

Assessing Psychosocial Experiences of People in Addiction Recovery Using the CHES Health Connections App

App users' messages, escalations, and social wall posts analysis.

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Introduction

CHES Health's Connections is an evidence-based app that assists individuals in recovery from substance use disorder (SUD), including opioid use disorder (OUD) and stimulant use disorder (StUD). The West Virginia Department of Health and Human Resources (DHHR), Bureau for Behavioral Health (BBH), utilizes the Connections app with support from the State Opioid Response (SOR) grant through the Substance Abuse and Mental Health Services Administration, with the goal of increasing access to OUD and StUD prevention, treatment, and recovery services. Progress toward recovery among this population has been demonstrated quantitatively¹, but little is known about the qualitative experiences of individuals.



Figure 1. CHES Health's Connections app home screen displayed on a cell phone.

Abstract

Objective

To assess how people in recovery from SUD experienced psychosocial changes or events while engaged with the CHES Health Connections app.

Method

Sentiment analysis and content analysis were utilized to examine de-identified qualitative comments posted in the CHES Health Connections app by users from January 2023 through March 2023. First, the team conducted a sentiment analysis using ATLAS.ti software. This automated procedure scanned data and coded excerpts as "positive," "negative," or "neutral." Second, team members manually reviewed excerpts and codes to (a) confirm the accuracy of codes (and recode as needed) and (b) apply one or more specific codes to elaborate upon positive and negative phenomena. Quantitative counts of the qualitative data resulted.

Results

A total of 1,991 excerpts were analyzed over three months, with analysis ongoing. This included 1,147 neutral, 778 positive, and 66 negative excerpts. Positive categories included: sobriety (270), sobriety tools, strategies, confidence (199), enhanced engagement with the app (193), supportive relationships (112), constructive life activities (92), mental health or well-being (47), physical health (2). Negative categories included: sobriety tools or strategies (13), sobriety (12), mental health or well-being (11), supportive relationships (11), constructive life activities (9), physical health (5), and financial stability (1). All comment categories were largely positive with the only two exceptions being the physical health and financial stability categories.

Conclusion

CHES Health's Connections users in WV expressed many positive psychosocial changes or events, most notably sobriety and the espousal of tools, strategies, or confidence to support sobriety. The CHES Health Connections app provides a platform for sharing these accomplishments with peers².

Methods



Figure 2. Methods. Data examination occurred in two stages using sentiment and content analysis.

Positive: INCREASE (or maintenance) of the following:	Negative: DECREASE (lack) of the following:	Definition
		Constructive life activities
		Events or activities indicative of successful functioning such as work, school, or family responsibilities
		Financial stability
		Steady personal or family finances
		Mental health or well-being
		Positive emotional state, broadly defined (not just absence of mental illness)
		Miscellaneous
		Phenomena not fitting the other categories
		Physical health
		Positive physical state, broadly defined (not just absence of disease)
		Sobriety
		A reported period of sobriety
		Sobriety tools or strategies
		Practices to support sobriety (or build confidence in ability to abstain) such as coping strategies, routines, self-reflection, or spirituality
		Supportive relationships
		Positive and fulfilling relationships, including mentor relationships
		Enhanced engagement via app
		Achievement of "badges" or "levels" within CHES, earned based on CBT lessons, socializing, posting/replying, journaling, or related activities

	Definition
Neutral	Statements with no relevance to positive/negative items (e.g., advice or congratulations)
	Intentions to engage in certain activities, but with no action or behaviors
	Positive or negative experiences in the past (i.e., pre-CHES)
	Unseen photos or pictures (as visual images were not included in the deidentified data set)
	Unclear statements

Figure 3. Coding. Positive, Negative and Neutral definitions.

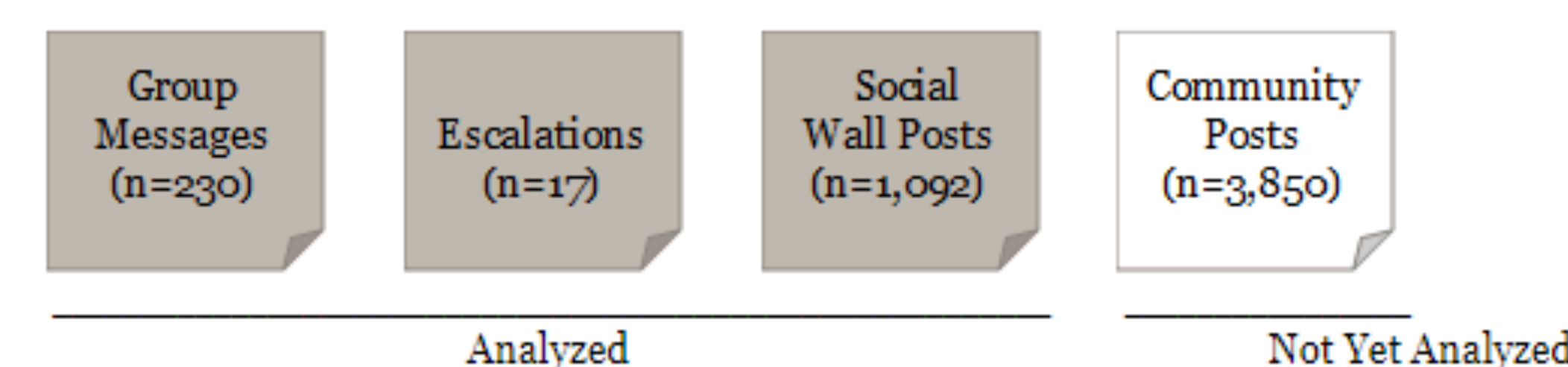


Figure 4. Four qualitative data sources were available via the CHES Health's Connections app for analysis.

- Group message:** Discussion content among a defined group which tends to center on specific topics
- Escalation:** Content identified in a member's message/post which is categorized to prompt engagement with CHES Health's staff (Categories: Reported Use, Not Confident, Safety, Misconduct, Other)
- Social wall post:** Text, images, or other content posted within specific categories on a social wall (Categories: Badge Earned, Level Up, Picture, Recovery Streak, Sobriety Milestone, Text)
- Community post:** Textual content posted among a CHES Health's Connections community

Results

Overall

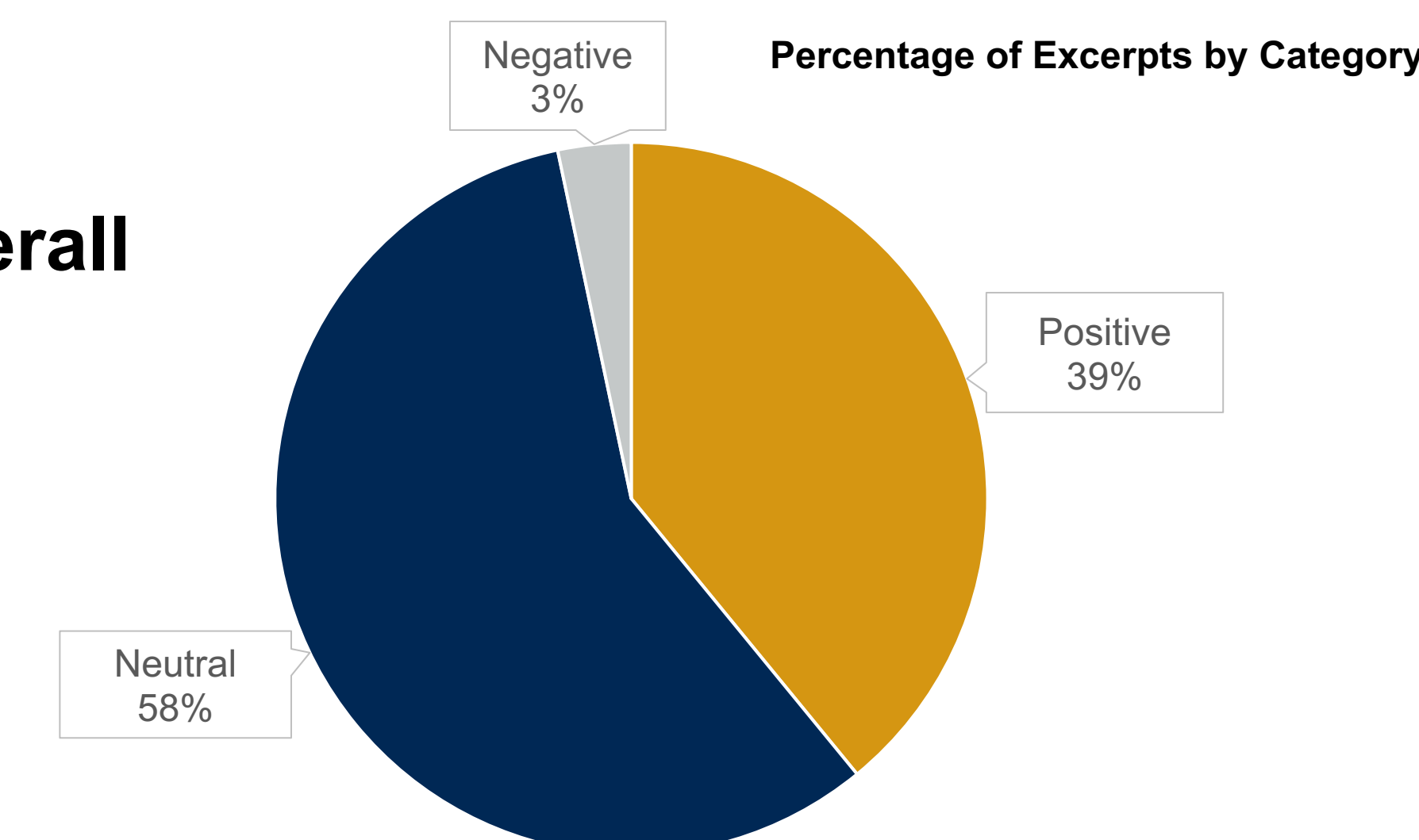


Figure 5. A total of 1,991 excerpts were analyzed over three months, with analysis ongoing. This included 1,147 neutral, 778 positive, and 66 negative excerpts.

Positive Categories

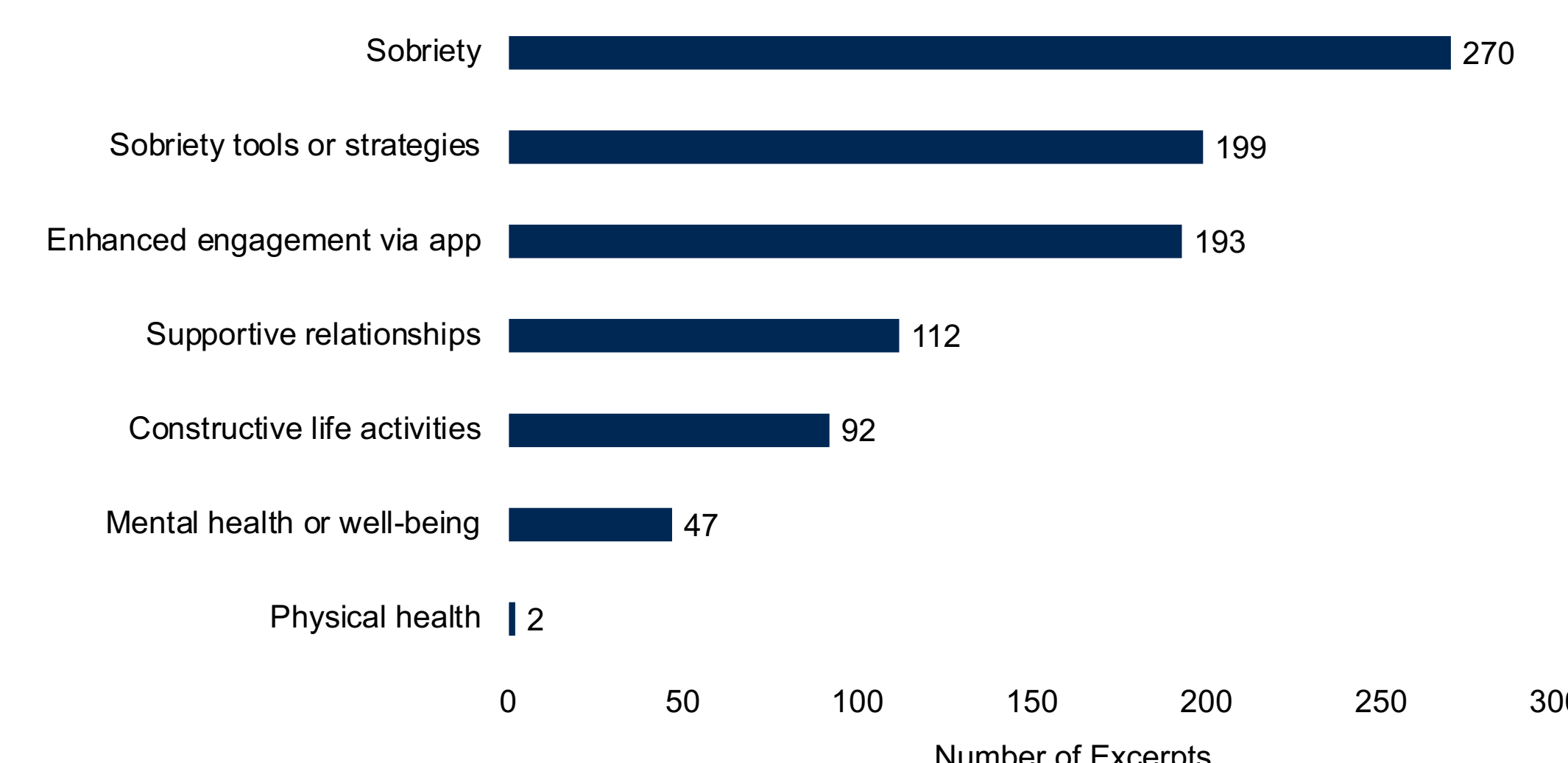


Figure 6. Positive categories included: sobriety (270), sobriety tools, strategies, confidence (199), enhanced engagement with the app (193), supportive relationships (112), constructive life activities (92), mental health or well-being (47), physical health (2).

Negative Categories

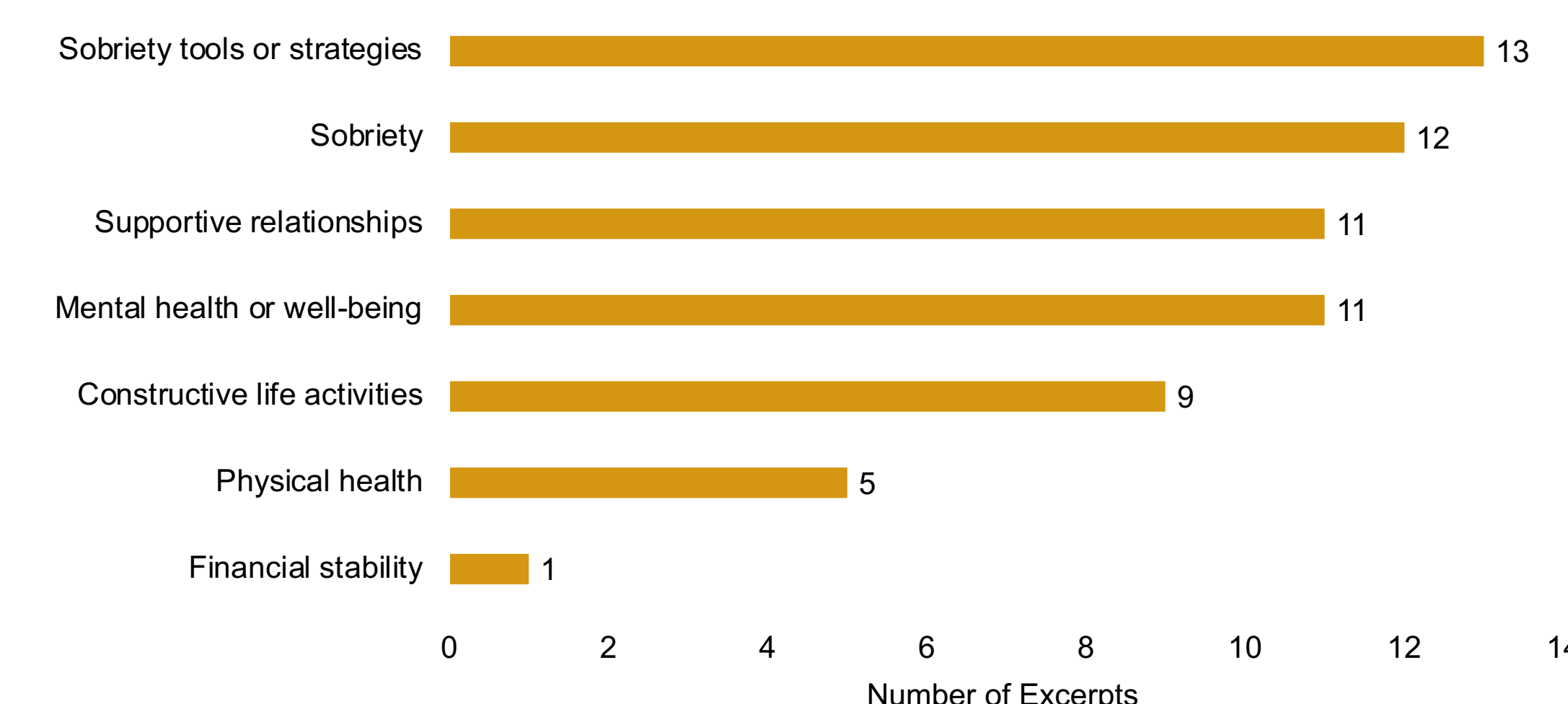


Figure 7. Negative categories included: sobriety tools or strategies (13), sobriety (12), mental health or well-being (11), supportive relationships (11), constructive life activities (9), physical health (5), and financial stability (1).

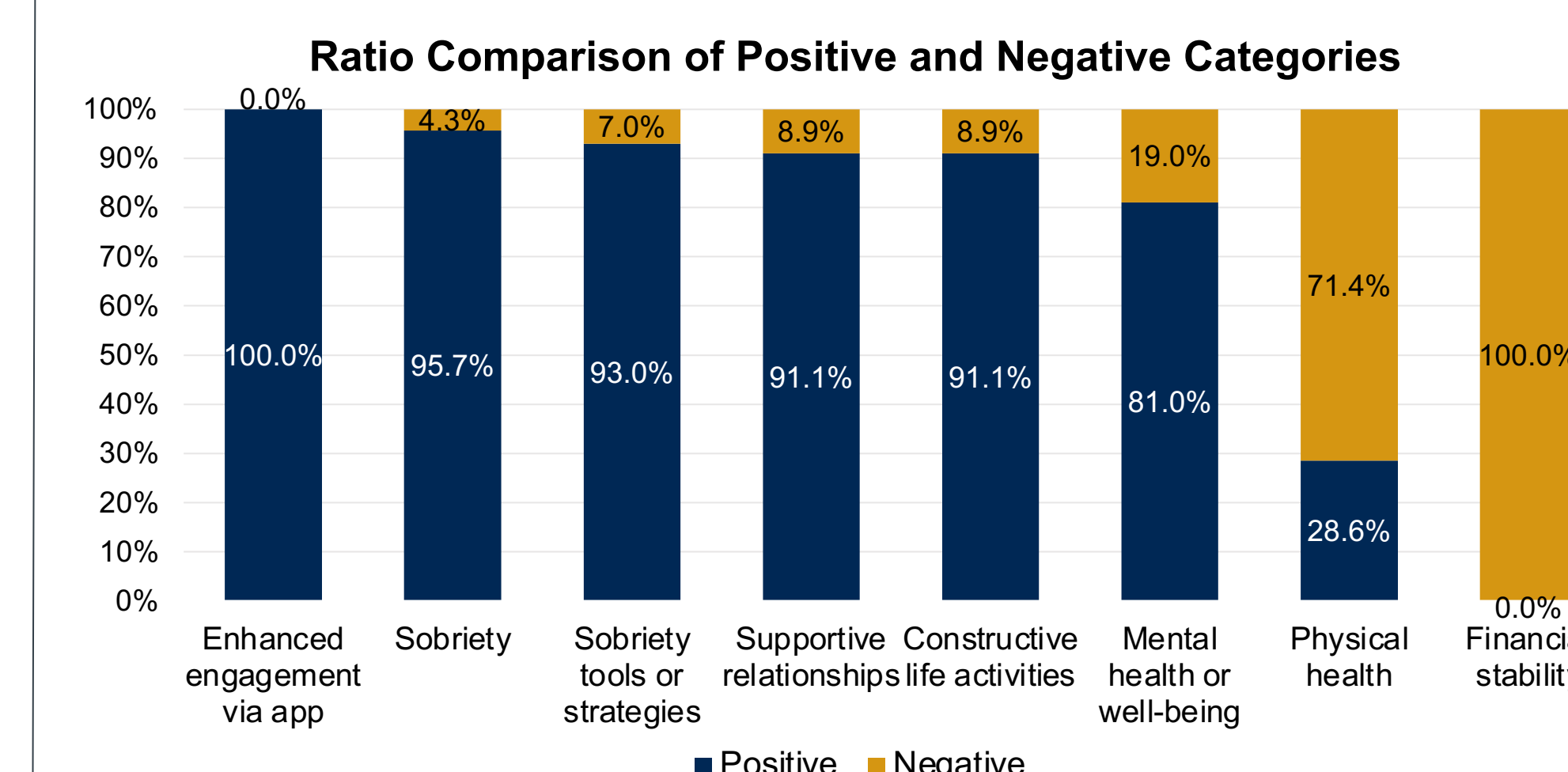


Figure 8. A percentage ratio comparison of positive and negative categories. Only two categories (physical health and financial stability) had a higher number of negative excerpts. Physical health had 2 positive excerpts and 5 negative, while financial stability had 0 positive excerpts and 1 negative.

Conclusions

- CHES Health's Connections app users in WV expressed many positive psychosocial changes or events, most notably sobriety and the espousal of tools, strategies, or confidence to support sobriety.
- All comment categories had by far more positive than negative comments except for physical health and financial stability (although those categories had a very low number of comments).
- CHES Health's Connections app provides users in WV a platform for sharing accomplishments with peers.

References

- Gustafson, D.H., Landucci, G., McTavish, F. et al. The effect of bundling medication-assisted treatment for opioid addiction with mHealth: study protocol for a randomized clinical trial. *Trials* 17, 592 (2016). <https://doi.org/10.1186/s13063-016-1726-1>
- CHES Health. (2023). Connections App. <https://www.ches.health/recovery/connections-app/>

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