agyalsz, adj le egy rendelést a PC-nek 5G Royalra.
postával csak 4 ezer. Azt 1:15-be keverik. Így tudni fogod már holnap, hogy mit tud a PC canna. És nem kockáztatasz sokat.
Hiába mondanám, hogy fasza, mert nincs olyan cannabinoid, ami mindenkinek jó. Neked kell eldöntened

[Válasz 'Iszmi' üzenetére \(#55748\)](#)

és 2016. jan. 26. 09:49 | [Válasz](#) | [#55753](#)

Én is po mellett voksolok .

[Válasz 'MR' üzenetére \(#55751\)](#)

és 2016. jan. 26. 09:51 | [Válasz](#) | [#55754](#)

Iszmi nekem lesz holnapra po füstből mék fésű utcára elterelésre ! XD nem tallunk be?:D

[Válasz 'Iszmi' üzenetére \(#55750\)](#)

Nova 2016. jan. 26. 09:54 | [Válasz](#) | [#55755](#)

Hány olyan "új eladó" jelent meg itt az elmúlt 2 hónapban, aki más régi nevével akarta felhívni magára a figyelmet. Meg mondta, hogy mindjárt újra élni fog az oldaluk. Aztán 2 hét után nem is hallottunk róla.
Szeintem kipattant a fejből, hogy megveszik a dexter domainjét. Csak aztán nem sikerült. Mert nem beregisztrálható 5000Ft-ból. :)

[Válasz 'simlota' üzenetére \(#55734\)](#)

@ pcc 2016. jan. 26. 09:57 | [Válasz](#) | [#55756](#)

Próbálkoznak csak az a baj hogy sokan be is dőlnek =/

[Válasz 'Nova' üzenetére \(#55755\)](#)

Kattogok 2016. jan. 26. 10:03 | [Válasz](#) | [#55757](#)

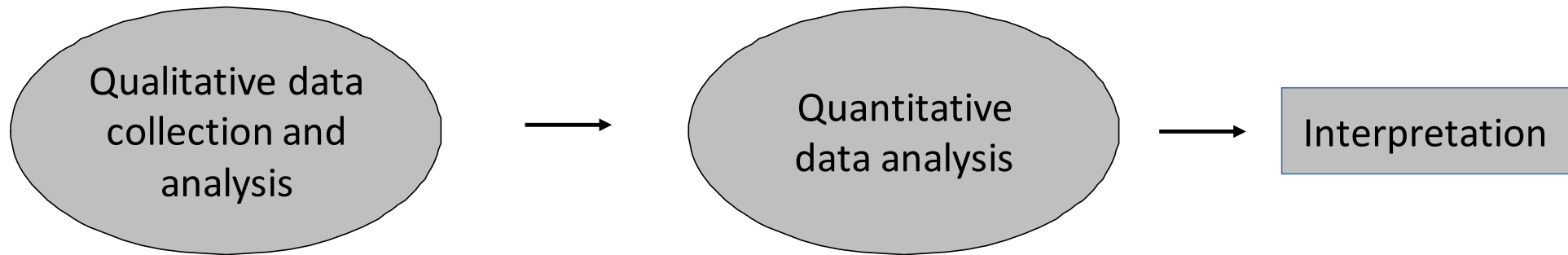
MR.T Iszmi Tegnap Hungarian kiírta, hogy ellettek küldve a csomagok :)
Mail-t énsem kaptam de kb mostanság kéne itt lennie ha feladta :) jelezze valaki ha valamit kapott tőle :)

[Válasz 'Mr T' üzenetére \(#55747\)](#)

Methodology

- mixed-methods analysis and sequential explanatory strategy
- - qualitative data collection, netnography
- -- thematic analysis for emerging topics
- - quantitative data analysis by text analysis tool [Zurvey.io](https://zurvey.io)
- -- word frequencies, co-appearances, and recurring themes
- IT tools for big text corpuses, natural language processing
- vocabulary, lexicographic and syntax of the target language
- recognises sentiments/evaluations/attitudes/emotions
- hard to detect irony, special expressions, argot

Social science has entered to the data science age!



Data set: Hungarian NPS user discussion fora
Data corpus: Hungarian NPS user discussion fora on vending

1. **Netnography** on the data set (between 2009-2016)
2. **Thematic analysis** on the data corpus (on one specific forum between 2014-2016)
 Main/relevant topics:
 - the purchase of NPS
 - types of vendors
 - the legal status of drugs
 - drug use patterns
 - source of conflicts in the vending process

Analytic tool: *Zurvey* automatic text analytic tool (data mining and sentiment analysis)

1. **Basic analysis**
 - polarities, sentiments
 - word frequencies
 - co-occurrences
 - recurring themes
2. **Conceptualization** of qualitative topics to keywords
 - polarities, sentiments
 - (sub)topics, attributes, locations, brands

- Are the qualitative topics marked as relevant in the quantitative analysis?
- How the topics are constructed and reflected?
- What are the new topics?
- What kind of relations are between the topics?

Results

(1) Purchase of NPS *“Could anyone please write opinion about Party Chemicals’ [vendor name] ROYAL SMOKER [brand name] ????! Is it as strong as Gold’s [other vendor], or better or weaker?”*

(2) Reliability of vendors (FAIR/FRAUD) *“We are trying. Thanks to the forum, the inquiry is big. We will post on Thursday, and we hope that new vendor stereotypes will avoid us and based on your evaluation we can sign up among the FAIR-Vendors. :) Have a nice day Forum-users!”*

“This webpage is a gipsy fraud. They are sending baking soda!!”

(3) Legal status of various substances *“Thanks, you are really helpful, and I’m happy that you would help, but I’m not looking for a vendor! I wrote that I can order, I have the person from whom! I’m interested in the customs, how seriously they take the 50-60-gram packs?”*

(4) Drug use patterns *“They don’t know how to use this, they are just hanging there on the dunghill and dunno fucking anything.”*

(5) Conflicts in the vending process *“You’ll go to jail. The NAV [national tax authority] is already checking your mailbox and post. Take care!”*

Results

The discussion's main topic was vendor reliability and fraud more negative than positive phrases attached

Discussants:

- low levels of literacy**
- weak knowledge of substance legality**
- inadequate resources to provide peer-help harm reduction**

Drug use purpose: 'escape from reality' (not positive recreation)!

Conclusions

Efficient indicated prevention interventions and harm reduction measures are needed to target disadvantageous online NPS user groups having little or no resources for self-help!

Thanks for your attention!

