

The measurement of substance use disapproval: different information capacity of disapproval of licit and illicit psychoactive substances along a spectrum of substance use disapproval

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Objectives: Approval/disapproval of substance use behavior might have a role in the development and persistence of substance use. However, less is known about the measurement function of disapproval of using different types of psychoactive substances. By using item response analyses, the present study aimed to examine the latent structure as well as item-level measurement properties of the construct of substance use disapproval. **Methods:** Nationally representative adult samples derived from the National Survey on Addiction Problems in Hungary from 2015 (N=2274) and 2019 (N=1385) were used in the present study. Dichotomous items measured the disapproval of eleven forms of substance use, such as smoking cigarettes, drinking alcohol and different forms of illicit drug use. **Results:** A unidimensional measurement model of substance use disapproval was supported. Item response analyses indicated that disapproval of alcohol use and cigarette smoking had moderate discrimination capacity and were located at moderately low-moderately high levels of the substance use disapproval continuum, whereas illicit substance use forms had high-very high discrimination capacities and were ranged at low-very low levels of the disapproval spectrum. Disapproval of experimenting with heroin, ecstasy and designer stimulants had the highest information capacity in 2015, whereas in 2019 disapproval of experimenting with synthetic cannabinoids and experimenting with and using occasionally cannabis were the most informative. **Conclusions:** Less permissive attitudes were shown for all forms of illicit drug use compared to alcohol and cigarette use. Discrimination and difficulty levels of disapproval of substance use might be associated with legal status of psychoactive substances.

(Neuropsychopharmacol Hung 2022; 24(2): 85–94)

Keywords: attitudes, disapproval, item response theory (IRT), measurement, substance use

BACKGROUND

Substance use can be conceptualized as a social behavior. Therefore, positive evaluation is attached for some forms of substance use in the society (e.g., moderate alcohol drinking can be an indicator of higher social-economic status), whereas other forms of substance use (e.g., heroin use) are negatively evaluated and sanctioned socially, morally or by governmental policies and laws (Room, 2005). Empirical findings and theoretical models (e.g., theory of planned behavior) (Ajzen, 1991) highlight the exploratory role of attitudes towards substance use in terms of development and persistence of substance use (Chawla et al., 2007; Salloum et al., 2018). Personal disapproval of substance use behavior is considered an important element of these attitudes. Previous studies reported that for various psychoactive substances (e.g., cigarette smoking, alcohol drinking, new psychoactive substance use), disapproval is bidirectionally and negatively associated with substance use outcomes (Lipperman-Kreda & Grube, 2009; Palamar et al., 2018; Patrick et al., 2010). That is, lower levels of personal disapproval can influence earlier initiation and higher frequency levels of substance use, whereas substance use behavior also has a decreasing effect on substance use disapproval (Patrick et al., 2010).

Questions regarding personal disapproval of different forms of substance use are included in various epidemiologic studies, such as in the European Model Questionnaire (EMQ) by the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) (European Monitoring Centre for Drugs and Drug Addiction, 2002). However, to the best of the Authors' knowledge, limited data are available on the psychometric properties of the construct of substance use disapproval. By using item response theory (IRT), the present study aimed to examine the latent structure as well as item-level measurement properties of the construct of substance use disapproval. IRT is widely used statistical method in psychometrics which assumes that observed indicators of a construct (e.g., items measuring disapproval of different substance use forms) can be placed along a latent, not directly observable trait (e.g., disapproval of substance use). This approach can express the relationship between the observed indicators and the underlying latent trait by informing about the severity or position of an observed indicator along the latent trait and by quantifying how well an observed indicator can differentiate people at a given level of the latent trait.

As previous studies did not examine differences in information capacity of disapproval of different forms of substance use along a hypothesized substance use disapproval continuum (possibly ranging between not disapproving any substance use forms and disapproving all substance use forms), it might be possible to obtain a more detailed understating on the measurement of substance use disapproval by using IRT.

METHODS

Participants and procedure

Data of the present study were derived from the National Survey on Addiction Problems in Hungary (NSAPH). The NSAPH uses a cross-sectional study design, but different samples are collected in periodically repeated survey rounds. The present study used samples of surveys from 2015 and 2019 (Paksi et al., 2017, 2021). Both samples were nationally representative for Hungarian adults in terms of age (between 18-64 years), size and geographic location of residence. In the NSAPH 2015 young adults (aged between 18-34 years) were overrepresented. The net sample size for NSAPH 2015 and NSAPH 2019 was 2274 and 1385, respectively (NSAPH 2015: mean age: 41.56 years [SD=13.20], females: 53.84% [weighted N=802]; NSAPH 2019: mean age: 41.77 years [SD=13.08], females: 53.20% [weighted N=737]).

Measures

Questions regarding personal disapproval of different forms of substance use were derived from the European Model Questionnaire (EMQ) by the EMCDDA (2002). Respondents were asked to rate their level of disapproval on the following forms of substance use: (i) smoking 10 or more cigarettes a day, (ii) drinking 1 or 2 alcoholic drinks multiple times a week, (iii) experimenting with cannabis, (iv) using cannabis occasionally, (v) using cannabis regularly, (vi) experimenting with synthetic cannabinoids, (vii) experimenting with designer stimulants, (viii) using designer stimulants regularly, (ix) experimenting with ecstasy, (x) experimenting with heroin, (xi) experimenting with tranquilizers without medical approval. Originally, responses were provided on a three-point scale (0=not disapproving, 1=disapproving, 2=strongly disapproving). However, to ease interpretation and avoid low bivariate cell

counts in IRT analyses, dichotomized variables were used during analyses (0=not disapproving, 1=disapproving or strongly disapproving). Very high levels of internal consistency were present for these items in both samples (Sample 2015: $\omega=0.98$; Sample 2019: $\omega=0.99$).

Data analysis

All psychometric analyses were performed in Mplus (Muthén & Muthén, 2017) by using the Weighted Least Squares Means and Variance adjusted (WLSMV) estimation method and sampling weights. A unidimensional model of substance use disapproval was estimated based on the beforementioned eleven dichotomous indicators. In unidimensional IRT models discrimination (i.e., differentiating between individuals who disapprove and do not disapprove substance use at different levels of the substance use disapproval continuum) and difficulty parameters (i.e., disapproval severity of an item on the substance use disapproval continuum) were interpreted. One (1PL) and Two Parameter Logistic (2PL) IRT models were estimated and compared. In the 1PL IRT model the difficulty parameters were freely estimated, while discrimination parameters were fixed as equal. In the 2PL IRT model the difficulty and discrimination parameters were freely estimated. To examine changes between the two samples in substance use disapproval characteristics, configural and scalar invariance models were considered and compared. In the configural invariance model the invariance of the unidimensional factor structure was tested between the two survey samples, while factor loadings/discrimination parameters and thresholds/difficulty parameters were freely estimated between the groups. In the scalar invariance model the invariance of the factor loadings/discrimination parameters and thresholds/difficulty parameters was tested, thus factor loadings/discrimination parameters and thresholds/difficulty parameters were fixed as equal between the two samples. The metric invariance model (i.e., testing the invariance of the factor loadings/discrimination parameters) was not identified because of the applied WLSMV estimation method. Model fit and comparison of the IRT and measurement invariance models was evaluated based on the Root Mean Squared Error of Approximation (RMSEA), the Comparative Fit Index (CFI), the Tucker-Lewis Index (TLI). In the cases of the CFI and the TLI, values between 0.900-0.950 indicate adequate model fit, while

values above 0.950 indicate optimal model fit. For the RMSEA, values between 0.080-0.050 indicate adequate model fit, while values below 0.050 indicate optimal model fit. In the cases of measurement model comparisons (i.e., 1PL IRT model vs. 2PL IRT model; configural invariance model vs. scalar invariance model) Chi-square difference test ($\Delta\chi^2$) was calculated by using the DIFFTEST option in Mplus (Muthén & Muthén, 2017). Significant $\Delta\chi^2$ results indicate that the less restrictive and more complex model (with lower degrees of freedom and higher number of free parameters) fits significantly closer to the data compared to the more restrictive and parsimonious model (with higher degrees of freedom and lower number of free parameters). However, due to the sensitivity of the χ^2 in larger samples, in measurement model comparisons differences in RMSEA and CFI were considered primarily. Considerable differences between two models can be assumed if the changes in RMSEA and CFI exceeds 0.015 and 0.010, respectively (Chen, 2007).

RESULTS

Preliminary analyses

Table 1 presents comparison of disapproval rates of different substance use forms between surveys from 2015 and 2019. The lowest disapproval rates were shown for drinking 1 or 2 alcoholic drinks multiple times a week (40.05-49.30%) and smoking 10 or more cigarettes a day (54.39-63.51%), while any form of illicit substance use had very high disapproval rates ($\geq 86.09\%$) at both samples. Considering non-overlapping 95% confidence intervals of the disapproval prevalence rates and significant χ^2 tests, in the sample from 2019 significantly lower disapproval rates were shown for smoking 10 or more cigarettes a day, drinking 1 or 2 alcoholic drinks multiple times a week, and experimenting with and occasionally using cannabis, compared to the survey sample from 2015. Contrary, disapproval of experimenting with synthetic cannabinoids was significantly higher in the sample from 2019.

Level of model fit and invariance

Model fit of the IRT and measurement invariance models are shown in Table 2. The 2PL IRT model presented adequate-optimal model fit in both samples based on values of the RMSEA, the CFI and the TLI.

Table 1. Comparison of disapproval rates of different substance use forms between surveys from 2015 and 2019

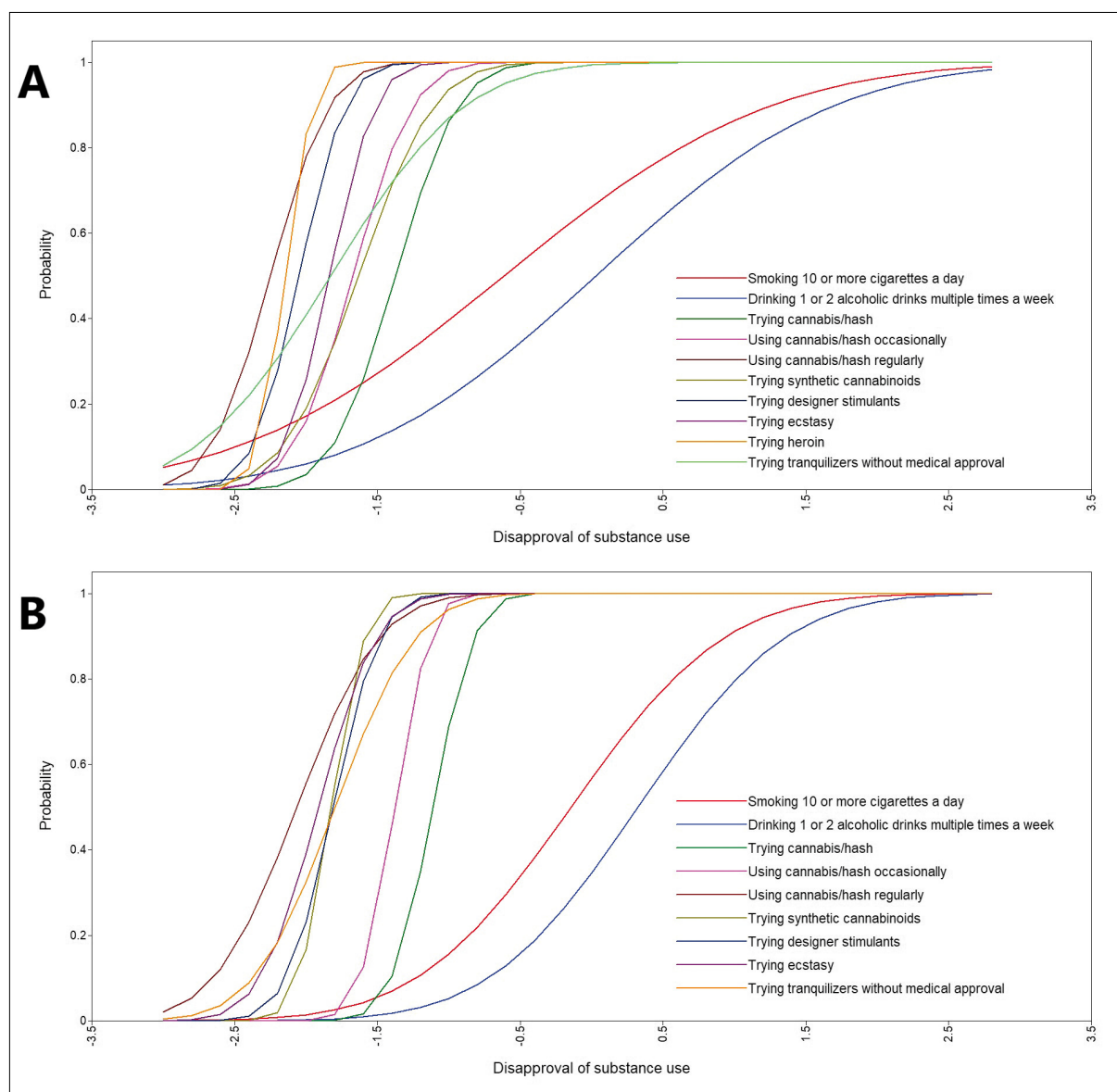
	Survey year: 2015 (N=1490) % [95% CI]	Survey year: 2019 (N=1385) % [95% CI]	χ^2	ϕ
Smoking 10 or more cigarettes a day	63.51% ^b [60.86%-66.16%]	54.39% ^a [51.51%-57.27%]	20.75***	-0.09
Drinking 1 or 2 alcoholic drinks multiple times a week	49.30% ^b [46.56%-52.04%]	40.05% ^a [37.23%-42.87%]	21.01***	-0.09
Experimenting with cannabis	90.35% ^b [88.73%-91.97%]	86.09% ^a [84.08%-88.10%]	10.59**	-0.07
Using cannabis occasionally	94.42% ^b [93.16%-95.68%]	91.23% ^a [89.60%-92.86%]	9.34**	-0.06
Using cannabis regularly	98.36% ^a [97.67%-99.05%]	96.97% ^a [95.98%-97.96%]	5.27*	-0.05
Experimenting with synthetic cannabinoids	93.41% ^a [92.01%-94.81%]	96.34% ^b [95.25%-97.43%]	10.35**	+0.07
Experimenting with designer stimulants	97.62% ^a [96.78%-98.46%]	95.99% ^a [94.86%-97.12%]	5.16*	-0.05
Using designer stimulant regularly	99.21% ^a [98.72%-99.70%]	98.70% ^a [98.05%-99.35%]	1.53 ^{NS}	-0.03
Experimenting with ecstasy	96.24% ^a [95.20%-97.28%]	96.61% ^a [95.56%-97.66%]	0.24 ^{NS}	+0.01
Experimenting with heroin	98.28% ^a [97.57%-98.99%]	97.40% ^a [96.48%-98.32%]	2.27 ^{NS}	-0.03
Experimenting with tranquilizers without medical approval	92.95% ^a [91.54%-94.36%]	94.94% ^a [93.67%-96.21%]	4.16*	+0.04

Note: N- and %-values are weighted. Variables regarding disapproval of different substance use forms are coded as: 0=Not disapproving, 1=Disapproving the given substance use form. % [95% CI]: Prevalence rates [95% Confidence Intervals] of disapproval for different substance use forms. χ^2 : Chi-square statistics and the level of significance: ^{NS}p \geq 0.050; *p<0.050; **p<0.010; ***p<0.001. ϕ : Phi correlation. Prevalence rates of disapproval in the same row that do not share subscripts differ at p<0.050 level (based on non-overlapping 95% confidence intervals).

Table 2. Model fit of IRT and measurement invariance models

	χ^2	df	p	RMSEA [90% CI]	CFI	TLI
Survey year: 2015						
1PL IRT model	907.77	54	<0.001	0.088 [0.083-0.094]	0.959	0.958
2PL IRT model	327.78	44	<0.001	0.057 [0.051-0.062]	0.986	0.983
1PL IRT model vs. 2PL IRT model	513.53	10	<0.001	0.031	0.027	0.025
Survey year: 2019						
1PL IRT model	461.47	54	<0.001	0.079 [0.073-0.086]	0.980	0.980
2PL IRT model	329.75	44	<0.001	0.074 [0.066-0.081]	0.986	0.983
1PL IRT model vs. 2PL IRT model	183.42	10	<0.001	0.005	0.006	0.003
Measurement invariance (2PL IRT model)						
Configural invariance model	656.13	88	<0.001	0.063 [0.059-0.068]	0.986	0.983
Scalar invariance model	683.59	97	<0.001	0.061 [0.057-0.066]	0.986	0.984
Configural invariance model vs. scalar invariance model	40.14	9	<0.001	0.002	0.000	0.001

Note: 1PL IRT model: 1 Parameter Logistic Item Response Theory Model. 2PL IRT model: 2 Parameters Logistic Item Response Theory. χ^2 : Chi-square test of model fit. RMSEA [90% CI]: Root Mean Squared Error of Approximation [90% Confidence Interval]. CFI: Comparative Fit Index. TLI: Tucker-Lewis Index. In the cases of measurement model comparisons, χ^2 represents the Chi-square difference test ($\Delta\chi^2$). In measurement model comparisons, differences in RMSEA, CFI and TLI between the two given model were also considered.

Figure 1. Substance use disapproval item characteristic curves from 2015 (A) and 2019 (B).

Only items with significant discrimination parameters are presented in the figures to avoid misinterpretation of item information capacities (see further: Table 3).

Compared to the 1PL IRT model, the 2PL IRT model showed considerably higher levels of model fit (based on changes in the RMSEA and the CFI) in the sample from 2015 and slightly higher levels of model fit in the sample from 2019. The $\Delta\chi^2$ also suggested that the 2PL IRT model fits significantly closer to the data than the 1PL IRT model. Therefore, the 2PL IRT model was selected for further analyses. Model fit of the configural and scalar invariance models was considered adequate-optimal based on values of the RMSEA, the CFI and the TLI. The more restrictive scalar invariance model did not present decrease

in model fit compared to the configural invariance model based on changes in the RMSEA and the CFI, which indicated that factor loadings/discrimination parameters and thresholds/difficulty parameters were invariant between the two samples.

Item response analyses

Item discrimination and difficulty characteristics are presented in Figure 1 and Table 3. Discrimination parameters for disapproval of smoking 10 or more cigarettes a day and drinking 1 or 2 alcoholic

Table 3. Standardized factor loadings and IRT parameters of the substance use disapproval factor

Survey year	Standardized factor loadings λ (S.E.)		IRT discrimination parameters α (S.E.)		IRT difficulty parameters β (S.E.)	
	2015	2019	2015	2019	2015	2019
Smoking 10 or more cigarettes a day	0.56*** (0.03)	0.76*** (0.03)	0.68*** (0.06)	1.18*** (0.11)	-0.61*** (0.07)	-0.14** (0.05)
Drinking 1 or 2 alcoholic drinks multiple times a week	0.61*** (0.03)	0.77*** (0.04)	0.76*** (0.07)	1.22*** (0.14)	0.03 ^{NS} (0.06)	0.32*** (0.05)
Experimenting with cannabis	0.95*** (0.01)	0.98*** (0.01)	2.89*** (0.31)	4.38*** (1.22)	-1.38*** (0.05)	-1.11*** (0.05)
Using cannabis occasionally	0.95*** (0.01)	0.98*** (0.01)	3.04*** (0.44)	5.20** (1.96)	-1.67*** (0.06)	-1.38*** (0.06)
Using cannabis regularly	0.95*** (0.02)	0.91*** (0.02)	3.08*** (0.60)	2.20*** (0.34)	-2.25*** (0.10)	-2.07*** (0.11)
Experimenting with synthetic cannabinoids	0.92*** (0.01)	0.98*** (0.01)	2.40*** (0.25)	5.47*** (1.23)	-1.63*** (0.06)	-1.82*** (0.07)
Experimenting with designer stimulants	0.97*** (0.01)	0.97*** (0.01)	3.92*** (0.77)	3.89*** (0.63)	-2.05*** (0.08)	-1.81*** (0.08)
Using designer stimulant regularly	0.99*** (0.02)	0.98*** (0.02)	8.23 ^{NS} (10.16)	4.61 ^{NS} (2.42)	-2.42*** (0.11)	-2.29*** (0.13)
Experimenting with ecstasy	0.97*** (0.01)	0.95*** (0.01)	3.99*** (0.63)	3.14*** (0.41)	-1.84*** (0.06)	-1.91*** (0.08)
Experimenting with heroin	0.99*** (0.01)	1.00*** (0.01)	6.55** (2.44)	14.77 ^{NS} (32.72)	-2.15*** (0.08)	-1.94*** (0.08)
Experimenting with tranquilizers without medical approval	0.80*** (0.03)	0.91*** (0.02)	1.35*** (0.14)	2.24*** (0.30)	-1.83*** (0.09)	-1.80*** (0.08)

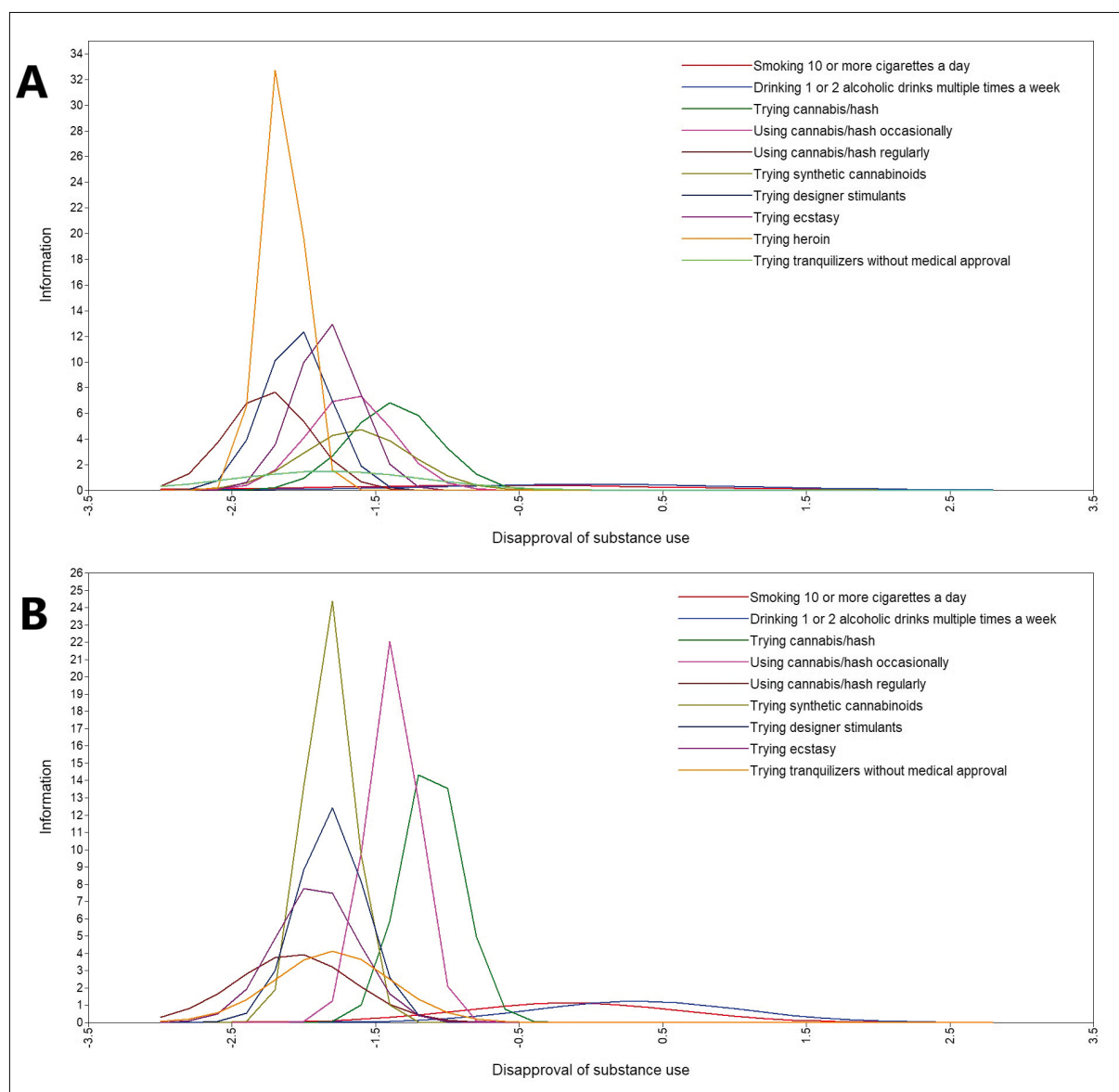
Note: Level of significance: ^{NS} $p \geq 0.050$; * $p < 0.050$; ** $p < 0.010$; *** $p < 0.001$.

drinks multiple times a week were at moderate levels, whereas items measuring disapproval of illicit substance use forms had high-very high discrimination capacities (Baker, 2001). However, non-significant discrimination parameters (with high standard errors) were demonstrated in both samples for disapproval of using designer stimulant regularly, and in the sample from 2019 for experimenting with heroin. Therefore, these items were not considered during examination of item information capacities. Based on the difficulty parameters, disapproval of drinking 1 or 2 alcoholic drinks multiple times a week was positioned at moderate and moderately high levels of the disapproval continuum (i.e., an attitude to disapprove any form of substance use), disapproval of smoking 10 or more cigarettes a day was covered moderately low levels of the disapproval continuum, while illicit substance use forms were located at low-very low levels of the disapproval continuum (i.e., an attitude to disapprove illicit substance use). Difficulty levels of disapproval of different illicit substance forms were not homogenous, for example, using cannabis and designer stimulants regularly

and experimenting with heroin was among at the lowest levels of the continuum, while disapproval of experimenting with cannabis was located at less lower levels. Item information curves are shown in Figure 2. In the sample from 2015, the items measuring disapproval of experimenting with heroin, ecstasy and designer stimulants had the highest information capacity, whereas in the sample from 2019 the items measuring disapproval of experimenting with synthetic cannabinoids and experimenting with and using occasionally cannabis were the most informative ones.

DISCUSSION

Overall, very high levels of disapproval were shown for any form of illicit substance use, while lower levels of disapproval rates were presented for licit substance use forms (i.e., alcohol drinking and cigarette smoking). These findings correspond with previous data which showed that the Hungarian population has less tolerant attitude towards cannabis use (compared to other European countries) (Cao & Zhao, 2012).

Figure 2. Substance use disapproval item information curves from 2015 (A) and 2019 (B).

Only items with significant discrimination parameters are presented in the figures to avoid misinterpretation of item information capacities (see further: Table 3).

Regarding the latent structure of substance use disapproval, a unidimensional measurement model was supported. In other words, this model suggested a latent continuum of substance use disapproval: low levels of the substance use disapproval spectrum can indicate a tendency to disapprove illicit substance use forms and moderate and moderately high levels can inform about an attitude to disapprove any form of substance use. This concept of the substance use disapproval continuum suggests interrelationship between disapproval of different substance use forms and shows some similarities with previous findings

which indicated that there is an overlap between attitudes towards different types of substances (Lund et al., 2016). IRT analyses showed that within the spectrum, disapproval of drinking 1 or 2 alcoholic drinks and smoking 10 or more cigarettes a day were located between moderately low-moderately high levels, while illicit substance use forms were ranged at low-very low levels of the disapproval continuum. Discrimination parameters for disapproval of the two licit substance use variables were at moderate levels, whereas disapproval of illicit substance use forms had high-very high discrimination capacities. That is, licit

or illicit status of a given substance use form might have to be considered when examining differences in measurement parameters along the spectrum of substance use disapproval. Similarly, previous studies reported association between the legal status and attitudes towards substance use (Steigerwald et al., 2020). Among the included substance use forms, disapproval of experimenting with heroin, ecstasy and designer stimulants had the highest information capacity in 2015, whereas in 2019 disapproval of experimenting with synthetic cannabinoids and experimenting with and using occasionally cannabis were the most informative. In other words, these forms of illicit drug use had the highest capacity to differentiate between individuals who disapprove and do not disapprove licit substance use as these items were located at low levels of the substance use disapproval continuum.

LIMITATIONS

The cross-sectional design of the present study impeded to examine within-person variations, causal mechanisms, longitudinal invariance in substance use disapproval. The applied measurement of substance use disapproval did not capture the full information due to the dichotomous measurement of disapproval (instead of using polytomous scales), the absence of measuring substance use approval and other forms of substance use (e.g., LSD, other alcohol use and cigarette smoking patterns). Finally, the analyses did not explore how sociodemographic covariates might influence difficulty and discrimination parameters of disapproval of different forms of substance use.

CONCLUSIONS

The present study aimed to further the understanding on the measurement properties of substance use disapproval. Thus, by using IRT analyses, the latent structure as well as item-level measurement properties of the construct of substance use disapproval was examined. Findings of the present study showed that indicators of substance use disapproval can be placed along a latent continuum of substance use disapproval and have different capacity to differentiate people at different levels of this latent spectrum. These findings can be indicative for future studies to measure disapproval of those forms of substance use which have high discrimination capacity and cover a broad range of the disapproval spectrum. The analyses also revealed changes between the two

survey samples in prevalence levels and information capacity of disapproval of some forms of substance use. Therefore, it would be necessary for future studies to examine how changes in drug policy and social context (e.g., communication and representation about drugs in media and political dialogues) might affect measurement functions of the indicators of substance use disapproval.

LIST OF ABBREVIATIONS

α : Item response theory discrimination parameters
 β : Item response theory difficulty parameters
 χ^2 : Chi-square test
 $\Delta\chi^2$: Chi-square difference test
 ω : Omega reliability index
 ϕ : Phi correlation
 λ : Standardized factor loadings
1PL: One Parameter Logistic
2PL: Two Parameter Logistic
CFI: Comparative Fit Index
CI: Confidence Interval
EMCDDA: European Monitoring Centre for Drugs and Drug Addiction
EMQ: European Model Questionnaire
IRT: Item Response Theory
M: Mean
NSAPH: National Survey on Addiction Problems in Hungary
RMSEA: Root Mean Squared Error of Approximation
SD: Standard Deviation
S.E.: Standard Error
TLI: Tucker-Lewis Index
WLSMV: Weighted Least Squares Means and Variance adjusted

DECLARATIONS:

Ethics approval and consent to participate. Authors declare that all procedures followed the ethical standards of the Declarations of Helsinki. Informed consent was obtained from all the participants for being included in the study. The study protocols have been approved by the Research Ethics Committee (REC) at the Faculty of Education and Psychology of ELTE Eötvös Loránd University (protocol numbers: 2015/76, 2019/212).

Availability of data and materials. The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Competing interests. The authors declare that they have no known competing financial interests or personal relation-

ships that could have influenced the work reported in this paper.

Funding Sources. The study was supported by the National Research, Development and Innovation Office (K128604; KKP126835; TKP2020-IKA-05). ZH was supported by the ÚNKP-20-3 and by the ÚNKP-21-4 New National Excellence Programmes of the Ministry for Innovation and Technology from the source of the National Research, Development and Innovation Fund.

Authors' contributions. All authors have critically revised the manuscript and approved its final version. ZH: Conceptualization, Formal analysis, Data Curation, Visualization, Writing - Original Draft, Writing - Review & Editing; AM: Conceptualization, Methodology, Investigation, Data Curation, Writing - Review & Editing; BP: Conceptualization, Methodology, Investigation, Data Curation, Writing - Review & Editing; ZD: Conceptualization, Methodology, Investigation, Writing - Review & Editing; KF: Conceptualization, Methodology, Investigation, Writing - Review & Editing.

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A szerhasználat helytelenítésének mérése: legális és illegális pszichoaktív szerhasználati formák helytelenítésének eltérő információs tartalma egy szerhasználat helytelenítési spektrum mentén

Célkitűzések: A szerhasználati viselkedés helyeslésének/helytelenítésének szerepe lehet a szerhasználat kialakulásában és fennmaradásában. Ugyanakkor kevesebb információ áll rendelkezésre a különböző pszichoaktív szerhasználati formák helytelenítésének mérési jellemzőivel kapcsolatban. Jelen tanulmány célja, hogy tételválasz-elemzés használatával megvizsgálja a szerhasználat helytelenítésének látens struktúráját, valamint a különböző szerhasználati formákat mérő tételek pszichometriai jellemzőit. **Módszer:** A tanulmányban a 2015-ös (N=2274) és 2019-es (N=1358) Országos Lakossági Adatfelvétel az Addiktológiai Problémákról vizsgálat reprezentatív, felnőtt mintái kerültek felhasználásra. Dichotóm pontozású tételek révén 11 szerhasználati forma helytelenítése került felmérésre (pl. dohányzás, alkoholhasználat, illegális droghasználat különböző formái). **Eredmények:** A szerhasználat helytelenítésének egyfaktoros mérési modelljét támogatták az adatok. A tételválasz-elemzés eredményei alapján az alkoholhasználat és a dohányzás helytelenítése mérsékelt diszkriminációs kapacitással volt jellemezhető, ill. ezen tételek leginkább a szerhasználati helytelenítés kontinuumának mérsékelt alacsony és mérsékelt magas szintjein mutatott a legmagasabb információtartalmat. Az illegális droghasználat különböző formáinak helytelenítése magas és nagyon magas diszkriminációs kapacitást mutatott, mely tételek a szerhasználati helytelenítés kontinuumának nagyon alacsony és alacsony tartományokban rendelkeztek a legmagasabb információtartalommal. A 2015-ös adatfelvétel során a heroin, az ecstasy és a designer stimulánsok kipróbálásának helytelenítését mérő tételek rendelkeztek a legmagasabb szintű információtartalommal. A 2019-es adatfelvétel során a szintetikus kannabinoidok és a kannabisz kipróbálásának, valamint a kannabisz alkalmi használatának helytelenítését mérő tételek nyújtották a legmagasabb szintű információtartalmat. **Következtetések:** Az illegális droghasználati formák esetében kevésbé megengedő attitűdök voltak láthatóak, az alkoholhasználat és a dohányzással összevetve. A szerhasználati helytelenítést mérő tételek diszkriminációs és nehézségi kapacitása összefüggést mutathat az adott pszichoaktív szer jogi státuszával.

Kulcsszavak: attitűdök, helytelenítés, tételválasz-elmélet, mérés, szerhasználat