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Measuring internet use: comparisons of different assessments and with internet addiction

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Abstract

Background: The measurement of Internet use is an under-documented topic despite the worldwide growth of problematic Internet use and the recent debate in addiction research suggesting that heavy use over time should be suitable for population-based assessment. This study compared different measures of Internet use to identify the most relevant one, and tested whether Internet use was a good proxy of self-reported Internet addiction.

Methods: Data were collected in the ado@internet.ch study among 3054 Swiss 8th grade adolescents. Different assessments of Internet use (frequency, number of hours spent on Internet, quantity-frequency measure, latent score) were compared using rank invariance across instruments. We also examined associations of Internet use with health outcomes (Internet addiction, wellbeing, somatic health problems, and quantity of sleeping). Additionally, associations of Internet addiction with health outcomes were investigated.

Results: Quantity-frequency captured 82% of the variability of average quantity and 64% of the variability of frequency, whereas the latent score captured respectively 94% and 52%. Regression models showed that frequency displayed the lowest associations with Internet addiction ($b = 0.128$) and wellbeing ($b = -0.038$). The associations of other Internet use measures were very similar. Associations of Internet addiction with wellbeing were higher than those of Internet use with wellbeing, whereas the other associations were similar.

Conclusions: The quantity-frequency appeared as the most reliable and straightforward measure of Internet use. However, Internet use seemed to be only one factor in Internet addiction. This study was a first step toward proposing a unique relevant tool of Internet use in epidemiological research.

Keywords: Adolescents; behavioral addiction; internet use; population-based sample

Measuring internet use: comparisons of different assessments and with internet addiction

Introduction

A recent debate in addiction research has suggested that the variable, heavy substance use, should be a suitable indicator of substance use disorder among population-based samples (Rehm et al. [17]; Nutt & Rehm [15]). Indeed, heavy use is a key criterion for substance abuse (Rehm et al. [17]; Rehm et al. [16]; Kraus [9]) and its self-reported measurement does not share the same issues as self-reported addiction scales, such as misunderstanding of questions and symptoms (Slade et al. [21]) and stigmatization (Schomerus et al. [20]; Rehm et al. [17]; Glass et al. [4]; Nutt & Rehm [15]). Moreover, use over time may also allow for the monitoring of behaviors. This debate also extended to behavioral addictions such as Internet use, gaming or gambling (Weinstock et al. [27]; Rehm et al. [16]; Kraus [9]). Indeed, Internet use and heavy use is correlated to behavioral addiction, such as gambling (Sassen et al. [19]), Internet gaming (Lemmens et al. [12]), and Internet addiction (Király et al. [8]; Suris et al. [24]). On the contrary, a recent study highlighted that heavy substance use may not be a proxy of Internet addiction, since they do not overlap to a large extent (Baggio et al. [1]).

Despite its importance, few validation studies concerning use over time occur in the epidemiological literature. Alcohol use is a well-documented topic (Gmel et al. [5]), but other substances lack appropriate measures for use over time (e.g. for cannabis; Baggio et al. [2]), and to our knowledge, no studies compared measures of Internet use (Spada [23]). Studies using Internet use refer to a large range of assessments, and no studies have compared measures of Internet use. The simplest one is a measure of frequency using an ordinal scale, such as categories for those who 'never,' 'seldom,' 'sometimes,' 'often,' or 'always' use the Internet (Kutty & Sreeramareddy [11]). Some studies used a quantitative variable, asking

participants how much time they spent on the Internet over a certain period of time, such as the number of hours per day (Király et al. [8]), and sometimes the number of hours per week (Tonioni et al. [26]). Other studies included a focus on the context of Internet use, such time spent on Internet at home (Smahel, Bradford & Blinka [22]), time spent on Internet for private purposes (Rumpf et al. [18]), and Internet use on weekdays and weekends (Suris et al. [24]; Rumpf et al. [18]). Overall, it seems that each study proposes its own measurement without referring to any validated measure of Internet use or to the psychometric quality of the questions assessed. Unfortunately, it is more difficult to propose a straightforward behavioral measure for Internet use than for other types of substance use, which can be assessed with number of drinks or number of cigarettes (Weinstock et al. [27]).

Time spent on the Internet is the highest for adolescents in comparison with any other age group, and it dramatically rose during the last years, with 97% of the Swiss adolescents using Internet in 2009 (Suris et al. [25]). Therefore, studying Internet use among adolescents is crucial.

This study aimed to compare different measures of Internet use among a population-based sample of Swiss adolescents. Different assessments, including those most frequently used (e.g. frequency of use, number of hours spent on the Internet, and the context of Internet use) and those that have been validated for other substance-related uses (e.g. the quantity-frequency measure), were compared. The comparison was performed using rank invariance across instruments and correlation with health outcomes that are known to be associated with problematic Internet use and overuse, such as Internet addiction (Suris et al. [24]) and detrimental health outcomes (Moreno et al. [13]; Suris et al. [25]; Kuss et al. [10]). Additionally, we also tested whether Internet use was a good proxy of self-reported Internet addiction, investigating associations between these two measures and comparing their respective associations with health outcomes.

Methods

Ethics

The research has been conducted in full accordance with the World Medical Association Declaration of Helsinki. The Ethics Committee of the canton of Vaud approved the study's protocol. All participants were informed about the study and parental consent was sought. It was a tacit consent: parents were informed of the study, and the children of those who did not express disagreement were included in the study.

Participants and procedures

Data were collected from the ado@internet.ch study (Suris et al. [24]), a longitudinal study designed to investigate Internet use among adolescents living in the canton of Vaud in the French-speaking part of Switzerland. This study aimed to fill in the gap of recent data regarding Internet use, problematic Internet use, and associated consequences among a population-sample of adolescents in Switzerland. A representative sample of 35 schools was selected, and all 8th graders in each school were invited to participate ($n = 3367$). A total of 230 adolescents were absent, 60 refused to participate, and 10 were excluded because they did not complete the questionnaire correctly (to the last question of the questionnaire asking whether their answers were sincere enough to be taken into consideration, they answered 'no'). Thus, 3067 adolescents ($M = 14.23$, $SD = 0.01$) participated in the study (91.1% of the initial sample). Missing data were list-wise deleted, which left a final sample of 3,049 participants (99.4% of the sample). This study focused on baseline data, which were collected between 23 April and 4 June 2012. Participants filled in an online form in the schools' computer science rooms and were supervised by a trained research assistant (for 21 schools) or a teacher (for 14 schools).

Measures

Internet use. Questions about Internet use included frequency and quantity. The frequency of Internet use during the previous 30 days was assessed using a 6-point ordinal scale ('no use during the last 30 days,' 'less than once a week,' 'at least once a week,' 'several times per week,' 'at least once a day,' and 'several times per day'). The quantity of Internet use was assessed separately for schooldays and for weekends/holidays by asking participants how much time they spent on average on the Internet on these days. The answers were close-ended: 'no time', 'less than one hour', 'at least one hour but less than two hours', 'at least two hours but less than three hours', 'at least three hours but less than four hours', and 'four hours or more'.

We derived six measures of Internet use from these questions. Ordinal questions were converted into quantitative questions to compute continuous variables, and these conversions were used for all variables in order to be able to compare the different measures. We computed (1) frequency per week (quantitatively recoded: 0, 0.5, 1, 3.5, 7, and 14; using the minimal value for each case, for example 'several time per day' = 2 times per day = 14); (2) quantity on schooldays (recoded quantitatively as a number of hours: 0, 0.5, 1.5, 2.5, 3.5, 4.5); (3) quantity on weekends/holidays (also recoded quantitatively as a number of hours); (4) average quantity, a mean of the number of hours spent per day, weighted according to the number of schooldays and non-schooldays (respectively, 70% and 30%, the proportions of schooldays and non-schooldays in the canton of Vaud on a monthly basis during the school year); (5) quantity-frequency (i.e. the number of hours spent each week on the Internet, computed by multiplying frequency based on a weekly use (from 0, no use; to 14, several uses per days) and average quantity); and (6) latent Internet use score, using the original ordinal scales for frequency, quantity on schooldays, and quantity on weekends/holidays. For this purpose, we ran a single-factor confirmatory factor analysis (CFA) for ordinal data with a

weighted least squares means and variance (WLSMV) adjusted estimation (Muthén & Muthén [14]).

Internet addiction. Problematic Internet use was assessed using the French version of the Internet Addiction Test (IAT; Khazaal et al. [7]). This test comprises 20 items assessed on a 6-point scale. A total score was computed, and a higher score indicated more problematic Internet use (range 0–100). We used a continuous numbered scale instead of a cut-off because recent literature has assumed a more continuous construct for dependence rather than a categorical model (Kerridge et al. [6]).

Wellbeing. Participants' emotional wellbeing was measured using the World Health Organization Five Well-Being Index (WHO-5; WHO [28]). Answers were collected on a 6-point scale from 0 to 5, and a sum-score of wellbeing was computed, with a higher score indicating a better wellbeing (range 0–100). We also used a continuous variable instead of a dichotomized measure (with a recommended cut-off of 52) to ensure the total variability of the wellbeing measure.

Somatic health problems. Six somatic health problems were assessed: back pain, weight problems, headaches, musculoskeletal pain, sleep problems, and sight problems. Each problem was assessed on a 5-point scale: 'never,' 'less than monthly,' 'about once a month,' 'at least once a week,' and 'most days.' Answers were dichotomized as 'at least weekly,' coded 1, and 'less than weekly,' coded 0. A sum-score of the number of somatic health problems was also computed (range: 0–6).

Quantity of sleeping. Participants' quantity of sleep was recorded using the number of hours slept during the schooldays and weekends/holidays. We computed an average quantity of sleep, weighted according to the number of schooldays and non-schooldays (respectively, 70% and 30%).

Covariates. Demographic covariates included gender, age, family structure (parents together or not), school type (VSB for students who expect to continue on to higher education, VSG for students who may continue in apprenticeship or academic studies, and VSO for students who expect to continue in apprenticeship), and perceived family income as a proxy for socio-economic status ('well above average,' 'above average,' 'average,' and 'below average').

Statistical analyses

Descriptive statistics were first computed. Second, we used Pearson correlations to assess the rank invariance across instruments, i.e. the common variance between the different measures of Internet use. Correlations were converted in R^2 to provide an indicator of common variance shared between two measures of Internet use. We first computed Spearman correlations, because some variables were not continuous ones. The results of Pearson and Spearman correlations were very similar, so we present the results of the Pearson correlations to be able to compute R^2 . Third, associations between Internet use measures and health outcomes were tested using regression models. Internet use variables (frequency, quantity on schooldays, quantity on weekend/holidays, average quantity, quantity-frequency, and latent Internet score) were separately used as independent variables, and health outcomes (IAT sum score, number of somatic health problems, quantity of sleeping, and wellbeing) as dependent variables. A total of 24 linear and count models (robust Poisson regression) were computed according to the distribution of the variables. These models were run controlling for covariates (age, gender, school type and perceived family income), and Internet use variables were standardized to allow comparisons between estimates. Standardized regression coefficients are reported.

Finally, to test whether Internet use was a good proxy of Internet addiction, we computed Pearson correlations between Internet addiction and Internet use (Spearman correlations

displayed similar results), and regression models using IAT sum score as the independent variables and health outcomes (number of somatic health problems, quantity of sleeping, and wellbeing) as the dependent variables. We also used standardized independent variables and controlled for covariates.

The population distribution of school track and gender was available, so we used this information to compute sampling weights. Consequently, the cross-distribution of these two variables is equal in the sample and in the studied population. All analyses were performed using Stata 14 (College Station, TX) except for the single factor confirmatory factor analysis which was computed with Mplus 7 (Los Angeles, CA).

Results

Descriptive statistics are summarized in Table 1. Participants' age ranged from 11 to 17, with a mean age of 14.23 (SD = 0.01), and 50.4% were girls. Most participants lived with their parents together (67.9%), and a minority came from a low socio-economic background (11.0% reported a perceived family income below average). The distribution between the three school types was quite homogeneous, with about a third of the participants in each school type.

Regarding health outcomes, participants reported on average one weekly somatic health issue, with sleep problems (29.3%) and musculoskeletal problems (21.6%) being the most frequent. They slept on average 8.54 hours per night and reported a well-being of 65.49. The participants had a low score of Internet addiction (29.41 on a scale ranging from 0 to 100, where the score 100 was the most addicted).

Internet use measures showed that participants often used the Internet. A total of 74.1% used the Internet at least once a day, and the average time spent on the Internet was 1.73 hours

during schooldays, 2.67 during weekends/holidays, and 1.98 hours overall. Participants spent an average of 20.66 hours per week using the Internet.

Latent score confirmatory factor analysis loadings included 0.721 for frequency of use ($R^2=0.52$), 0.886 for quantity on schooldays ($R^2=0.79$), and 0.805 for quantity on weekends/holidays ($R^2=0.65$).

Table 2 shows Pearson correlations between Internet use measures. Overall, quantity-frequency and latent score were the measures that had the most common variance with other measures (quantity-frequency: 64% of common variance with frequency, 82% of common variance with average quantity; latent score: 52% and 94%). The correlations between frequency and different measures of quantity were weaker ($0.52 \leq r \leq 0.58$; i.e. 27–34% of common variance). All correlations are statistically significant.

The last line of Table 2 showed correlations between Internet measures and Internet addiction. Correlations were statistically significant and high ($r > 0.50$) for measures of average quantity, quantity-frequency, and latent score, but common variance showed that the two measures did not overlap ($R^2 \text{ max} = 29.2\%$).

Regression models (Table 3) showed that frequency displayed lower associations with IAT ($b = 0.128$) and wellbeing ($b = -0.038$). Associations of Internet use measures with IAT were the highest ones ($0.128 \leq b \leq 0.162$), whereas associations with wellbeing were lower ($-0.038 \leq b \leq -0.054$). A higher Internet use was associated with a higher score of IAT and a lower wellbeing. Internet use was associated with an increased number of somatic health problems ($0.003 \leq b \leq 0.004$) and a decreased amount of sleep ($-0.004 \leq b \leq -0.005$). Except for frequency, the associations were comparable for the different measures of Internet use.

The last line of Table 3 showed the associations of IAT with other health outcomes. The association of IAT with wellbeing was higher than those of Internet measures ($b = -0.086$,

95% IC did not overlap), but associations of IAT with the number of somatic health problems and the amount of sleep were very similar with those of Internet measures.

Discussion

This study aimed to compare different measures of Internet use among a population-based sample of adolescents living in Switzerland. To our knowledge, this is the first study to look at various operationalizations of Internet use. Six different measures of Internet use were compared, including measures often used in previous studies (frequency of Internet use over a period of time and number of hours spent on the Internet, calculated for schooldays, weekends/holidays, and in aggregate) and measures derived from assessments of other substance-related use (quantity-frequency and latent score). Additionally, we investigated whether Internet use was a relevant proxy for self-reported Internet addiction.

Comparisons between the different measures of Internet use

We investigated the rank invariance across instruments (i.e. how the different instruments captured the whole extent of Internet use). The correlations between the different measures were all statistically significant. As we can expect, there were positive relationships between the different measures of Internet use. However, two operationalizations captured most of the variability of the observed variables (i.e. frequency of Internet use, average number of hours spent on the Internet on schooldays and on weekends/holidays): the quantity-frequency measure, which was computed by multiplying frequency and average quantity (the weighted mean score of quantity for schooldays and for weekends/holidays), and the latent score, which was derived from the ordinal observed variables using a CFA approach. Quantity-frequency measure even appeared to better capture the frequency of Internet use (64% of common variance, compared to the latent score, which shared 52% of common variance with this

measure). The latent score better captured the association with average quantity (94%), even if the common variance between quantity-frequency and average quantity was also high (83%). Frequency and quantity had at most 34% of common variance, and thus did not seem to capture the total extent of Internet use when they are used separately. Indeed, it seemed that a reliable assessment of Internet use needed both frequency and quantity, as they did not overlap. Therefore, using a single measure of frequency or average quantity, as previous studies did (Tonioni et al. [26]; Kutty & Sreeramareddy [11]) should not be the best way to assess Internet use. Comparisons of the different measures of Internet use were also investigated using their associations with health outcomes. The measures' associations with the IAT results tested construct validity, as Internet overuse has been described as highly correlated with Internet addiction (Suris et al. [24]). Frequency of use and quantity of use on schooldays had low associations with IAT results. The other measures were equivalent (i.e. they had similar standardized regression coefficients). Therefore, these analyses suggested that frequency of Internet use and number of hours spent on the Internet on schooldays may not be the best choices to assess Internet use. Next, associations of Internet use measures with other health outcomes were tested. Higher frequency of Internet use correlated with lower levels of wellbeing, but all other Internet use measures were equivalent (i.e. they had similar standardized regression coefficients). The different measures of Internet use displayed low associations with health outcomes, and especially with physical health outcomes (somatic health problems and number of hours slept) in comparison with psychological health outcome (wellbeing). Therefore, Internet use seemed to be highly correlated with psychological health rather than physical health. This is probably because Internet use in itself is not a problematic behavior, but only heavy use should be a detrimental health factor that is associated with psychological health prior having consequences on physical health.

Overall, considering the two sets of analyses, the results suggested that quantity-frequency and latent score are the most-relevant measures of Internet use. Indeed, they both capture variability of different aspects of Internet use (frequency and quantity), and both display the highest level of associations with health outcomes, and especially with Internet addiction, which allows for investigations of construct validity. Of the two measures, we prefer quantity-frequency for several reasons. First, the latent score was less-closely associated than quantity-frequency with frequency of Internet use; the latent score was also very-closely associated with average quantity, which suggested that this measure was quite redundant with average quantity and that it thus captured less-variance related to frequency of use. Second, latent scores are more difficult to calculate, especially when ordinal scales are used; specific estimators are needed, and not all statistical software solutions provide such estimations. Quantity-frequency, derived by multiplying frequency and quantity, is a more straightforward way to compute Internet use. Moreover, quantity-frequency is easy to understand, as it provides a specific number of hours spent on the Internet (e.g. 22.75 hours per week in the sample studied). Latent scores cannot be used in such a way because their descriptive statistics are not meaningful and are not enough to get an idea of the average Internet use in a sample. The results of this study were in line with studies that recommended quantity-frequency for the measure of other substance-related uses, such as for alcohol (Gmel et al. [5]).

Comparisons between Internet use and self-reported Internet addiction

The comparisons between Internet use and Internet addiction showed that the correlations were high (as defined by Cohen [3]) between IAT and some measures of Internet use, including the quantity-frequency, defined as the most relevant one in the previous section. However, the two measures did not overlap, and Internet use captured a maximum of 29.2%

of the variance of Internet addiction. Moreover, if the associations between IAT with somatic health problems and number of hours slept were weak and comparable to those of Internet use, its association with wellbeing was higher. Overall, Internet use seems to be only one factor in Internet addiction, and Internet addiction not only reflects a magnitude of use. This result is in line with a previous recent study reporting that only part of addictive gaming/Internet use was captured by heavy use over time (Baggio et al. [1]). This study thus contributed to the current debate on the relevance of heavy use over time as a proxy for behavioral addiction in self-reported studies. Even if previous conceptualizations suggested that use over use should be a good proxy of behavioral addiction (Kraus, [9]; Rehm et al. [16]; Weinstock et al. [27]), this empirical study showed that Internet use may not capture a large variability of self-reported Internet addiction, in line with the findings of only one other empirical study (Baggio et al. [1]).

This study, however, had some limitations. Regarding Internet use assessment, an ordinal scale was used for frequency of Internet use. Therefore, we had to choose specific values for each point to compute quantity-frequency measures; some of these choices were arbitrary (e.g. several times per week =14 and less than one time per week =0.5). We also tested other choices (e.g. several times per week =21, less than one time per week =0), but the results were unchanged and still favored the quantity-frequency measure. However, further studies should include quantitative measures of frequency of use, even closed-ended ones. A second shortcoming was that the difference between frequency of Internet use on schooldays and on weekends/holidays was not assessed. Further studies on the measures of frequency on schooldays and on weekends/holidays are needed. Another limitation was that the study used self-reported measures; thus, its measures may be biased, especially the IAT, which likely caused misunderstandings of questions and symptoms (Slade et al. [21]). More reliable measures of Internet addiction, such as clinical interviews, are needed in order to assess

whether self-reported Internet addiction is a good proxy of Internet addiction. Additionally, measures of different comorbidities associated with problematic Internet use should be assessed to confirm this study's findings. Further studies should also take into account the different aspects of Internet use (e.g. gaming, chatting, down streaming music), because different Internet activities may require different involvements. A last shortcoming was that the study was carried out among adolescents living in the canton of Vaud; thus, its results have limited generalizability, especially since the study included only 35 schools. Studies using other samples, especially those with older participants, are needed.

Conclusions

To conclude, this study recommended the use of a quantity-frequency measure to assess Internet use, both to establish levels of use and to investigate associations of Internet use with health outcomes. This study was a first step toward proposing a unique and reliable tool to measure Internet use in epidemiological research. Furthermore, it showed that Internet use did not overlap with self-reported Internet addiction.

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Table 1. Descriptive statistics for socio-demographic, health, and Internet use measures

Variables	Mean, %
Socio-demographic characteristics	
Age ¹	14.24 (0.01)
Gender ²	
Boys	49.6 (1,539)
Girls	50.4 (1,515)
Family structure ²	
Parents together	67.9 (2,074)
Other	32.1 (980)
Perceived family income ²	
Below average	11.0 (336)
Average	26.2 (800)
Above average	56.4 (1,721)
Well above average	6.4 (197)
School type ²	
VSB (higher education)	38.2 (1,167)
VSG (apprenticeship or academic studies)	31.5 (962)
VSO (apprenticeship)	30.3 (925)
Health outcomes	
Weekly somatic health problems (0-6) ¹	1.01 (0.02)
Back pain ²	14.2 (435)
Weight problems ²	5.5 (168)
Headaches ²	16.6 (508)
Musculoskeletal problems ²	21.6 (660)
Sleep problems ²	29.3 (896)
Sight problems ²	13.3 (405)
Sleep (average no. of sleep hours on schooldays) ¹	8.54 (0.02)
Wellbeing (0-100)	65.49 (0.31)
Internet Addiction Test (20-100) ¹	29.41 (0.30)
Internet use measures	
Frequency ²	
No use	0.4 (14)
Less than once a week	2.2 (67)
At least once a week	6.1 (187)
Several times per week	17.2 (526)
At least once a day	30.7 (936)
Several times per day	43.4 (1,324)
Average frequency (no. of times previous 30 days) ¹	8.89 (0.09)
Quantity	
Average no. of hours on schooldays ¹	1.73 (0.02)
Average no. of hours on weekend/holidays ¹	2.67 (0.02)
Average no. of hours ¹	1.98 (0.02)
Quantity × frequency (no. of hours per week) ¹	20.66 (0.34)

¹ Means and standard deviations are given.

² Percentages and n are given.

Table 2. Spearman correlations between Internet use measures

	1	2	3	4	5	6
1. Frequency	-					
2. Quantity schooldays	0.55***	-				
3. Quantity weekends/holidays	0.52***	0.67***	-			
4. Average quantity	0.58***	0.96***	0.84***	-		
5. Quantity × Frequency	0.80***	0.88***	0.75***	0.91***	-	
6. Latent score	0.72***	0.93***	0.85***	0.97***	0.90***	-
7. IAT	0.44***	0.47***	0.51***	0.52***	0.52***	0.54***

*** p < .001.

IAT: Internet addiction test.

Table 3. Associations of Internet use measures with health outcomes

Internet use measures	Internet Addiction Test ¹		Wellbeing ¹		No. of somatic health problems ²		No. of sleep hours on schooldays ¹	
	b	CI-95%	b	CI-95%	b	CI-95%	b	CI-95%
Frequency	0.128***	[0.118; 0.137]	-0.038***	[-0.049; -0.027]	0.004***	[0.003; 0.004]	-0.004***	[-0.005; -0.004]
Quantity on schooldays	0.141***	[0.130; 0.152]	-0.050***	[-0.062; -0.037]	0.004***	[0.003; 0.004]	-0.005***	[-0.006; -0.005]
Quantity on weekends/holidays	0.151***	[0.141; 0.160]	-0.050***	[-0.061; -0.039]	0.003***	[0.003; 0.004]	-0.004***	[-0.005; -0.003]
Average quantity	0.152***	[0.143; 0.161]	-0.054***	[-0.065; -0.044]	0.004***	[0.003; 0.004]	-0.005***	[-0.006; -0.004]
Quantity × Frequency	0.152***	[0.143; 0.161]	-0.046***	[-0.057; -0.036]	0.004***	[0.003; 0.005]	-0.005***	[-0.006; -0.005]
Latent score	0.162***	[0.152; 0.172]	-0.055***	[-0.065; -0.042]	0.004***	[0.003; 0.005]	-0.005***	[-0.006; -0.005]
IAT	-	-	-0.086***	[-0.096; -0.076]	0.006***	[0.005; 0.006]	-0.005***	[-0.006; -0.005]

¹ Linear regression, ² Poisson regression. Analyses were performed controlling for age, gender, and perceived family income.

CI-95%: 95% confidence intervals

