

Current and future use of concentration-enhancing drugs: are users open to alternatives?

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Abstract

Introduction: As a result of the increased feeling of pressure to perform and medicalization of society, more and more students and working individuals are turning to psychostimulant drugs in order to improve their performances. Non-medical use of these stimulants, like methylphenidate and dexamphetamine, is a world-wide problem but little research has been conducted in the Netherlands.

Research question: which personal and environmental factors are associated with the use and non-medical use of methylphenidate and dexamphetamine, among adolescents and adults living in the Netherlands?

Method: a cross-sectional study was conducted among students and working individuals living in the Netherlands, using an anonymous online survey. Use and misuse of methylphenidate and/or dexamphetamine was assessed using the Stimulant Survey Questionnaire (SSQ). Additionally, pressure to perform, fear of failure and procrastination were assessed.

Results: Use of ADHD-medication among students was associated with the male gender ($OR = 0.522$, $p = 0.033$) and higher perception of safety and being informed ($OR = 3.591$, $p = 0.000$). Use of ADHD-medication among working participants was associated with the male gender ($OR = 0.369$, $p = 0.036$), a lower perception of safety and being informed ($OR = 0.481$, $p = 0.000$), and lower use among social contacts ($OR = 0.033$, $p = 0.000$). Non-medical use of ADHD-medication among students was associated with cannabis use ($OR = 4.616$, $p = 0.000$) and a lower perception of safety and being informed ($OR = 0.533$, $p = 0.021$). No significant association was found for non-medical use of ADHD-medication among working individuals.

Conclusion: This study indicates a high prevalence of ADHD-medication use and misuse for both students and working individuals in the Netherlands. Multiple personal and environmental factors, like the male gender and perception of safety and being informed are associated with the use of methylphenidate and dexamphetamine among students and working individuals.

Introduction

Background

Many individuals nowadays experience academic and/or work-related stress as a result of the overwhelming amount of work and learning material given to them combined with the increased pressure to perform (Maier & Schaub, 2015). A survey on study pressure among Dutch students showed that 4 out of 10 students suffer from severe study stress (De Hoog & Schilp, 2012). An excessive amount and/or frequency of stress can have negative consequences such as concentration problems and fatigue (Litjens & Ruijbroek, 2019). A report by the Dutch intercity student consultation (ISO) indicated that 70% of the students often to very often experience pressure to perform, and that 32% suffers from concentration problems (Litjens & Ruijbroek, 2019; Van der Heijde, Vonk & Meijman, 2016, 2014). Among working professionals, performance pressure is recognized as one of the five major sources of work stress (Chan, Lai, Ko & Boey, 2000). Eventually, work stress can lead to a poor mental health and may cause employees dropping out of work (Rajgopal, 2010)

Psychostimulants and cognitive enhancement

As a result of the increased feeling of pressure to perform, more and more students and working individuals are turning to psychostimulant drugs in order to improve their performances (Cândido, Perini, Pádua & Junqueira, 2020; d'Angelo, Savulich & Sahakian, 2017; Korn, Hassan, Fainshtein, Yusov & Nitza, 2019; Schelle et al., 2015; Van der Heijde, Van den Berk & Vonk, 2020). The most commonly used psychostimulants are methylphenidate (e.g., Ritalin and Concerta) and dexamphetamine, approved for the treatment of children with learning and attention disorders such as Attention Deficit Hyperactivity Disorder (ADHD) (American Psychiatric Association, 2013; Zorginstituut Nederland 2021a, 2021b). Even though ADHD is a childhood onset condition the increase in psychostimulant use is attributable to adolescents and adults. More and more individuals are using stimulants, also as a result of the medicalization of society (See Appendix I). Since 2016 the prevalence of methylphenidate users above the age of 18 has vastly risen in the Netherlands, with an increase of 6.5% in 2019 (Stichting Farmaceutische Kengetallen, 2017, 2018, 2020).

People without an attention disorder use these prescription stimulants for pharmacological cognitive enhancement (PCE), based on the believe that these drugs enhance cognitive abilities such as attention and memorization (Smith & Farah, 2011). PCE is defined as the stimulation of cognitive capacities of healthy individuals, through the use of stimulating drugs, with the aim of improving cognitive performances to improve academic abilities and productivity at work (Majori et al., 2017; Pohl, Boelsen & Hildt, 2018). Cognitive enhancement (CE) can also be achieved through the use of over-the-counter drugs such as caffeine and nicotine, as well as through the use of illicit drugs such as cannabis, cocaine, and ecstasy (Franke, Bagusat, Rust, Engel & Lieb, 2014). Moreover, among working professionals there is an increasing popularity for a phenomenon called micro-dosing: taking small quantities of psychedelic drugs such as LSD, to improve their performance at work (d'Angelo et al., 2017).

Prevalence NMUPS

Non-medical use of prescription stimulants (NMUPS), defined as the use of stimulant medication without a prescription or not according to prescription, has mostly been studied among college students in the United States. Previous research showed a prevalence among students in the US ranging from 5% to 35%, depending on the used methods and study population (Arria et al., 2018). Additionally, studies have shown that NMUPS is highest among fraternity members and students from highly competitive colleges (Dussault & Weyandt, 2013; McCabe, Knight, Teter & Wechsler, 2005). In a study by DeSantis et al. (2009) among American fraternity members, 55% of the male students reported having used stimulant drugs at least once in their life without a prescription. International surveys showed that NMUPS also occurs in Italy (11.3%) (Majori et al. 2017), Belgium

(15.9%) (Ponnet et al., 2021), and Switzerland (7%) (Maier, Liakoni, Schildmann, Schaub & Liechti, 2015). Lower prevalences were found in Germany (1.3%) (Franke et al., 2011), the Netherlands (1.7%) (Schelle et al., 2015), and Australia (6.5%) (Lucke et al., 2018).

Increasing evidence indicates that employees are also turning to prescription stimulants (Leon, Harms & Gilmer, 2018). NMUPS can continue after academic years into the workforce, but people also initiate use later into adulthood (Sales, Murphy, Murphy & Lau, 2019). Although general usage among adults is low, studies indicate higher rates of PCE among particular professions. Franke and colleagues (2013) found that, among a sample of surgeons, 8.9% was using prescription drugs for cognitive enhancement. During a study by Krill, Johnson, and Albert (2016) among a sample of attorneys, 4.8% reported medical or nonmedical stimulant use. Working professionals are using stimulants as a result of performance pressure, to improve productivity, to cope with stress, and to counteract fatigue and loss of concentration (d'Angelo et al., 2017; Franke et al., 2013; Krill et al., 2016)

Adverse effects

Most psychostimulant drugs used for CE purposes were originally developed to treat neuropsychiatric disorders and are therefore not without risks. The use of methylphenidate and dexamphetamine has been associated with multiple adverse health effects. Most commonly mentioned short term side effects are loss of appetite, headaches, insomnia, nervousness, palpitations, nausea and dry mouth (Zorginstituut Nederland 2021a, 2021b). But stimulant use is also associated with side effects such as depression, suicidality, hallucinations and cardiovascular collapse (Majori et al., 2017; Van de Loo-Neus et al., 2011). In addition, methylphenidate and dexamphetamine have a similar pharmacological profile as other stimulants. Therefore, misusers are at risk of physiological or psychological addiction (Blevins, Stephens & Abrantes, 2016). Although the effects are extensively studied, scientific evidence of long-term health effects is scarce. Dangerous and addictive effects may even endure for many years into adult life (Barbaresi et al., 2013; Korn et al., 2019). Both stimulants have been classified as a narcotic substance with unacceptable risks to public health (Van der Horst, de Jonge, Sannen, & Goossens, 2019).

Effectiveness

ADHD medication seems effective for behavioral deficits, but it remains unclear whether these drugs have an enhancing effect on cognition (Lakhan & Kirchgessner, 2012; Smith & Farah, 2011). Existing evidence is very limited and inconsistent. Small effects are mainly seen in already low-performing individuals, showing these drugs are more effective at correcting deficits than enhancing cognitive performances (Lakhan & Kirchgessner, 2012).

Even among ADHD diagnosed individual's methylphenidate is not always effective. Most placebo-controlled studies result in a non-response rate to methylphenidate or amphetamines around thirty percent. Among the participants another 12-13% responds to placebo as well as to methylphenidate, with no room for improvement, and are therefore considered placebo responders (Greenhill et al., 2001; Vitiello et al., 2001). Reported effects of healthy individuals could also be based on beliefs and perceived placebo effects. Due to these placebo effects people will constantly feel more focused, which likely maintains the misuse of the drug (Lakhan & Kirchgessner, 2012).

On the other hand, expectations of stimulant drugs often exceed their real effect (Repantis, Schlattmann, Laisney & Heuser, 2010). During a study by Hupli et al. (2016) multiple students admitted they were disappointed with the results, either not feeling an effect or finding it too mild. Moreover, evidence of long-term effectiveness of medical treatment is lacking. Multiple cohort studies failed to support statements that ADHD medication improves long term outcomes (Van de Loo-Neus, Rommelse, Buitelaar, 2011). A study among children and adults showed effects of

continuing methylphenidate use only in the younger age group, effects were absent in the group of older participants (Matthijssen, Dietrich, Bierens, 2019).

Diagnosis

Furthermore, the last few years there have been doubts about the validity and consistency of ADHD diagnoses (Singh & Kelleher, 2010), they seem largely subjective and do not always adhere to the DSM-V criteria (Urban & Gao, 2017). Due to the pressure of society rather ordinary states of wavering focus may come to be seen as a syndrome and lead to incorrect diagnoses (Thier et al., 2017; Van der Heijde et al., 2020). The subjectivity of the diagnosis makes diagnosing extra difficult and may contribute to the abuse. Research revealed that students are feigning ADHD symptoms because it is seen as an easy way to access stimulant medications (Fuermaier et al. 2021).

Theoretical Framework

Integrative Model of Adolescent Health Risk Behavior

NMUPS can be explained using the Integrative Model of Adolescents Health Risk Behavior (IMAHRB; figure 1) (Keeler & Kaiser, 2010). This theoretical model provides a basis for understanding why adolescents and adults either avoid or participate in risky health behavior, in this case NMUPS.

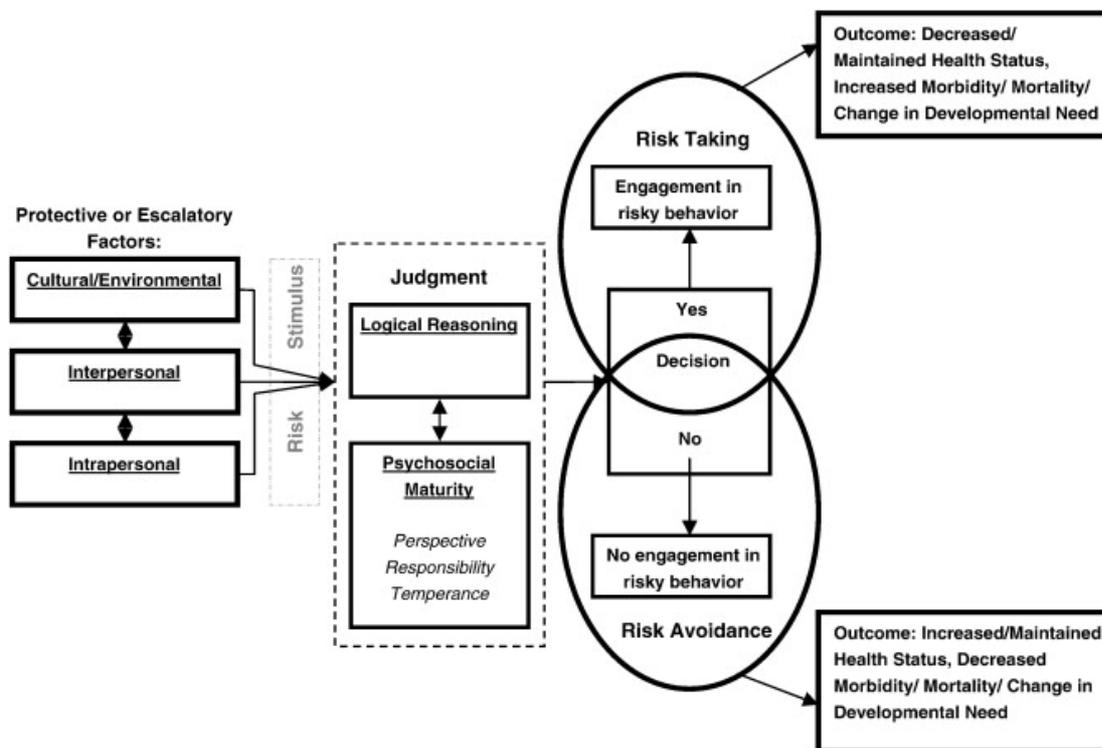


Figure 1: The Integrative Model of Adolescents Health Risk Behavior

Protective or escalatory factors

The model includes factors that discourage (protective factors) or encourage (escalatory factors) risk taking behavior. These factors are classified into intrapersonal, interpersonal, and cultural and environmental factors. The intrapersonal factors are all innate qualities of each individual. Examples of intrapersonal escalatory factors that affects the engagement in NMUPS are age (Thier & Gresser, 2017) and gender (Ponnet et al., 2021). The interpersonal factors are all about relationships between the individual and other persons, and the consequent activities that result from these relationships. Interpersonal factors affecting NMUPS are the relationship with other students or colleagues that engage in NMUPS as well (Thier & Gresser, 2017). The external conditions in which the intrapersonal and interpersonal factors interact with each other, represent the cultural and environmental factors. One of the escalatory factors of NMUPS seems to be a highly cognitive demanding environment, such

as universities and high demanding workplaces (Schelle et al., 2015). Media influence is also part of the cultural environment. Previous research showed media reports may play a role in risk-benefit perception of stimulant misuse, as 95% of all media reports on this topic mentioned at least one benefit of prescription drugs, and only 58% mentioned any risks and side effects (Partridge et al., 2011).

Risk stimulus

In order for an individual to engage in or to avoid risk behavior a risk stimulus is needed. This stimulus is highly contextual and is influenced by emotions. NMUPS has been associated with variables such as stress, anxiety and depression (Weyandt et al., 2009; Dussault & Weyandt, 2013; Verdi, Weyandt & Zavras, 2016). Among working individuals, stimulants are mostly used in stressful high-pressure jobs like medicine (Franke et al., 2013). Generally, reasons most commonly mentioned by students for NMUPS are to help with concentration, to improve study performance and to increase alertness (Majori et al., 2017). Preliminary studies also found that students with a lower grade point average (GPA) are at higher risk for pharmacological cognitive enhancement than others (Weyandt et al., 2009). NMUPS takes place throughout the whole year, but mainly during the exam periods when there is a heightened feeling of stress (Van der Horst et al., 2019; Korn et al., 2019). Other risk stimuli for NMUPS could be the opportunity to have more energy to prolong a night out, to increase the effect of alcohol, the increasing sociability, and to lose weight, to mitigate the effects of alcohol (Korn et al., 2019; Sales, Murphy, Murphy & Lau, 2019).

Judgement

The concept of judgement does not refer to any actual choices but rather to cognitive and psychosocial factors that influences the process of arriving at a decision. Whether someone engages in risky behavior depends on logical reasoning and psychosocial maturity. Psychosocial maturity includes the ability to place decisions in perspective, to be responsible and regulate one's impulses. Previous research showed that the higher students' intention of taking stimulating drugs the higher their risk of doing it, indicating that stimulant use is the result of a rational choice (Ponnet et al., 2021). However, students seem not to be aware of the risks or consciously ignore them. A study by DeSantis et al. (2010) with in-depth interviews revealed how little students know about the drugs before trying them for the first time. Almost all students who took ADHD medication only knew what they had heard from other students, and never sought out health information from a professional or pharmaceutical reference guide. Sales and colleagues (2019) indicated that among working individuals prescription stimulants are perceived as safe, providing a lot of benefits.

Risk taking or risk avoiding

The protective and escalatory factors, combined with a risk stimulus and someone's judgement can affect whether someone engages in NMUPS or avoids it.

Aim of the study

Over the past decades non-medical use of methylphenidate and dexamphetamine has been extensively studied. However, most studies have only focused on the prevalence and variables related to NMUPS among students. To date there has been limited information on the use of working adults and the future perspective of users. Moreover, only a few studies have looked at the use of prescription stimulants in the Netherlands. A study by Ganpat et al. examined the use of prescription drugs with the intention to improve performance in sport and study among Dutch adolescents between 14 and 17 years old (Ganpat, Kleinjan & van de Mheen, 2009). Another Dutch study among college students has found evidence of polydrug use in relation to cognitive enhancement (Schelle et al., 2015). And in a Dutch survey taken in 2018 one in a hundred adolescents filled in they had recently used ADHD medication, of which one third (also) without a prescription (Van der Horst et al., 2019).

This article contributes to the knowledge on factors associated with the use of methylphenidate and dexamphetamine. The overall aim of this study was to evaluate use and non-medical use of methylphenidate and dexamphetamine in both adolescents and adults in the Netherlands. It gives a broader perspective on the association with sociodemographic factors and background characteristics: including factors influencing past, present and future use for both the student and working population.

The research question is: Which personal and environmental factors are associated with the use and non-medical use of methylphenidate and dexamphetamine, among adolescents and adults living in the Netherlands?

The following sub questions will be addressed:

- When and why did people start using methylphenidate and/or dexamphetamine?
- How are methylphenidate and dexamphetamine obtained?
- What do methylphenidate and dexamphetamine users experience as side effects?
- What is the future perspective of users?
- Are people willing to use non-medical alternatives like mindfulness programs?

Method

Participants

This cross-sectional study was conducted among students and working professionals in the Netherlands. To be eligible, participants had to be at least 18 years of age and currently live in the Netherlands. A total of 273 respondents filled in the online questionnaire, of which 202 fully completed the questionnaire. A number of 10 respondents did not meet the inclusion criteria and were filtered out of the analyses. Additionally, participants that did not fill in whether they had used ADHD medication or not, were filtered out of the analyses as well, yielding a final sample of 251 participants. The majority of participants were female (N=158; 63.7%) and of Dutch nationality (N=214; 86.5%). The mean age of participants was 25.22 years (SD=9.4). Moreover, most participants had a university education (N=183; 73.8%), the second most represented level of education was university of applied sciences (N=54; 21.8%). Participants were recruited in three different manners: (1) through the social media of the investigator (e.g., Facebook and WhatsApp), (2) through a newsletter that was sent to all patients of the GP practice Huisartsen Oudeturfmarkt Amsterdam, (3) through posted advertisements on platforms of cooperating organizations. Students were mostly recruited through faculty associations of Dutch universities and universities of applied sciences. All contacted organizations were asked to share a brief description of the purpose of the study including a link to the questionnaire with their members. Even though participants were recruited throughout the whole Netherlands, the relative distribution of respondents was not equal per city.

Procedure

The questionnaire was an anonymous online survey that was available in Dutch and English. Participants could access the online survey through a link after reading and agreeing to the digital consent form. To increase participation, participants could opt to participate in a prize-pool of 5 bol.com vouchers worth 20 euros, at the end of the questionnaire. Data were stored in a password protected data base. The study was approved by the Ethics Review Board of the Faculty of Social and Behavioural Sciences (ERB) of the University of Amsterdam, the Netherlands.

Measures

The length of the survey depended on the given answers because respondents were routed toward questions based on previously given answers. Respondents who filled in to be a student, to work and to have experience with taking ADHD medication received the most questions. On average, it took approximately 10 minutes to complete the survey.

Demographics

Demographic questions included participant age, gender, nationality, living arrangement, professional status and level of education. Additionally, students were asked to fill in their faculty and working professionals were asked to fill in their work sector and position.

ADHD medication use

To indicate the use and misuse of AD(H)D-medication, history of diagnosis and prescription for AD(H)D-medication were assessed. Participants were asked if they ever used and/or misused AD(H)D medication and to report considerations of having AD(H)D. This section also included questions about motives for use. The drug effects, side effects and frequency of use were also assessed, as well as the future perspective of the participant.

Stimulant Survey Questionnaire (SSQ)

To measure different kinds of AD(H)D medication use, as well as perceived knowledge and safety of these stimulants, the Stimulant Survey Questionnaire (SSQ) (Weylandt et al., 2009) was used. The

original SSQ consists of 40-items. To make the questionnaire fully applicable for the setting and participants of this study the words “prescription stimulant medication” were altered into “AD(H)D medication”, and every time a question was specific for a study setting, an additional item for the work setting was added as well. Questions applicable to working situations were only answered by participants with a job. The final questionnaire consisted of 48 items. Additionally, to make the answers more detailed, the 5-point Likert answer scale of the original SSQ was altered to a 7-point Likert scale. The first 23 items the participant needed to rate on a 7-point Likert scale ranging from 1= never to 7= always, the following 12 items the participant need to rate on a 7-point Likert scale ranging from 1= strongly disagree to 7= strongly agree. The last 13 items were presented in a dichotomous format (“yes” or “no”).

Factor analyses and reliability analyses for both the student and working population were conducted. Items about smoking, snorting and injecting the medication were excluded because no participant filled in to have done it themselves, or know someone who did it. After excluding multiple items, because of difficult loadings (Appendix IX) a total of 6 components were extracted. The first 4 components were group specific, the last 2 components where exactly the same for each group. The components were conceptualized and labeled as follows:

Students

- (1) Use of ADHD-medication for Academic and Cognitive enhancement (Cronbach’s alpha = .806),
- (2) Use of ADHD-medication for recreational purposes (Cronbach’s alpha = .946),
- (3) Availability and usage among students (Cronbach’s alpha = .739),
- (4) Usage among social contacts (Cronbach’s alpha = .777),

Working population

- (1) Use of ADHD-medication for Cognitive and Performance enhancement (Cronbach’s alpha = .809),
- (2) Use of ADHD-medication for recreational purposes (Cronbach’s alpha = .918),
- (3) Availability and usage among colleagues (Cronbach’s alpha = .759),
- (4) Usage among social contacts (Cronbach’s alpha = .775),

Not group specific

- (5) Sharing of medication (Cronbach’s alpha = .683),
- (6) Perception of safety and being informed (Cronbach’s alpha .679).

Non-medical alternatives

To assess if participants are open for use of non-medical alternatives, multiple interventions were explained aimed at improving concentration and lifestyle to reduce AD(H)D symptoms, based on previous questions by Douwes (2018). Each explanation of the intervention was followed by the following 3 items: (1) I think [intervention] is a useful intervention for when someone experiences concentration problems, (2) [intervention] would be a useful intervention in case I experience concentration problems, and (3) I would like to follow this intervention. Participants were asked to rate the items on a 5-point Likert scale, ranging from 1 = strongly disagree to 5 = strongly agree. Additionally, we asked participants if they were willing to follow an e-Health intervention.

Pressure to perform

Pressure to perform was assessed using the 4-item performance pressure scale (Mitchell et al. 2017) in combination with the 6-item academic stress scale (De Bruyn et al. 2019). The original items of the performance pressure scale were focused on working professionals only and the original items of the academic stress scale were focused on students only. Therefore, a new scale, combining both scales, was developed. The new scale was adjusted to both the working population and student population. Also, the academic stress items were worded into a performance pressure item, and 4-items were. Like the original academic stress scale all items were divided into three subscales: stress about

external expectations, stress about amount of work (originally: stress about the study material), and stress about consequences (originally: stress about not passing). The first subscale consists of 2 newly worded academic stress items, the first item of the performance pressure scale and two completely new items about expectations. The second subscale consists of 2 newly worded academic stress items and the second performance pressure item. The third subscale consist of a new item that combines the last 2 original academic stress items, and the last two items of the performance pressure scale. Participants were asked to rate the items on a 7-point Likert scale, ranging from 1 = strongly disagree to 7 = strongly agree.

Additionally, participants were asked to state to what extend they agreed with the statement “I need AD(H)D medication to perform”. Participants were asked to rate this item on a 5-point Likert scale, ranging from 1 = strongly disagree to 5 = strongly agree.

Social norm

To assess the influence of social norm on the use of AD(H)D medication the following question was asked: “What percentage of people in your environment do you think has ever used stimulant medication to improve their performances?”

Procrastination

Procrastination was measured using 3 items of the Tuckman procrastination scale (Tuckman, 1991), as used by De Bruyn et al. (2019). Participants were asked to rate the items on a 5-point Likert scale, ranging from 1 = strongly disagree to 5 = strongly agree. (Cronbach’s alpha = .836)

Fear of failure

Fear of failure was measured using 4 items of the fear of failure scale (Frost, Marten, Lahart & Rosenblate, 1990), as used by De Bruyn et al. (2019). Participants were asked to rate the items on a 5-point Likert scale, ranging from 1 = strongly disagree to 5 = strongly agree. (Cronbach’s alpha = .857)

lifestyle

For the association between lifestyle factors and use of AD(H)D medication, questions were devised. Participants were asked if they had smoked tobacco or used e-cigarettes in the last 12 months, if they smoked cannabis in the last 12 months, if they used illegal drugs in the last 12 months, and how often they drank alcohol in the last 12 months. Additionally, students were asked if they were an active member of a sorority or faculty student association.

Statistical analyses

The online platform Qualtrics was used for data collection and storing. The data was converted to the statistical software IBM SPSS 26, where the data was analyzed. First, descriptive statistics were computed. The sample was split into the following subgroups: never used the medication, use of medication only medically, both medical and non-medical use, and only ever non-medical use. Second, two logistic regression analyses were performed. The first analysis was performed with the binary dependent outcome variable, use of methylphenidate/dexamphetamine or not, including all participants. The second analysis was performed with the binary dependent outcome variable, medical or non-medical use of methylphenidate/dexamphetamine, including all medical and non-medical users. For both analyses a p-value of 0,05 with a 95% confidence interval (CI) was used. All variables that correlated significantly with the outcome were included as independent variables (see Appendix X).

Results

The present sample included 146 participants that did not use methylphenidate or dexamphetamine and 102 participants that did use methylphenidate or dexamphetamine at least once in their life. A total of 73 participants filled in they acquired methylphenidate or dexamphetamine medication through a prescription of their health care provider, of which 46 (18.5%) had only ever used the drug(s) for medical purposes and 27 (10.9%) had also used the drug(s) for non-medical reasons, not according to prescription. A number of 29 (11.7%) participants filled in they had at least once acquired methylphenidate or dexamphetamine without a prescription of a health care provider for non-medical purposes. Descriptive statistics regarding the demographics of participants are presented in Table 1.

Table 1. Descriptive table by use of methylphenidate and/or dexamphetamine

| Variable | Use of methylphenidate and/or dexamphetamine | | | Total (N=248) | |
|---|--|---------------------|---|------------------|-------------|
| | No (N=146) | Medically (N=46) | Yes Medically + Non-medically (N=27) | | |
| Age | | | | | |
| Mean (SD) | 24.9 (9.9) | 27.3 (10.8) | 26.1 (7.8) | 22.7 (4.1) | 25.22 (9.4) |
| Gender | | | | | |
| Male (n, %) | 38 (26.0) | 20 (43.5) | 12 (44.4) | 13 (44.8) | 83 (33.5) |
| Female (n, %) | 106 (72.6) | 22 (47.8) | 15(55.6) | 15 (51.7) | 158 (63.7) |
| Different (n, %) | 2 (1.4) | 4 (8.7) | - | 1 (3.4) | 7 (2.8) |
| Nationality | | | | | |
| Dutch (n, %) | 124 (84.9) | 42 (91.3) | 24 (88.9) | 24 (82.8) | 214 (86.5) |
| Other European country (n, %) | 13 (8.9) | 1 (2.2) | 2 (7.4) | 5 (17.2) | 21 (8.5) |
| Other non-European country (n, %) | 9 (6.2) | 3 (6.5) | 1 (3.7) | - | 13 (5.2) |
| Living situation | | | | | |
| With family (n, %) | 28 (19.2) | 6 (13.0) | 4 (14.8) | 4 (13.8) | 42 (16.9) |
| With friends/roommates (n, %) | 58 (39.7) | 17 (37.0) | 12 (44.4) | 17 (58.6) | 104 (41.9) |
| Alone (n, %) | 39 (26.7) | 12 (26.1) | 8 (29.6) | 6 (20.7) | 65 (26.2) |
| With husband/wife or partner (n, %) | 20 (13.7) | 11 (23.9) | 3 (11.1) | 2 (6.9) | 36 (14.5) |
| Different (n, %) | 1 (0.7) | - | - | - | 1 (0.4) |
| Professional status | | | | | |
| Student (n, %) | 57 (39.0) | 20 (43.5) | 10 (37.0) | 11 (37.9) | 98 (39.5) |
| Student + not working (n, %) | 8 (5.5) | 1 (2.2) | 1 (3.7) | 2 (6.9) | 12 (4.8) |
| Student+ working (n, %) | 53 (36.3) | 11 (23.9) | 6 (22.2) | 9 (31.0) | 79 (31.9) |
| Working (n, %) | 19 (13.0) | 11 (23.9) | 7 (25.9) | 4 (13.8) | 41 (16.5) |
| Not working (n, %) | 5 (3.4) | 2 (2.2) | 1 (3.7) | 3 (10.3) | 11 (4.4) |
| Retired (n, %) | 1 (0.7) | - | - | - | 1 (0.4) |
| Different (n, %) | 3 (2.1) | 1 (2.2) | 2 (7.4) | - | 6 (2.4) |
| Level of education | | | | | |
| Higher general secondary education (n, %) | - | - | - | 1 (3.4) | 1 (0.4) |
| Pre-university education (n, %) | - | - | - | 1 (3.4) | 1 (0.4) |
| Vocational secondary education (n, %) | 1 (0.7) | 1 (2.2) | - | - | 2 (0.8) |
| University of Applied Sciences (n, %) | 30 (20.5) | 13 (28.3) | 9 (33.3) | 2 (6.9) | 54 (21.8) |
| University (n, %) | 110 (75.3) | 32 (69.6) | 18 (66.7) | 23 (79.3) | 183 (73.8) |
| PhD/Doctorate (n, %) | 5 (3.4) | - | - | 2 (6.9) | 7 (2.8) |

Demographics students

The distributions of use and misuse of methylphenidate and/or dexamphetamine for the student population are shown in Table 2. A total number of 18 (9.4%) students indicated to use ADHD-medication for both medical and non-medical purposes, 22 (11.5%) students indicated to have used

ADHD-medication at least once for non-medical purposes only. Use of methylphenidate and/or dexamphetamine for non-medical purposes was almost exclusively done by university students only.

Table 2. Demographics students by field of study

| Field of study | Use of methylphenidate and/or dexamphetamine among students | | | | Total (N=191) |
|---|---|---------------------|--|-----------------------------|------------------|
| | No (N=119) | Yes | | | |
| | | Medically (N=32) | Medically + Non-medically (N=18) | Non- medically (N=22) | |
| <i>University</i> | | | | | |
| Economics and Business Administration (n, %) | 12 (10.1) | 2 (6.3) | 2 (11.1) | 3 (13.6) | 19 (9.9) |
| Beta sciences, Mathematics and Computer Sciences (n, %) | 29 (24.4) | 6 (18.8) | 6 (33.3) | 5 (22.7) | 46 (24.1) |
| Humanities (n, %) | 12 (10.1) | 5 (15.6) | 3 (16.7) | 3 (13.6) | 23 (12.0) |
| Behavioral and Movement Sciences (n, %) | 3 (2.5) | - | 1 (5.6) | - | 4 (2.1) |
| Medicine (n, %) | 14 (11.8) | - | - | 1 (4.5) | 15 (7.9) |
| Social Sciences (n, %) | 19 (16.0) | 3 (9.4) | 3 (16.7) | 3 (13.6) | 28 (14.7) |
| Law (n, %) | 7 (5.9) | - | - | 4 (18.2) | 11 (5.8) |
| Dentistry (n, %) | 6 (5.0) | 3 (9.4) | - | 2 (9.1) | 11 (5.8) |
| Arts and culture (n,%) | 1 (0.8) | 1 (3.1) | - | - | 3 (1.6) |
| Different (n, %) | 1 (0.8) | 1 (3.1) | - | 1 (4.5) | 3 (1.6) |
| <i>University of applied sciences</i> | | | | | |
| Economy and Management | 2 (1.7) | 1 (3.1) | - | - | 3 (1.6) |
| Hotel school | 1 (0.8) | 1 (3.1) | - | - | 2 (1.0) |
| Education and upbringing | 3 (3.5) | 5 (15.6) | 1 (5.6) | - | 9 (4.7) |
| Healthcare and well being | 1 (0.8) | 1 (3.1) | - | - | 2 (1.0) |
| Nature and technology | 4 (3.4) | 1 (3.1) | - | - | 5 (2.6) |
| Different | 3 (2.5) | 1 (3.1) | 1 (5.6) | - | 5 (2.6) |
| <i>Vocational secondary education</i> | | | | | |
| Teacher education | - | 1 (3.1) | - | - | 1 (0.5) |
| Different | 1 (0.8) | - | - | - | 1 (0.5) |

Demographics working individuals

Table 3 shows the distribution of use and misuse of methylphenidate and/or dexamphetamine among people with a job, including students with a job. ADHD-medication was used by 13 (10.7%) working participants for medical and non-medical purposes. Another 13 (10.7%) participants indicated to use ADHD-medication for non-medical purposes only.

Motives most often mentioned for non-medical use of AD(H)D-medication for both students and working individuals were to be able to perform better in the study (53.7%), to experiment (20.4%) and to feel better (18.5%). To perform better at work was mentioned less often (10,9%). There was almost no difference in age of first taking AD(H)D-medication between the groups for medical 20,16 (SD= 11.7) and non-medical 20,88 (SD= 5.8) purposes. Medication for non-medical purposes were mostly acquired by getting it for free (46.3%) or buying it (22.2%) from a family member or friend.

Among all participants concentration and better performance were most often mentioned as positive consequences. Also, 2.8% indicated to have no positive consequences at all. Mostly mentioned negative consequences were faded emotions, not being able to sleep, irritability, headache, feeling of anxiety, nausea and feeling dull.

Table 3. Demographics working participants by work sector

| Work sector | Use of methylphenidate and/or dexamphetamine | | | | Total (N=121) |
|--|--|---------------------|--|-----------------------------|------------------|
| | No (N= 73) | Yes | | | |
| | | Medically (N=22) | Medically + Non-medically (N=13) | Non- medically (N=13) | |
| Business economic and administrative (n, %) | 6 (8.2) | - | - | 1 (3.4) | 7 (5.8) |
| Care and welfare (n, %) | 24 (32.9) | 3 (13.6) | 1 (7.7) | 3 (23.1) | 31 (25.6) |
| Technical (n, %) | 6 (8.2) | - | - | 1 (3.4) | 7 (5.8) |
| Commercial (n, %) | 3 (4.1) | 3 (13.6) | 2 (15.4) | 1 (3.4) | 9 (7.4) |
| Services (n, %) | 3 (4.1) | 3 (13.6) | - | 2 (15.4) | 8 (6.6) |
| Pedagogical, education (n, %) | 6 (8.2) | 3 (13.6) | 1 (7.7) | 1 (3.4) | 11 (9.1) |
| Transport and logistics (n, %) | 3 (4.1) | - | - | - | 3 (2.5) |
| ICT (n, %) | 3 (4.1) | 2 (9.1) | 1 (7.7) | - | 6 (5.0) |
| Managers (n, %) | 2 (2.7) | 1 (4.5) | 1 (7.7) | 1 (3.4) | 5 (4.1) |
| Public administration, security and legal (n, %) | 1 (1.4) | 2 (9.1) | 2 (15.4) | 1 (3.4) | 6 (5.0) |
| Creative and linguistic (n, %) | 5 (5.5) | 3 (13.6) | 1 (7.7) | 1 (3.4) | 10 (8.3) |
| Hospitality, catering | 3 (4.1) | 1 (4.5) | 2 (15.4) | - | 6 (5.0) |
| Different | 8 (11) | 1 (4.5) | 2 (15.4) | 1 (3.4) | 12 (9.9) |

A total of 31.6% of the participants that still used ADHD medication indicated on planning to stop using the drugs after completing their study, while only a small number of participants indicated to stop using when they retired (6.3%). Some participants also indicated on planning to use it forever (13.9%) (with an equal distribution of medical and non-medical users per category).

Alternative interventions

Because of unequal sample sizes and data did not meet the assumption of equal variance between groups the Welch's test was performed to assess possible differences between non-users, medical-users and non-medical users for six different non-medical interventions. There was a statistically significant difference between groups for the Cognitive behavioral therapy ($F(2,71) = 3.95, p = .024$) and the Mindfulness therapy ($F(2,79) = 4.72, p = .012$). A Games-Howell test revealed that the score for perception of usefulness of the cognitive behavioral therapy for non-users (3.53 ± 0.62 points, $p = .023$) was statistically significant higher compared to non-medical users (3.13 ± 0.97). The test also showed that non-users (3.43 ± 0.94 points, $p = .012$) perceived the Mindfulness therapy more useful compared to non-medical users (3.13 ± 0.97). Moreover, the Game-Howell test revealed that non-users ($3.42 \pm 0.86, p = .000$) find Running therapy statistically more useful compared to both the medical users ($2.59 \pm .80, p = .003$) and the non-medical users (2.83 ± 1.08). For coaching therapy, Lifestyle therapy and Neurofeedback there was no statistically significant difference between the groups (Appendix XI). A total of 22.2% of the participants using ADHD-medication for non-medical purposes was willing to follow an e-Health intervention, compared to 15.4% of the medical users and 20% of the non-users.

Use

To determine which variables predicted use and non-medical use of ADHD-medication for the student and working group, a stepwise backward logistic regression was conducted for both groups. For students, a significant model for use ($\chi^2(2, n = 212) = 60.52, p = 0.000$) emerged with gender ($B = -0.650, p = 0.033$) and feeling of safety and being informed ($B = 1.278, p = 0.000$) predicting medical use, with $R^2 = 0.33$. For working participants gender ($B = -.997, p = 0.002$), perception of safety and being informed ($B = -0.732, p = 0.000$) and use among social contacts ($B = -3.418, p = 0.000$) significantly predicted the use of ADHD-medication ($\chi^2(3, n = 103) = 32.88, p = 0.000$), with $R^2 = 0.37$.

Non-medical use

For students, a significant model for non-medical use of ADHD-medication ($\chi^2 (2, n = 84) = 15.63, p = 0.000$) emerged with use of cannabis ($B = 1.530, p = 0.002$) and feeling of safety and being informed ($B = -0.630, p = 0.021$) predicting misuse of ADHD-medication, with $R^2 = 0.23$. For working participants no significant association was found for non-medical use. See Table 4, Table 5 and Table 6 for complete results of the logistic regressions.

Table 4. Summary regression analysis for variables predicting use of ADHD-medication among all students.

| Variable | B (SE) | P-value | OR | 95% BI |
|---|----------------|---------|-------|-------------|
| Students | | | | |
| Gender | -0.650 (0.304) | 0.033 | 0.522 | 0.288-0.948 |
| Perception of safety and being informed | 1.278 (0.203) | 0.000 | 3.591 | 2.410-5.350 |

Note: Table 4 is the step 7 model of the analyses for students. One variable was deleted at each step. N= 212

Table 5. Summary regression analysis for variables predicting use of ADHD-medication among all working individuals

| Variable | B (SE) | P-value | OR | 95% BI |
|---|----------------|---------|-------|-------------|
| Working individuals | | | | |
| Gender | -0.997 (0.476) | 0.036 | 0.369 | 0.145-0.938 |
| Perception of safety and being informed | -0.732 (0.208) | 0.000 | 0.481 | 0.320-0.722 |
| Use among social contacts | -3.418 (2.056) | 0.000 | 0.033 | 0.006-0.176 |

Note: table 5 is the step 7 model of the analyses for working individuals. One variable was deleted at each step. N= 103

Table 6. Summary regression analysis for variables predicting non-medical use of ADHD-medication among students using the medication.

| Variable | B (SE) | P-value | OR | 95% BI |
|---|----------------|---------|-------|--------------|
| Students | | | | |
| Cannabis | 1.530 (0.495) | 0.002 | 4.616 | 1.748-12.190 |
| Perception of safety and being informed | -0.630 (0.272) | 0.021 | 0.533 | 0.312-0.909 |

Note: table 6 is the step 7 model of the analyses. One variable was deleted at each step. N= 84

Discussion

This study sought to provide insight into the personal and environmental factors associated with the use and non-medical use of methylphenidate and dexamphetamine among students and working professionals in the Netherlands. Our results confirm the use of ADHD-medication for both medical and non-medical purposes.

Compared to the prevalence of previous Dutch research on stimulant use among students (1.3%), we found a very high prevalence of non-medical use of ADHD-medication (11.5%) (Schelle et al., 2015). Our results were more similar to prevalence's reported by studies conducted in Italy (11.3%) (Majori et al., 2017) and Belgium (15.9%) (Ponnet et al., 2021). We also found a high prevalence of ADHD-medication use among working participants (10.7%), comparable to a study among surgeons (8.9%) (Franke et al., 2013). Even though Sales and colleagues (2019) confirmed the use of prescription stimulants for non-medical reasons among different work fields. Information on stimulant use among working individuals is still very limited and has mostly been conducted among specific high pressure work fields, like medicine. Our sample consisted of both working students and full-time working individuals from different fields making it difficult to fully compare the prevalence to other results. A study by Majori and colleagues (2017) found a statistically significant difference between stimulant use among working students compared to non-working students. This could explain the high prevalence of ADHD-medication use among our sample for both the student sample and working sample.

Use of ADHD-medication

Our results show that gender significantly predicts the use of ADHD-medication. Both male students and working individuals had a higher risk of using ADHD-medication compared to females. While some studies confirm these results (Dietz et al., 2013; McCabe et al., 2006) others have found no significant difference in gender regarding stimulant use at all (Teter et al., 2006; Franke et al., 2013). Which implicates that more research is needed.

We found a significant association between the perception of safety and being informed and the use of ADHD-medication among students. These results are in line with previous research (Blevins et al., 2017) reporting students using ADHD-medication perceive stimulants as safer and perceive themselves to be better informed of the risks compared to non-users. But research has also shown that students regularly misusing stimulant are actually less aware of the serious consequences and addictive effects (Lakhan and Kirchgessner 2012), indicating that students are not aware of the serious risks their taking.

Contrary to the student sample, a lower perception of safety and being informed was associated with ADHD-medication use among working individuals. This is in contrast with previous research showing a higher perceived safety among working individuals (Sales et al., 2019). We also found that the use of ADHD-medication among working participants was significantly associated with less social contacts using the drugs. This is contrary to previous literature, showing a social influence on employee substance use (Frone & Brown, 2010).

Non-medical use of ADHD-medication

Consistent with previous research on NMUPS, our results show that use of ADHD-medication for non-medical purposes is associated with the use of other substances among students (Desantis, Noar & Webb, 2009; McCabe et al. 2008;). Non-medical use of ADHD-medication among students showed a significant association with the use of cannabis. While we were not able to show a significant influence of other substances, other studies also found a significant association with the use of alcohol and other lifestyle drugs (Schelle et al., 2015).

We found that students using ADHD-medication for non-medical purposes have a lower perception of safety and being informed. This result is in contrast with the findings of Judson and Langdon (2009) indicating that among students, illicit users report less concerns with safety and more knowledge of stimulants compared to non-illicit users. This result could indicate that students are deliberately ignoring the health risks (Majori et al., 2017).

Contrary to previous research we were not able to find any significant associations for non-medical use of ADHD-medication among working individuals. Franke and colleagues (2013) found an association with NMUPS among working individuals and attempts to counteract fatigue and loss of concentration. Sales and colleagues (2019) indicated perception of low risk, social benefits and easy supply as risk factors leading to the initiation and continuation of NMPSU. They also identified recreational use of stimulants among working individuals. Differences could be explained by the work field of participating individuals, since use of stimulants is associated with high pressure jobs (Franke et al., 2013). Also, our sample included working students as well, which probably influenced the outcome.

Our results confirm that motives for the use of ADHD-medication for non-medical purposes are mainly to enhance cognitive performances (Teter et al., 2006; Judson et al., 2009). Study purposes was the most frequently mentioned reason to start using the medication. Moreover, positive consequences mentioned most often were increased concentration and better performance, suggesting participants believe these drugs have a positive effect on cognitive functioning. Additionally, 31.6% of the participants indicated to plan on stopping after the study. These results were mainly focused on study settings, reflecting the large contribution of students in our sample.

Consistent with previous research our results show that most non-medical users acquire the medication through their friends and family members (DeSantis et al., 2008; Schelle et al., Weylandt et al., 2009). Usually, these contacts have a valid prescription. Physicians should therefore be aware of the possible diversion of the drugs, raising more awareness and compliance among patients (Their et al., 2017).

Non-medical alternatives

Our results show that non-users perceived CBT, mindfulness and Running therapy as more useful compared to non-medical users of ADHD-medication. This could suggest that non-users are more open to alternatives in the first place and are less likely to start taking stimulants. However, 22.2% of the non-medical users compared to 20% of the non-users indicated they were willing to use e-Health interventions. This could suggest that non-medical users are more interested in online interventions than in real life interventions. Previous research has indicated that e-Health interventions are considered of added value to meet the self-sufficient ways of addressing student's attention-related health problems (van der Heijde, Arts & Vonk, 2020).

Strengths and limitations

Several strengths and limitations of the present study should be taken into account when interpreting the results. Since this is one of the first Dutch study to indicate use and misuse of methylphenidate and dexamphetamine for both students and working individuals, it provides insight into the continuing use of ADHD-medication in the academic and working situation. The survey was distributed throughout the whole Netherlands by contacting almost all faculty student associations and gives therefore an indication of use not only of the population in Amsterdam, where the study was conducted.

Important factors influencing our results are the relatively small sample size and a possible participation bias. The recruitment of participants possibly encouraged misusers to participate in the study more, resulting in a higher rate of misusers compared to previous literature. Also, more students participated in the study, which was probably the result of difficult contact with labor unions and employee contacts. This resulted in a large contribution of working students in the working participants group. The low response rate of full-time working participants limits the generalizability of our findings. Results should therefore be interpreted with caution. Also, because substantially more female subjects participated in our study, a potential gender bias may have influenced the results. This could explain why there was no significant association between gender and the non-medical use of ADHD-medication.

It must be noted that this research was conducted during the COVID-19 pandemic, which may have influenced the results, especially with regard to stress and substance use (Ahmed et al., 2020; Papp & Kouros, 2021). During this pandemic the academic and working environment changed which may have influenced both the need for the medication and the way of acquiring it. However, this research was about the lifetime occurrence of methylphenidate and or dexamphetamine use and therefore took into account also the use before the pandemic.

Future research

Even though this research gives some insight into factors associated with the use of methylphenidate and/or dexamphetamine, research of ADHD-medication for non-medical purposes among the Dutch population is still very limited. Therefore, more research is needed. Future studies should take into account all different groups when looking at use and misuse, especially the differentiation between students, working students and full-time working individuals is important. Studies need to focus on both personal and environmental factors included in this study and are advised to look at self-diagnosis as well. Self-diagnosis could influence the use of stimulants for non-medical purposes. Finally, more deepen insight into non-medical alternatives, with a special focus on e-Health is needed.

Conclusion

This study indicates a high prevalence of ADHD-medication use for both students and working individuals in the Netherlands. Use of methylphenidate and dexamphetamine is significantly associated with an increased perception of safety and the male gender among students. Among working individuals, the male gender, a lower perception of safety and being informed and less use among social contacts predicts the use of ADHD-medication. Non-medical use of methylphenidate and/or dexamphetamine among students is significantly associated with the use of cannabis and a lower perception of safety and being informed.

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Appendices

Appendix I: Table methylphenidate sales 2005-2019

| Year | RIZIV²- expenses (in EUR) | Personal share (in EUR) | Number of packages | Number of DDD³ |
|-------------|---|------------------------------------|-------------------------------|--------------------------------------|
| 2005 | 1,298,067 | 402,086 | 256,365 | 1,727,617 |
| 2006 | 2,259,126 | 701,061 | 313,547 | 2,676,262 |
| 2007 | 3,058,851 | 945,220 | 365,625 | 3,490,621 |
| 2008 | 3,786,250 | 1,160,433 | 418,571 | 4,239,005 |
| 2009 | 4,108,586 | 1,253,891 | 434,791 | 4,548,648 |
| 2010 | 5,510,437 | 1,402,598 | 482,254 | 5,071,747 |
| 2011 | 6,048,101 | 1,430,072 | 496,243 | 5,213,579 |
| 2012 | 5,930,107 | 1,381,853 | 485,885 | 5,061,549 |
| 2013 | 5,420,068 | 1,221,002 | 455,786 | 4,698,276 |
| 2014 | 5,273,032 | 1,164,378 | 446,483 | 4,560,688 |
| 2015 | 5,622,733 | 1,250,395 | 452,510 | 4,842,637 |
| 2016 | 5,870,389 | 1,359,411 | 453,039 | 5,106,602 |
| 2017 | 5,022,261 | 1,280,602 | 448,728 | 5,224,436 |
| 2018 | 5,072,274 | 1,340,334 | 454,756 | 5,474,148 |
| 2019 | 5,252,058 | 1,400,663 | 469,276 | 5,745,871 |

¹ Statistics are based on the 'Pharmanet' database from RIZIV. This database contains data of reimbursed medicines that were delivered through community pharmacies (so not through hospitals).

² Rijksinstituut voor Ziekte- en Invaliditeitsverzekering

³ DDD: Defined Daily Doses

Adapted from: De Bruyn et al., 2019

Appendix II: information letter for participant (English)

Information letter

Dear reader,

Thank you for your interest in this study! Over the last decades the use of prescription stimulants and concentration-enhancing drugs has increased significantly. This increase is attributable to the increased feeling of pressure to perform and the normalization of misusing these drugs. Stimulants are used in a way other than prescribed, or without a medical indication, which can cause serious side effects, such as palpitations, depression, and drug dependence. Therefore, it is important to do research on this topic

We would like to invite you to participate in the research project “Current and future use of concentration-enhancing drugs: are users open to alternatives?” This research is carried out on behalf of the Student Health Services of the University of Amsterdam. The research concerns the use of the stimulant drugs methylphenidate (also known as Ritalin, Concerta and Medikinet) and dexamfetamine (also known as Tentin and Dexamfetamine FNA), approved for the treatment of AD(H)D and narcolepsy.

Please read the information below carefully before deciding to participate in the study.

Purpose of the investigation

The aim of this project is to investigate what factors influence the use of the drugs methylphenidate and dexamfetamine among adolescents and adults.

What is expected of you as a participant?

Participation consists of the completion of a questionnaire with questions about yourself, the use of methylphenidate and / or dexamfetamine, your experiences with this medication, and your lifestyle. You will give answers that most apply to you. Completing the questionnaire will take **approximately 10 minutes**. When you participate, you can participate in the prize draw of **5 bol.com vouchers worth 20 euros**.

Use and storage of your data

Your data will only be used for research purposes. All your data will remain confidential. All data is processed anonymously.

A link to the extended description of the study you find here. If you have any questions about the research or would like additional information, now or in the future, please contact Maxime Birza by sending an email to m.j.j.birza@uva.nl

If you have an official complaint about the study, you can contact the ethics committee of the University of Amsterdam, by sending an email to Dhr. dr. W.P.M. van den Wildenberg, at: W.P.M.vandenWildenberg@uva.nl.

If, after reading this information letter, you decide to take part in the research, I would kindly ask you to sign the informed consent form by clicking on the button.

With kind regards,

Maxime Birza

On behalf of the Students Health Service of the University of Amsterdam

Appendix III: Informed consent form (English)

Informed consent

I hereby declare that I have been clearly informed about the nature, method and purpose of the investigation, as set out in the information sheet for this investigation. And I have been given the opportunity to ask questions about this.

I fully agree to participate in this study. I realize that I have the right to withdraw this consent at any time, and that I may stop the investigation at any time without having to give any reason.

My anonymity is guaranteed. If my research results are used for scientific publications, or made public in any other way, this will be done completely anonymously.

- I agree
- I do not agree (questionnaire stops)

Appendix IV: Information letter for participant (Dutch)

Informatiebrief

Beste lezer,

Dank voor je interesse in dit onderzoek! De afgelopen jaren is het gebruik van stimulerende middelen en concentratie-verhogende middelen sterk toegenomen. Dit komt onder meer door de verhoogde prestatiedruk en de normalisering van het gebruik van deze medicijnen. Stimulerende middelen worden ook steeds vaker gebruikt op een andere manier dan is voorgeschreven, of zonder medische indicatie en dat kan leiden tot ernstige bijwerkingen, zoals hartkloppingen, depressie en drugsverslaving. Het is daarom belangrijk dat er onderzoek wordt gedaan naar het gebruik van deze middelen.

We willen je uitnodigen om deel te nemen aan het onderzoeksproject “Huidig en toekomstig gebruik van concentratie-verhogende middelen: staan gebruikers open voor alternatieven?” Dit onderzoek wordt uitgevoerd in opdracht van Bureau Studentenartsen van de UvA. We onderzoeken het gebruik van de stimulerende medicijnen methylfenidaat (ook wel bekend als Ritalin, Concerta en Medikinet) en dexamfetamine (ook wel bekend als Tentin en Dexamfetamine FNA). Deze medicijnen worden voorgeschreven door artsen aan mensen met AD(H)D en narcolepsie.

Wil je onderstaande informatie aandachtig doorlezen voordat je beslist deel te nemen aan het onderzoek?

Doel van het onderzoek

Het doel van dit onderzoek is te achterhalen wat voor factoren invloed hebben op het gebruik van de middelen methylfenidaat en dexamfetamine onder adolescenten en volwassenen.

Wat houdt deelname in?

Deelname bestaat uit het invullen van een vragenlijst met vragen over jezelf, het gebruik van methylfenidaat en/of dexamfetamine, je ervaringen hiermee, en je leefstijl. Je vinkt steeds het antwoord aan dat het meest voor jou van toepassing is. Het invullen van de vragenlijst duurt **circa 10 minuten**. Bij deelname kun je meedoen aan de **verloting van 5 bol.com bonnen t.w.v. 20 euro**.

Gebruik en opslag van uw gegevens

Je gegevens worden alleen gebruikt voor onderzoeksdoeleinden. Al je gegevens blijven vertrouwelijk. Alle gegevens worden anoniem verwerkt.

Indien je een officiële klacht hebt over het onderzoek, dan kun je contact opnemen met de commissie ethiek van de Universiteit van Amsterdam door een mail te sturen naar Dhr. dr. W.P.M. van den Wildenberg, via: W.P.M.vandenWildenberg@uva.nl.

Indien je een officiële klacht hebt over het onderzoek, dan kun je contact opnemen met de commissie ethiek van de Universiteit van Amsterdam door een mail te sturen naar Dhr. dr. W.P.M. van den Wildenberg, via: W.P.M.vandenWildenberg@uva.nl.

Mocht je na het lezen van deze informatie besluiten om deel te nemen aan het onderzoek, dan verzoek ik je vriendelijk om het toestemmingsformulier te ondertekenen door akkoord te gaan met de voorwaarden.

Met vriendelijke groeten,

Maxime Birza

Mede namens de studentenartsen van de Universiteit van Amsterdam

[Appendix V: Informed consent form \(Dutch\)](#)

Toestemmingsformulier

Ik verklaar hierbij op voor mij duidelijke wijze te zijn ingelicht over de aard, methode en doel van het onderzoek, zoals uiteengezet in het informatieblad voor dit onderzoek. En ik ben in de gelegenheid gebracht om hier vragen over te stellen.

Ik stem geheel vrijwillig in met deelname aan dit onderzoek. Ik besef dat ik daarbij het recht heb deze instemming op ieder moment weer in te trekken, en dat ik op ieder moment mag stoppen met het onderzoek, zonder dat ik daarvoor een reden voor hoef op te geven.

Mijn anonimiteit is gewaarborgd, als mijn onderzoeksresultaten worden gebruikt voor wetenschappelijke publicaties, of op een andere manier openbaar gemaakt worden, dan zal dit volledig geanonimiseerd gebeuren.

Wanneer u akkoord gaat met de voorwaarden zoals beschreven in het toestemmingsformulier dan stemt u in deel te nemen aan dit onderzoek.

- Ik ga akkoord
- Ik ga niet akkoord (vragenlijst stopt automatisch)

Appendix VI: Questionnaire English

Demographic questions

1. What is your age?
2. What is your gender:
 - Male
 - Female
 - Prefer not to say
3. Do you currently live in the Netherlands?
 - Yes
 - No (questionnaire is ended)
4. What is your nationality?
 - I am Dutch
 - I'm from another European country, namely
 - I'm from a country outside Europe, namely
5. What is your current living situation?
 - Living with family
 - Living with friends or roommates
 - Living alone
 - Living with husband / wife or partner
 - Different, namely
6. What is your current professional situation? (Multiple answers possible).
 - Student
 - Working, amount of hours per week:
 - Not working
 - Retired
 - Different, namely
7. What is your highest level of education? If you are currently following a form of education, you can check that box.
 - Primary education
 - General secondary education (Dutch: VMBO, MAVO, VBO)
 - Higher general secondary education (Dutch: HAVO)
 - Pre-university education (VWO)
 - University of Applied Sciences (Dutch: HBO)
 - Scientific education (university)
 - PhD/ Doctorate
8. Have you graduated from this education?
 - Yes
 - No

(When participant has stated to be a student)

9. I study at:
 - Faculty of Economics and Business Administration

- Faculty of Science, Mathematics and Computer Science
- Faculty of Humanities / Faculty of Religion and Theology
- Faculty of Behavioural and Movement Sciences
- Faculty of Medicine
- Faculty of Social Sciences / Faculty of Social and Behavioural Sciences
- Faculty of Law
- Faculty of Dentistry
- Different, namely

(When participant has stated to work)

10. In which sector do you work, and what is your position?

- Sector: Business economic and administrative, position:
- Sector: Care and welfare, position:
- Sector: Technical, position:
- Sector: Commercial, position:
- Sector: Services, position:
- Sector: Pedagogical, education, position:
- Sector: Transport and logistics, position:
- Sector: ICT, position:
- Sector: Managers, position:
- Sector: Public administration, security and legal, position:
- Sector: Creative and linguistic, position:
- Sector: Agricultural, position:
- Different sector and position:

The following questions are about Attention Deficit Hyperactivity Disorder (ADHD), and the use of AD(H)D medications. Here are some examples of AD(H)D medications. These are the substance names followed by (brand names): methylphenidate (Ritalin, Equasym, Concerta, Medikinet CR), atomoxetine (Strattera) and dexamphetamine. These medications can be used for other treatments as well. In the context of this research, we will only focus on medications containing methylphenidate or dexamphetamine used for the enhancement of concentration and performance.

11. Do you think you have ADHD of ADD?

- Yes
- No

12. Have you ever been diagnosed with AD(H)D by a psychiatrist?

- Yes
- No

13. Have you ever been diagnosed with AD(H)D by a general practitioner?

- Yes
- No

14. Have you ever received a prescription for AD(H)D medication from a doctor?

- Yes
- No

More and more people are misusing AD(H)D medication for non-medical reasons. This means that the medicine has been used without medical indication (for example for the (drug) effect or for fun), or not as prescribed by the doctor (for example more often than intended). For the remainder of this

questionnaire, everywhere that AD(H)D medication is mentioned it only applies for methylphenidate and dexamphetamine

When answer to question 14 was **yes**:

15. For which medication did/do you receive a prescription? (multiple answers possible)
- Concerta
 - Equasym
 - Kinectene
 - Medikinet
 - Ritalin
 - Amfexa
 - Dexamfetamine
 - Tentin
 - Different, namely:

When answer to question 14 was **no**:

15. Have you ever used AD(H)D medication?
- Yes
 - No (automatically directed to question 30)
 - No, but I have consciously used sports / meditation or other lifestyle improvements to be able to concentrate better (automatically directed to question 30)

When answer to “have you ever used AD(H)D medication?” was yes.

16. How did you acquire AD(H)D medication? (multiple answers possible)

- Given by a friend/relative for free
- Bought from friend/relative
- Took from friend/relative without their knowledge
- Bought from dealer/stranger
- Traded another drug for a prescription stimulant
- Bought online
- Otherwise, namely

17. At what age did you use methylphenidate and/or dexamphetamine medication for the first time?

18. Why did you start taking methylphenidate and/or dexamphetamine medication? (multiple answers are possible)

- Because a doctor prescribed it
- Because my friends do it too
- To experiment
- For fun
- To be able to perform better (e.g. for your studies or sports)
- To make me feel better
- To get high
- Because it is safer than hard drugs
- To counteract the effects of one drug with another
- To enhance the effects of other drugs or medicines
- Another reason, namely

19. Have you obtained the desired effect by taking methylphenidate and/or dexamphetamine medication?

- Never

- Rarely
- Occasionally
- regularly
- Always

20. What are (or were) the positive consequences of the use of methylphenidate and/or dexamphetamine drugs for you? (Multiple answers possible)

- I can perform better
- I feel better
- It gets me high
- I can concentrate better
- There are no positive consequences
- Something else, namely ...

21. What are (or were) the negative consequences of the use of methylphenidate and/or dexamphetamine drugs for you? (Multiple answers possible)

- It makes me dull
- It makes me nauseous
- It gives me a headache
- It gives me anxiety
- It gives me delusions (believing that something is true that is not true)
- It gives me hallucinations (seeing and / or hearing things that are not there)
- I get amnesia
- It makes me less concentrated
- It makes me irritable
- I do not sleep well
- I get nightmares/ strange dreams
- My emotions are faded
- There are no negative consequences for me
- Something else, namely

22. Which of the following statements about the use of methylphenidate and/ or dexamphetamine suits you best?

- I use it at least once a day
- I use it at least once a week, but not every day
- I use it at least once a month, but not every week.
- I use it less than once a month
- I only used it once
- I have stopped using

(when participant has indicated to have stopped the medication)

23. Why have you stopped using methylphenidate and/or dexamphetamine?

- Because of the side effects
- The medication was not effective
- I no longer needed the drug
- Different reason, namely

(when participant has indicated to have stopped the medication)

24. How often did you use methylphenidate and/or dexamphetamine?

- At least once a day
- At least once a week, but not every day
- At least once a month, but not every week

- Less than once a month
- I used it only once

25. For how long have you used methylphenidate and/or dexamphetamine?
(number of years + number of months)

26. When was the last time you used methylphenidate and/or dexamphetamine medication?

- In the past week
- Not in the past week, but in the past month
- Not in the past month, but in the past 12 months
- Longer than 12 months ago

27. Have you ever used methylphenidate and/or dexamphetamine medication for non-medical purposes?

Give the answer that most applies to you.

- Never (continue to question 30)
- Rarely
- Occasionally
- Regularly
- Always

When participant has indicated to use AD(H)D medication for nonmedical purposes (never is not selected)

28. How often have you used methylphenidate or dexamphetamine in total without a medical indication?

- 1-2 times
- 3-5 times
- 6-9 times
- 10-19 times
- 20-39 times
- 40 times or more

29. For how long do you intend to keep on taking AD(H)D medication?

- Forever
- Until I finish my study
- Until I retire
- Different time, namely

Stimulant Survey Questionnaire (SSQ)

30. Give the answer that most applies to you. (when answer to question 14 or 15 was yes)

| | Never | Rarely | Occasionally | Regularly | Frequently | Most frequently | Always |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| I have used an AD(H)D medication at parties | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I have used an AD(H)D medication with alcohol | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I have snorted an AD(H)D medication | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

| | | | | | | | |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| I have injected an AD(H)D medication | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I have smoked an AD(H)D medication | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I have taken AD(H)D medication to focus better on class | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I have taken AD(H)D medication to focus better on work (when is indicated to work) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I have taken AD(H)D medication to perform better on study tests | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I have taken AD(H)D medication to perform better on a work deadline (when is indicated to work) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I have taken AD(H)D medication to help me socialize better | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I have taken AD(H)D medication to help me lose weight | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I have taken AD(H)D medication to perform better in schoolwork | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I have taken AD(H)D medication to perform better at work assignments (when is indicated to work) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I have taken AD(H)D medication to feel energetic | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I have taken AD(H)D medication to feel better about myself | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I have taken AD(H)D medication to "get high" | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

| | | | | | | | |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| I have been offered AD(H)D medication by other people | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I have tried someone else's AD(H)D medication | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I have purchased AD(H)D medication from other peoples | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I have sold AD(H)D medication to other people | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I have given AD(H)D medication to other people | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I have been pressured into letting someone else have my AD(H)D medication | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

31. Indicate to what extent you agree with the following statements

| | Strongly disagree | Disagree | Somewhat disagree | Neutral | Somewhat agree | Agree | Strongly agree |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| AD(H)D medication is easy to get on the campus (when is indicated to be a student) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| AD(H)D medication is easy to get at the work site (when is indicated to work) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| AD(H)D medication is as easy to get as alcohol | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| AD(H)D medication is as easy to get as marijuana | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Using AD(H)D medication occasionally is a harmless | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Using AD(H)D medication daily is harmless | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| AD(H)D medication use on campus is a problem (when is indicated to be a student) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

| | | | | | | | |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| AD(H)D medication use at work is a problem (when is indicated to work) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| AD(H)D medication is safer than marijuana | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| AD(H)D medication is safer than alcohol | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I feel I am knowledgeable about AD(H)D medication | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I feel I am knowledgeable about the side effects of AD(H)D medication | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

32. Indicate whether or not the following statements applies to you

| | Yes | No |
|--|--------------------------|--------------------------|
| I know people who use AD(H)D medication at parties | <input type="checkbox"/> | <input type="checkbox"/> |
| I know people who use AD(H)D medication with alcohol | <input type="checkbox"/> | <input type="checkbox"/> |
| I know people who use AD(H)D medication with other drugs | <input type="checkbox"/> | <input type="checkbox"/> |
| I know people who use AD(H)D medication while studying | <input type="checkbox"/> | <input type="checkbox"/> |
| I know people who use AD(H)D medication while working | <input type="checkbox"/> | <input type="checkbox"/> |
| I know people who use AD(H)D medication during finals week (when is indicated to be a student) | <input type="checkbox"/> | <input type="checkbox"/> |
| I know people who use AD(H)D medication in the run-up to deadlines at work (when is indicated to work) | <input type="checkbox"/> | <input type="checkbox"/> |
| I know people who use AD(H)D medication during tests (when is indicated to be a student) | <input type="checkbox"/> | <input type="checkbox"/> |
| I know people who use AD(H)D medication during important work moments (when is indicated to work) | <input type="checkbox"/> | <input type="checkbox"/> |
| I know people who snorted AD(H)D medication | <input type="checkbox"/> | <input type="checkbox"/> |
| I know people who injected AD(H)D medication | <input type="checkbox"/> | <input type="checkbox"/> |
| I know people who smoke AD(H)D medication | <input type="checkbox"/> | <input type="checkbox"/> |
| I hide my AD(H)D medication so that no one will take it | <input type="checkbox"/> | <input type="checkbox"/> |

The following questions will introduce a number of interventions aimed at improving concentration and lifestyle and reducing AD(H)D symptoms. These interventions can replace the use of concentration-enhancing drugs. The term "intervention" refers to any form of treatment, intervention or therapy. Read the interventions carefully and decide whether these interventions could be useful and/or desirable for you.

Cognitive Behavioural Therapy (CBT)

Cognitive Behavioural Therapy is a form of psychotherapy in combination with behavioural therapy. During the treatment you become aware of your own functioning. Appropriate behavioural patterns are sought during therapy to respond to circumstances. Through exercises you learn to think and act differently, which reduces negative feelings and complaints and changes behaviour. Cognitive

behavioural therapy can also help to reduce AD(H)D symptoms by improving planning and organization.

33. To which extent do you agree with the following statements?

| | Strongly disagree | Disagree | Neither agree nor disagree | Agree | Strongly agree |
|---|--------------------------|--------------------------|----------------------------|--------------------------|--------------------------|
| I think cognitive behavioural therapy is a useful intervention for when someone experiences concentration problems. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Cognitive behavioural therapy would be a useful intervention in case I experience concentration problems. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I would like to follow this intervention. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Mindfulness

Mindfulness-based interventions are used in the treatment of psychiatric disorders but also to reduce stress in healthy people. Mindfulness increases your concentration by improving your attention, increasing your awareness and reducing stress.

34. To what extent do you agree with the following statements?

| | Strongly disagree | Disagree | Neither agree nor disagree | Agree | Strongly agree |
|---|--------------------------|--------------------------|----------------------------|--------------------------|--------------------------|
| I think mindfulness is a useful intervention for when someone experiences concentration problems. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Mindfulness would be a useful intervention in case I experience concentration problems. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I would like to follow this intervention | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

ADHD coaching

ADHD coaching is a psychosocial intervention that focuses on behaviour, emotion and cognitive outcomes. This intervention helps people develop skills to change negative outcomes and beliefs and to better cope with ADHD symptoms. Most programs focus on improving organization, time management and planning (OTMP), and goal setting.

35. To which extent do you agree with the following statements?

| | Strongly disagree | Disagree | Neither agree nor disagree | Agree | Strongly agree |
|---|--------------------------|--------------------------|----------------------------|--------------------------|--------------------------|
| I think ADHD coaching is a useful intervention for when someone experiences concentration problems. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ADHD coaching would be a useful intervention in case I experience concentration problems. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I would like to follow this intervention | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Lifestyle improvement

The improvement of nutrition, exercise and relaxation are key elements of lifestyle improvement. Lifestyle improvement improves your physical and psychological health and thus reduces ADHD symptoms and increases concentration.

36. To which extent do you agree with the following statements?

| | Strongly disagree | Disagree | Neither agree nor disagree | Agree | Strongly agree |
|---|--------------------------|--------------------------|----------------------------|--------------------------|--------------------------|
| I think lifestyle improvement is a useful intervention for when someone experiences concentration problems. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Lifestyle improvement would be a useful intervention in case I experience concentration problems. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I would like to follow this intervention | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Running therapy

Running therapy improves mental health by means of running under the guidance of a running therapist. A big difference with general running is that running therapy focuses on the process and not the performance. As a result, the training offers more relaxation. Running therapy has a beneficial effect on concentration and increases cognitive performance.

37. To what extent do you agree with the following statements?

| | Strongly disagree | Disagree | Neither agree nor disagree | Agree | Strongly agree |
|---|--------------------------|--------------------------|----------------------------|--------------------------|--------------------------|
| I think running therapy is a useful intervention for when someone experiences concentration problems. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Running therapy would be a useful intervention in case I experience concentration problems. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I would like to follow this intervention | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Neurofeedback

Neurofeedback is a behavioural therapy that teaches to improve brain activity and self-regulation. During the intervention you will see a real-time picture of your own neurological patterns and you will learn strategies to manipulate brain waves. This can reduce psychological complaints, including attention-problems, AD(H)D, anxiety and sleeping-problems.

38. To what extent do you agree with the following statements?

| | Strongly disagree | Disagree | Neither agree nor disagree | Agree | Strongly agree |
|---|--------------------------|--------------------------|----------------------------|--------------------------|--------------------------|
| I think Neurofeedback is a useful intervention for when someone experiences concentration problems. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Neurofeedback would be a useful intervention in case I experience concentration problems. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I would like to follow this intervention | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

39. Interventions can be followed both individually and in groups. Do you prefer individual or group interventions?

- Individually
- Group

There is also the possibility to find online help for attention-related problems. This means that you independently go through an e-Health program, without conversations with a therapist. An example of this is howtostayfocused.org, an online resource to address, clarify and analyse attention-related problems.

40. Are you familiar with the e-Health programme howtostayfocused.org?

- Yes
- No.

41. To what extent do you agree with the following statement?

I would like to follow an e-Health program

| Strongly disagree | Somewhat disagree | Not disagree/ not agree | Somewhat agree | Strongly agree |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

42. Could you mention any interventions that are not included in the questionnaire that you think should be included in the intervention offer of the UvA?

Pressure to perform

43. Indicate to what extend you agree with the following statements

When participant has indicated to be a student

| Expectations | Strongly disagree | Disagree | Somewhat disagree | Neutral | Somewhat agree | Agree | Strongly agree |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| I feel pressure to meet the expectations of my parents | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I feel pressure from fellow students to perform good in the study | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I feel pressure from my family to perform good in the study | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I feel pressure from friends to perform good in the study | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I'm putting myself under pressure to perform good in the study | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

The pressure for performance in my study is high

44. Indicate to what extent you agree with the following statements

When participant has indicated to work

I feel pressure to meet the expectations of my boss

I feel pressure from fellow colleagues to perform good at work

I feel pressure from my family to perform good at work

I feel pressure from friends to perform good at work

I'm putting myself under pressure to perform good at work

The pressure for performance in my workplace is high

45. Indicate to what extent you agree with the following statements

When participant has indicated to be a student

Amount of work

I feel tremendous pressure to produce results at my study

I feel pressure because I have too little time to perform all my study tasks

I feel pressured by the amount of work I have to do on the study

I feel pressure to deliver high quality results at my study

46. Indicate to what extent you agree with the following statements

When participant has indicated to work

I feel tremendous pressure to produce results at my work

I feel pressure because I have too little time to perform all my work tasks

I feel pressured by the amount of work I have to do at the workplace

I feel pressure to deliver high quality results at my work

47. Indicate to what extent you agree with the following statements

When participant has indicated to be a student

Consequences

| | | | | | | | |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| If I don't produce at high levels, my study will be at risk. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I would characterize my study as a results-driven environment. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I'm afraid of not carrying out study assignments properly | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

48. Indicate to what extend you agree with the following statements

When participant has indicated to work

| | | | | | | | |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| If I don't produce at high levels, my job will be at risk. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I would characterize my workplace as a results-driven environment. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I'm afraid of not carrying out work assignments properly | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

49. Indicate to what extend you agree with the following statements

| | | | | | |
|-------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
| I need AD(H)D medication to perform | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

50. What percentage of people in your environment do you think has ever used stimulant medication to improve their performances?

Procrastination and fear

The following questions are about procrastination and the fear of failure

51. Indicate to what extend you agree with the following statements

| | | | | | |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
| I needlessly delay finishing jobs, even when they are important. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| When I have a deadline, I wait until the last minute. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I am an incurable time waster. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

52. To what extend do you agree with the following statements?

| | | | | | |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
| If someone does a task better than me, then I feel like I failed the whole task. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| If I do not do as well as other people, it means I am an inferior human being. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

- If I do not do well all the time, people will not respect me.
- The fewer mistakes I make, the more people will respect me.

Lifestyle questions

53. Have you smoked tobacco or used e-cigarettes in the last 12 months?

- Yes
- No

54. Have you smoked cannabis in the last 12 months?

- Yes
- No

55. Have you used illegal drugs in the last 12 months?

- Yes
- No

56. Looking back at the past 12 months, how often did you drink alcohol?

- Never
- Monthly or less
- Once a week or less
- 2 to 3 times a week
- 4 times a week or more

(when participant has indicated to be a student)

57. Are you currently an active member of a student association or sorority?

- Yes
- No.

You have completed the questionnaire.

If you would like to participate in the drawing of the 5 bol.com vouchers worth 20 euros, please enter your email address below:

We thank you for your time spent taking this survey.
Your response has been recorded.

Appendix VII: Questionnaire Dutch

Demografische vragen

1. Wat is je leeftijd:
 2. Wat is je geslacht?
 - Man
 - Vrouw
 - Anders
 3. Woon je momenteel in Nederland?
 - Ja
 - Nee (vragenlijst stopt)
 4. Wat is je nationaliteit
 - Ik ben Nederlands
 - Ik kom uit een ander Europees land, namelijk
 - Ik kom uit een land buiten Europa, namelijk
 5. Wat is je huidige woonsituatie?
 - Samenwonend met familie,
 - Samenwonend met vrienden of huisgenoten
 - Alleenwonend
 - Samenwonend met echtgenoot/ echtgenote of partner
 - Anders, namelijk
 6. Wat is je huidige beroepssituatie? (Er zijn meerdere antwoorden mogelijk).
 - Student
 - Werkend, aantal uur per week:
 - Niet werkend
 - Met pensioen
 - Anders
 7. Wat is je hoogst genoten opleiding? Indien je op dit moment een opleiding volgt, kun je deze aanvinken
 - Basisonderwijs
 - Lager of voorbereidend beroepsonderwijs (VMBO, MAVO, VBO)
 - Hoger algemeen voorbereidend onderwijs (HAVO)
 - Voorbereidend wetenschappelijk onderwijs (VWO)
 - Hoger beroepsonderwijs (HBO)
 - Wetenschappelijk onderwijs (universiteit)
 - PhD/doctoraat
 8. Heb je deze opleiding al voltooid?
 - Ja
 - Nee
- (Wanneer is aangegeven student te zijn)
9. Ik studeer aan:
 - De faculteit Economie en Bedrijfskunde

- Faculteit der Bèta wetenschappen/ Natuurwetenschappen, wiskunde en informatica
- Faculteit der Geesteswetenschappen/ Faculteit Religie en Theologie
- Faculteit der Gedrags- en Bewegingswetenschappen
- Faculteit der Geneeskunde
- Faculteit der Sociale Wetenschappen/ Faculteit de Maatschappij- en Gedragswetenschappen
- Faculteit der Rechtsgeleerdheid
- Faculteit der Tandheelkunde
- Anders, namelijk

(Wanneer is aangegeven werkende te zijn)

10. Binnen welke sector ben je werkzaam, en wat is je functie?

- Bedrijfseconomisch en administratief, namelijk...
- Zorg en welzijn, namelijk...
- Technisch, namelijk...
- Commercieel, namelijk...
- Dienstverlening, namelijk...
- Pedagogisch/ onderwijs, namelijk...
- Transport en logistiek, namelijk...
- ICT, namelijk...
- Managers, namelijk...
- Openbaar bestuur, veiligheid en juridisch, namelijk...
- Creatief en taalkundig, namelijk...
- Agrarisch, namelijk...
- Anders, namelijk...

De volgende vragen gaan over ADHD en het gebruik van AD(H)D-medicijnen. Hier volgen enkele voorbeelden van ADHD-medicijnen. Dit zijn de stofnamen gevolgd door (**merknamen**): Methylfenidaat (**Ritalin, Equasym, Concerta, Medikinet CR**), Atomoxetine (**Strattera**) en Dexamfetamine. Deze medicijnen kunnen ook gebruikt worden voor de behandeling van andere kwalen. In het kader van dit onderzoek gaat het alleen om het gebruik van deze medicijnen voor de bevordering van concentratie en prestatie

11. Denk je dat je ADHD of ADD hebt?

- Ja
- Nee

12. Is er ooit door een psychiater de diagnose ADHD of ADD bij je vastgesteld?

- Ja
- Nee

13. Is er ooit door een (huis)arts de diagnose ADHD of ADD bij je vastgesteld?

- Ja
- Nee

14. Heb je ooit een recept voor AD(H)D medicatie verkregen via een arts?

- Ja
- Nee

AD(H)D medicatie wordt steeds vaker oneigenlijk gebruikt. Dit houdt in dat het medicijn is gebruikt zonder medische indicatie (bijvoorbeeld voor het (drugs)effect of voor de lol), of niet zoals is voorgeschreven (bijvoorbeeld vaker dan bedoeld). De volgende vragen gaan over het gebruik en

oneigenlijk gebruik van AD(H)D-medicijnen. In het kader van dit onderzoek gaat het bij de volgende vragen alleen over de medicijnen die methylfenidaat of dexamfetamine bevatten.

Wanneer het antwoord op vraag 14 **ja** was:

15. Voor welke ADHD-medicatie heb je een recept?

- Concerta
- Equasym
- Kinecteen
- Medikinet
- Ritalin
- Amfexa
- Dexamfetamine
- Tentin
- Anders, namelijk

Wanneer het antwoord op vraag 12 **nee** was:

15. Heb je ooit ADHD-medicatie gebruikt?

- Ja
- Nee (automatisch doorgestuurd naar vraag 30)
- Nee, maar ik heb me wel bewust bedient van sport/meditatie of andere verbeteringen op leefstijlgebied om beter te kunnen concentreren. (Automatisch doorgestuurd naar vraag 30)

16. Hoe ben je aan deze middelen gekomen?

- Gekregen van een vriend/familielid
- Gekocht van een vriend/ familielid
- Gestolen van een vriend/ familielid
- Gekocht van een dealer/ vreemde
- Ik heb het middel geruild voor een ander medicijn
- Online gekocht
- Anders, namelijk

17. Op welke leeftijd heb je methylfenidaat en/of dexamfetamine voor het eerst gebruikt?

...

18. Waarom ben je begonnen met het slikken van methylfenidaat en/of dexamfetamine? (er zijn meerdere antwoorden mogelijk)

- Omdat een arts het voorschreef
- Omdat mijn vrienden het ook doen
- Om te experimenteren
- Voor de lol
- Om beter te kunnen presteren op de studie
- Om beter te kunnen presteren op werk
- Om me beter te voelen
- Om er high van te worden
- Omdat het veiliger is dan harddrugs
- Om de effecten van het ene middel met het andere tegen te gaan
- Om de effecten van andere drugs of medicijnen te versterken
- Een andere reden, namelijk

19. Heb je door inname van methylfenidaat en/of dexamfetamine medicatie het gewenste effect verkregen?

- Nooit
- Zelden
- Af en toe
- Regelmatig
- Altijd

20. Wat zijn (of waren) voor jou de positieve gevolgen van het gebruik van methylfenidaat en/of dexamfetamine? (Er zijn meerdere antwoorden mogelijk)

- Ik kan beter presteren
- Ik voel me beter
- Ik word er high van
- Ik kan me beter concentreren
- Er zijn geen positieve gevolgen voor mij
- Iets anders, namelijk ...

21. Wat zijn (of waren) voor jou de negatieve gevolgen van het gebruik van methylfenidaat en/of dexamfetamine? (Er zijn meerdere antwoorden mogelijk)

- Ik word er duf van
- Ik word er misselijk van
- Ik krijg er hoofdpijn van
- Ik krijg er angstgevoelens van
- Ik krijg er waanideeën van (geloven dat iets waar is wat niet waar is)
- Ik krijg er hallucinaties van (dingen zien en/of horen die er niet zijn)
- Ik krijg er geheugenverlies van
- Ik word er minder geconcentreerd van
- Ik word er prikkelbaar van
- Ik slaap niet goed
- Ik krijg er nachtmerries / rare dromen van
- Mijn emoties vlakken af
- Er zijn bij mij geen negatieve gevolgen
- Iets anders, namelijk...

22. Welke van de volgende uitspraken over het gebruik van methylfenidaat en/of dexamfetamine past het beste bij jou?

- Ik gebruik het tenminste 1 keer per dag
- Ik gebruik het tenminste 1 keer per week, maar niet elke dag
- Ik gebruik het tenminste 1 keer per maand, maar niet elke week
- Ik gebruik het minder dan 1 keer in de maand
- Ik heb ze maar 1 keer gebruikt
- Ik ben gestopt met gebruik

(wanneer is aangegeven te zijn gestopt met gebruiken)

23. Waarom ben je gestopt met gebruiken

- Vanwege de bijwerkingen
- Het middel was niet effectief
- Ik had het middel niet meer nodig
- Andere reden, namelijk

(wanneer is aangegeven te zijn gestopt met gebruiken)

24. Hoe vaak heb je het gebruikt

- Ik gebruikte het tenminste 1 keer per dag
- Ik gebruik het tenminste 1 keer per week, maar niet elke dag
- Ik gebruik het tenminste 1 keer per maand, maar niet elke week
- Ik gebruik het minder dan 1 keer in de maand
- Ik heb het een keer gebruikt

25. Hoe lang heb je het gebruikt? (Aantal jaren + aantal maanden)

26. Wanneer was de laatste keer dat je methylfenidaat en/of dexamfetamine hebt gebruikt?

- In de afgelopen week
- Niet in de afgelopen week, maar wel in de afgelopen maand
- Niet in de afgelopen maand, maar wel in de afgelopen 12 maanden
- Langer dan 12 maanden geleden

27. Heb je ooit methylfenidaat en/of dexamfetamine oneigenlijk gebruikt?

Geef het antwoord dat het meest bij jou van toepassing is:

- Nooit
- Zelden
- Af en toe
- Regelmatig
- Altijd

Wanneer is aangegeven dat AD(H)D medicatie oneigenlijk is gebruikt

28. Hoe vaak heb je in de afgelopen 12 maanden methylfenidaat of dexamfetamine gebruikt zonder medische indicatie?

- Nooit
- 1-2 keer
- 3-5 keer
- 6-9 keer
- 10-19 keer
- 20-39 keer
- 40 keer of vaker

29. Hoelang ben je van plan het middel te blijven slikken?

- Voor altijd
- Totdat ik klaar ben met studeren
- Totdat ik klaar ben met werken
- Ander moment, namelijk

Stimulant Survey Questionnaire (SSQ)

30. Geef bij de volgende stellingen aan wat het meest bij jou van toepassing is:

| | Nooit | Zelden | Af en toe | Regelmatig | Vaak | Heel vaak | Altijd |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Ik heb ooit AD(H)D medicatie gebruikt op een feestje | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ik heb ooit AD(H)D medicatie gebruikt met alcohol | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ik heb ooit AD(H)D medicatie gesnoven | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

| | | | | | | | |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Ik heb ooit AD(H)D medicatie geïnjecteerd | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ik heb ooit AD(H)D medicatie gerookt | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ik heb ooit AD(H)D medicatie gebruikt om beter te kunnen concentreren in de les | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ik heb ooit AD(H)D medicatie gebruikt om beter te kunnen concentreren op het werk (alleen werkende mensen) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ik heb ooit AD(H)D medicatie gebruikt om beter te kunnen presteren in een toets | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ik heb ooit AD(H)D medicatie gebruikt om beter te kunnen presteren met een werk deadline (alleen werkende mensen) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ik heb ooit AD(H)D medicatie gebruikt om socialer te zijn | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ik heb ooit AD(H)D medicatie gebruikt om gewicht te verliezen | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ik heb ooit AD(H)D medicatie gebruikt om beter te presteren tijdens studieopdrachten | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ik heb ooit AD(H)D medicatie gebruikt om beter te presteren tijdens werk opdrachten (alleen werkende mensen) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ik heb ooit AD(H)D medicatie gebruikt om me energiever te voelen | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ik heb ooit AD(H)D medicatie gebruikt om me beter over mezelf te voelen | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ik heb ooit AD(H)D medicatie gebruikt om "high" te worden | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ik heb ooit AD(H)D medicatie aangeboden gekregen door een andere student | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ik heb ooit AD(H)D medicatie aangeboden gekregen door een collega (alleen werkende mensen) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ik heb ooit iemand anders zijn AD(H)D medicatie medicijn geprobeerd | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ik heb ooit AD(H)D medicatie gekocht van een andere persoon | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ik heb ooit AD(H)D medicatie verkocht aan iemand anders | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

| | | | | | | | |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Ik heb ooit AD(H)D medicatie gegeven aan iemand anders | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ik ben een keer geforceerd in het geven van mijn AD(H)D medicatie aan iemand anders | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

31. Geef aan in hoeverre je het eens bent met de volgende stellingen

| | Sterk oneens | Oneens | Enigszins oneens | Neutraal | Enigszins eens | Eens | Sterk eens |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| AD(H)D medicatie is makkelijk te verkrijgen op de campus (alleen studenten) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| AD(H)D medicatie is makkelijk te verkrijgen op werk (alleen werkende mensen) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| AD(H)D medicatie is net zo makkelijk te verkrijgen als alcohol | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| AD(H)D medicatie is net zo makkelijk te verkrijgen als marihuana | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Het af en toe gebruiken van AD(H)D medicatie kan geen kwaad | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Het dagelijks gebruik van AD(H)D medicatie kan geen kwaad | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Het gebruik van AD(H)D medicatie onder studenten is een probleem | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Het gebruik van AD(H)D medicatie onder collega's is een probleem (alleen werkende mensen) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| AD(H)D medicatie is veiliger dan marihuana | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| AD(H)D medicatie is veiliger dan alcohol | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ik heb het gevoel dat ik goed geïnformeerd ben over AD(H)D medicatie. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ik heb het gevoel dat ik goed op de hoogte ben van de bijwerkingen van AD(H)D medicatie. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

32. Geef aan of je het wel of de volgende stellingen wel of niet op jou van toepassing zijn

| | Ja | Nee |
|--|--------------------------|--------------------------|
| Ik ken mensen AD(H)D medicatie gebruiken op feestjes | <input type="checkbox"/> | <input type="checkbox"/> |
| Ik ken mensen die AD(H)D medicatie gebruiken met alcohol | <input type="checkbox"/> | <input type="checkbox"/> |
| Ik ken mensen die AD(H)D medicatie gebruiken met andere drugs | <input type="checkbox"/> | <input type="checkbox"/> |
| Ik ken mensen die AD(H)D medicatie gebruiken tijdens het studeren (alleen studenten) | <input type="checkbox"/> | <input type="checkbox"/> |

- | | | |
|--|--------------------------|--------------------------|
| Ik ken mensen die AD(H)D medicatie gebruiken tijdens het werk (alleen werkende mensen) | <input type="checkbox"/> | <input type="checkbox"/> |
| Ik ken mensen die AD(H)D medicatie gebruiken tijdens tentamen weken (alleen studenten) | <input type="checkbox"/> | <input type="checkbox"/> |
| Ik ken mensen die AD(H)D medicatie gebruiken in de aanloop naar een werk deadline (alleen werkende mensen) | <input type="checkbox"/> | <input type="checkbox"/> |
| Ik ken mensen die AD(H)D medicatie gebruiken tijdens toetsen alleen studenten) | <input type="checkbox"/> | <input type="checkbox"/> |
| Ik ken mensen die AD(H)D medicatie gebruiken op belangrijke werk momenten (alleen werkende mensen) | <input type="checkbox"/> | <input type="checkbox"/> |
| Ik ken mensen die AD(H)D medicatie snuiven | <input type="checkbox"/> | <input type="checkbox"/> |
| Ik ken mensen die AD(H)D medicatie injecteren | <input type="checkbox"/> | <input type="checkbox"/> |
| Ik ken mensen die AD(H)D medicatie roken | <input type="checkbox"/> | <input type="checkbox"/> |
| Ik verberg mijn AD(H)D medicatie zodat niemand het kan afpakken | <input type="checkbox"/> | <input type="checkbox"/> |

Er volgt nu een uiteenzetting van een aantal interventies die gericht zijn op het verbeteren van concentratie en leefstijl, en het verminderen van ADHD-symptomen. Deze interventies kunnen als vervanging dienen van het gebruik van concentratie-verhogende middelen. Met de term 'interventie' wordt elke vorm van behandeling, ingreep of therapie bedoeld. Lees de interventies aandachtig door en ga bij jezelf na of deze interventies zinvol en/of wenselijk zouden kunnen zijn.

Cognitieve gedragstherapie (CGT)

Cognitieve gedragstherapie is een vorm van psychotherapie in combinatie met gedragstherapie. Tijdens de therapie word je je bewust van je eigen functioneren en wordt gezocht naar passende gedragspatronen om te reageren op omstandigheden. Via oefeningen leer je om anders te denken en te handelen, waardoor negatieve gevoelens en klachten verminderen en het gedrag verandert. Gedragstherapie kan ook helpen bij het verminderen van AD(H)D klachten door het verbeteren van plannen en organiseren.

33. In hoeverre ben je het eens met de volgende stellingen?

| | Sterk oneens | Oneens | Noch oneens/noch eens | Eens | Sterk mee eens |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Ik zie cognitieve gedragstherapie als een zinvolle interventie voor wanneer iemand concentratieproblemen ervaart. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Cognitieve gedragstherapie zou een zinvolle interventie zijn voor het geval ik concentratieproblemen ervaar. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ik zou deze interventie willen volgen | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Mindfulness

Mindfulness-gebaseerde interventies worden gebruikt bij de behandeling van psychiatrische stoornissen maar zorgen ook voor de vermindering van stress bij gezonde mensen. Door de

verbetering van je aandacht, het verhogen van je bewustwording en de vermindering van stress, zorgt Mindfulness voor de verhoging van je concentratie.

34. In hoeverre ben je het eens met de volgende stellingen?

| | Sterk oneens | Oneens | Noch oneens/noch eens | Eens | Sterk mee eens |
|--|--------------------------|--------------------------|-----------------------------|--------------------------|--------------------------|
| Ik zie mindfulness als een zinvolle interventie voor wanneer iemand concentratieproblemen ervaart. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Mindfulness zou een zinvolle interventie zijn voor het geval ik concentratieproblemen ervaar. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ik zou deze interventie willen volgen. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

ADHD-coaching

ADHD-coaching is een psychosociale interventie die zich focust op gedrag, emotie en cognitieve uitkomsten. Deze interventie helpt je vaardigheden te ontwikkelen om negatieve resultaten en overtuigingen te veranderen en om beter om te kunnen gaan met ADHD-klachten. De meeste programma's focussen zich op verbeteren van organisatie, timemanagement en planning (OTMP) en goal setting.

35. In hoeverre ben je het eens met de volgende stellingen?

| | Sterk oneens | Oneens | Noch oneens/noch eens | Eens | Sterk mee eens |
|--|--------------------------|--------------------------|-----------------------------|--------------------------|--------------------------|
| Ik zie ADHD-coaching als een zinvolle interventie voor wanneer iemand concentratieproblemen ervaart. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ADHD-coaching zou een zinvolle interventie zijn voor het geval ik concentratieproblemen ervaar. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ik zou deze interventie willen volgen. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Leefstijlverbetering

Bij leefstijlverbetering staat het verbeteren van voeding, beweging en ontspanning centraal. Doormiddel van leefstijlverbetering worden je fysieke en psychologische gezondheid verbeterd en daarmee verminderen ADHD-symptomen en verbetert de concentratie.

36. In hoeverre ben je het eens met de volgende stellingen?

| | Sterk oneens | Oneens | Noch oneens/noch eens | Eens | Sterk mee eens |
|---|--------------------------|--------------------------|-----------------------------|--------------------------|--------------------------|
| Ik zie leefstijlverbetering als een zinvolle interventie voor wanneer iemand concentratieproblemen ervaart. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Leefstijlverbetering zou een zinvolle interventie zijn voor het geval ik concentratieproblemen ervaar. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ik zou deze interventie willen volgen | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Running therapy

Met Running therapie wordt hardlopen ingezet voor de verbetering van de psychische gezondheid, onder begeleiding van een running therapeut. Een groot verschil met algemeen hardlopen is dat running therapie is gericht op het proces en niet op de prestatie. Hierdoor biedt de training meer ontspanning. Running therapie heeft een gunstig effect op de concentratie en verhoogt cognitieve prestaties.

37. In hoeverre ben je het eens met de volgende stellingen?

| | Sterk oneens | Oneens | Noch oneens/noch eens | Eens | Sterk mee eens |
|--|--------------------------|--------------------------|-----------------------------|--------------------------|--------------------------|
| Ik zie Running therapy als een zinvolle interventie voor wanneer iemand concentratieproblemen ervaart. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Running therapy zou een zinvolle interventie zijn voor het geval ik concentratieproblemen ervaar. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ik zou deze interventie willen volgen | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Neurofeedback

Neurofeedback is een gedragstherapie waarmee wordt aangeleerd om je hersenactiviteit te reguleren en verbeteren. Tijdens de interventie krijg je een realtime beeld te zien van je eigen neurologische patronen en leer je strategieën om hersengolven te manipuleren. Hiermee kunnen psychische klachten, waaronder aandachtsproblemen, AD(H)D, angst en slaapproblemen verminderd worden.

38. In hoeverre ben je het eens met de volgende stellingen?

| | Sterk oneens | Oneens | Noch oneens/noch eens | Eens | Sterk mee eens |
|--|--------------------------|--------------------------|-----------------------------|--------------------------|--------------------------|
| Ik zie Neurofeedback als een zinvolle interventie voor wanneer iemand concentratieproblemen ervaart. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Neurofeedback zou een zinvolle interventie voor mij zijn. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ik zou deze interventie willen volgen. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Interventies zijn zowel individueel als in groepsverband te volgen.

39. Gaat je voorkeur uit naar individuele of naar groepsinterventies?

- Individuele interventie
- Groepsinterventie

Ook is er de mogelijkheid om online hulp te vinden voor aandacht gerelateerde problemen. Dit houdt in dat je zelfstandig een e-Health programma doorloopt, waarbij geen gesprekken plaatsvinden met een therapeut. Een voorbeeld hiervan is howtostayfocused.org, een online hulpmiddel om aandacht gerelateerde problemen aan te pakken, te verduidelijken en te analyseren.

40. Ben je bekend met het online hulpmiddel howtostayfocused.org?

- Ja
- Nee

In hoeverre bent u het eens met de volgende stelling?

41. Ik zou e-Health interventies graag online willen volgen

| | | | | |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Sterk oneens | Enigszins oneens | Noch oneens/noch eens | Enigszins mee eens | Sterk mee eens |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

42. Kun je zelf nog interventies noemen die niet in de vragenlijst zijn vermeld waarvan je denkt dat deze opgenomen zouden moeten worden in het interventieaanbod van de UvA?

Prestatiedruk

De volgende vragen gaan over de ervaren druk om te presteren

43. Geef aan in hoeverre je het eens bent met de volgende stellingen

Wanneer is aangegeven student te zijn

| Verwachtingen | Helemaal oneens | Oneens | Enigszins Oneens | Neutraal | Enigszins eens | Eens | Helemaal eens |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Ik voel druk vanuit mijn ouders om te presteren op de studie | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ik voel druk vanuit studiegenoten om te presteren op de studie | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ik voel druk vanuit familie om te presteren op de studie | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ik voel druk vanuit vrienden om te presteren op de studie | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ik zet mezelf onder druk om te presteren op de studie | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| De prestatiedruk in mijn studie is hoog | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

44. Geef aan in hoeverre je het eens bent met de volgende stellingen

Wanneer is aangegeven te werken

| | | | | | | | |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Ik voel druk vanuit mijn baas om te presteren op het werk | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ik voel druk vanuit mijn collega's om te presteren op het werk | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ik voel druk vanuit familie om te presteren op het werk | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ik voel druk vanuit vrienden om te presteren op het werk | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ik zet mezelf onder druk om te presteren op het werk | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

De prestatiedruk op mijn werk is hoog

45. Geef aan in hoeverre je het eens bent met de volgende stellingen
Wanneer is aangegeven student te zijn

Hoeveelheid

Ik voel enorme druk om resultaten te produceren op de studie

Ik voel druk doordat ik te weinig tijd heb al mijn taken uit te voeren op de studie

Ik voel druk door de hoeveelheid werk die ik moet verrichten op de studie

Ik voel druk om resultaten van hoge kwaliteit te leveren op de studie

46. Geef aan in hoeverre je het eens bent met de volgende stellingen
Wanneer is aangegeven te werken

Ik voel enorme druk om resultaten te produceren op het werk

Ik voel druk doordat ik te weinig tijd heb al mijn taken uit te voeren op het werk

Ik voel druk door de hoeveelheid werk die ik moet verrichten op het werk

Ik voel druk om resultaten van hoge kwaliteit te leveren op het werk

47. Geef aan in hoeverre je het eens bent met de volgende stellingen
Wanneer is aangegeven student te zijn

Gevolgen

Als ik niet op hoog niveau presteer dan komt mijn studie in het geding

Ik zou mijn studieomgeving omschrijven als een resultaat gedreven omgeving

Ik ben bang om studieopdrachten niet goed uit te voeren

48. Geef aan in hoeverre je het eens bent met de volgende stellingen
Wanneer is aangegeven te werken

| | | | | | | | |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Als ik niet op hoog niveau presteer dan komt mijn studie in het geding | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ik zou mijn werkomgeving omschrijven als een resultaat gedreven omgeving | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ik ben bang om werkopdrachten niet goed uit te voeren | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

49. In hoeverre ben je het eens met de volgende stelling

| | Helemaal oneens | Oneens | Neutraal | Eens | Helemaal mee eens |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Ik heb AD(H)D medicatie nodig om te kunnen presteren | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

50. Welk percentage aan mensen in je omgeving denk jij dat AD(H)D medicatie gebruikt voor de verbetering van hun prestaties?

Uitstelgedrag

51. Geef aan in hoeverre je het eens bent met de volgende stellingen

| | Helemaal oneens | Oneens | Neutraal | Eens | Helemaal mee eens |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Ik stel het afmaken van taken onnodig uit, zelfs als ze belangrijk zijn. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Wanneer ik een deadline heb wacht ik tot het allerlaatste moment. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Ik zal voor altijd een tijdverspiller zijn. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Faalangst

52. Geef aan in hoeverre je het eens bent met de volgende stellingen

| | Helemaal oneens | Oneens | Neutraal | Eens | Helemaal mee eens |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Als iemand een taak beter uitvoert dan ik, dan heb ik het gevoel dat ik de hele taak heb gefaald. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Als ik niet zo goed presteer als andere mensen dan betekent het dat ik een minderwaardig persoon ben. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Als ik niet de hele tijd goed presteer word ik niet gerespecteerd door anderen. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Hoe minder fouten ik maak hoe meer mensen mij leuk vinden. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Vragen over leefstijl

53. Heb je de afgelopen 12 maanden tabak gerookt of e-sigaretten gebruikt?

- Ja
- Nee

54. Heb je in de afgelopen 12 maanden cannabis gerookt?

- Ja
- Nee

55. Heb je in de afgelopen 12 maanden eens illegale drugs gebruikt?

- Ja
- Nee

56. Terugkijkend naar de afgelopen 12 maanden: hoe vaak dronk je alcohol?

- Nooit
- Maandelijks of minder
- 1 keer per week of minder
- 2 à 3 keer per week
- 4 keer per week of meer

Wanneer is aangegeven student te zijn

57. Ben je momenteel actief lid van een studentenvereniging of studievereniging?

- Ja
- Nee

Dit waren alle vragen.

Als je mee wilt doen aan de verloting van de 5 bol.com bonnen t.w.v. 20 euro, vul dan je email adres hieronder in:

Bedankt voor de tijd die u heeft genomen om aan deze enquête deel te nemen.

Uw antwoord is geregistreerd.

Appendix VIII: Mail per platform

Email naar universiteiten en hogescholen door heel Nederland

Beste lezer,

Mijn naam is Maxime Birza en voor de studentenartsen van de Universiteit van Amsterdam doe ik onderzoek naar het gebruik van ADHD-medicatie.

De afgelopen jaren is het gebruik van ADHD-medicatie sterk toegenomen door de verhoogde prestatiedruk en de normalisering van het gebruik van deze medicijnen (zie publicatie [SFK](#)). Ook de Corona crisis heeft een grote impact op het studie en werk leven, en daarom mogelijk op het gebruik van deze stimulerende middelen. Het gebruik van ADHD-medicatie kan leiden tot ernstige bijwerkingen, zoals hartkloppingen, depressie en drugsverslaving. Daarom is het belangrijk dat er grondig onderzoek wordt gedaan naar het gebruik van deze middelen.

Het doel van ons onderzoek is het achterhalen van persoonlijke factoren en omgevingsfactoren die invloed kunnen hebben op het gebruik van ADHD-medicatie, zodat betrokken instanties daar waar nodig bij kunnen sturen. Voor een zo goed mogelijk onderzoek hebben wij zo veel mogelijk respondenten nodig die de vragenlijst invullen. Wij vroegen ons daarom af of wij onze vragenlijst op een platform binnen uw onderwijsinstelling mogen delen? Door deelname verhoogt de student zijn kennis over het veilig verhogen van de concentratie tijdens het studeren omdat wij studenten ook attenderen op alternatieven, zoals bijvoorbeeld running therapie en een gezondere leefstijl. Dit kan voor uw onderwijsinstelling ook voordelig zijn, een win-win situatie dus!

Graag hoor ik van u.

Met vriendelijke groet,

Maxime Birza, mede namens de studentenartsen van de Universiteit van Amsterdam

T: 06-14919597

E: m.i.j.birza@uva.nl

Email naar studieverenigingen

Beste studievereniging,

Mijn naam is Maxime Birza en ik ben student Gezondheid en Leven aan de Vrije Universiteit Amsterdam. Voor mijn onderzoeksstage aan Bureau Studentenartsen op de Oude Turfmarkt doe ik onderzoek naar het gebruik van ADHD-medicatie. Het doel van het onderzoek is het achterhalen van persoonlijke factoren en omgevingsfactoren die invloed kunnen hebben op het gebruik van ADHD-medicatie.

Onder studenten wordt ADHD-medicatie veel gebruikt en daarom vormen zij een belangrijk onderdeel van het onderzoek. Voor een zo goed mogelijk onderzoek wil ik ervoor zorgen dat er veel respondenten de vragenlijst invullen. Daar heb ik jullie hulp bij nodig! Zouden jullie onderstaande link naar de vragenlijst willen delen met jullie leden. Mensen die meedoen aan het onderzoek krijgen er ook wat voor terug. Namelijk, door mee te doen krijgen studenten beter inzicht in het veilig

verhogen van de concentratie tijdens het studeren. Daarnaast worden er 5 bol.com bonnen t.w.v. 20 euro verloot.

Jullie zouden mij enorm helpen!

Linkje naar de Nederlandse versie van het onderzoek:

https://uva.fra1.qualtrics.com/jfe/form/SV_07h880xnBrbqbeS

Linkje naar de Engelse versie van het onderzoek:

https://uva.fra1.qualtrics.com/jfe/form/SV_71inktdarN6vN54

Graag hoor ik van jullie.

Met vriendelijke groet,

Maxime Birza, mede namens de studentenartsen van de Universiteit van Amsterdam

T: 06-14919597

E: m.j.j.birza@uva.nl

Email naar vakbonden

Geachte heer/mevrouw,

Voor een onderzoek uitgevoerd in opdracht van Bureau Studentenartsen van de Universiteit van Amsterdam, kijken wij naar het gebruik van ADHD-medicatie onder studenten en volwassenen.

De afgelopen jaren is het gebruik van ADHD-medicatie sterk toegenomen door de verhoogde prestatiedruk en de normalisering van het gebruik van deze medicijnen (zie publicatie [SFK](#)). Ook de corona crisis heeft een grote impact op het studie en werk leven, en daarom mogelijk op het gebruik van deze stimulerende middelen. Het gebruik van ADHD-medicatie kan leiden tot ernstige bijwerkingen, zoals hartkloppingen, depressie en drugsverslaving. Daarom is het belangrijk dat er grondig onderzoek wordt gedaan naar het gebruik van deze middelen.

Voor een zo goed mogelijk onderzoek, willen we ervoor zorgen dat veel respondenten onze vragenlijst invullen. Wij vragen jullie hieraan bij te dragen door het volgende bericht, met link te delen op jullie platform:

Beste lezer,

Voor een onderzoek naar het gebruik van ADHD-medicatie, uitgevoerd vanuit de studentenhuisartsen van de Universiteit van Amsterdam, zijn wij opzoek naar iedereen ouder dan 18 jaar! Wil jij bijdragen aan de wetenschap, en tegelijkertijd kennis opdoen over het verhogen van je concentratie? Doe dan mee met ons onderzoek naar ADHD-medicatie! Voor deelname hoef je geen ervaring te hebben met het gebruik van ADHD-medicatie. Het invullen is volledig anoniem en duurt ongeveer 10 minuten. Door de vragenlijst in te vullen maak je ook kans op een van de 5 waardebonnen van bol.com ter waarde van €20.

Linkje naar de Nederlandse versie van het onderzoek:

https://uva.fra1.qualtrics.com/jfe/form/SV_07h880xnBrbqbeS

Linkje naar de Engelse versie van het onderzoek:
https://uva.fra1.qualtrics.com/jfe/form/SV_71inktdarN6vN54

Alvast heel erg bedankt voor het invullen!

Met vriendelijke groet,

Maxime Birza, mede namens de studentenartsen van de Universiteit van Amsterdam

Met vriendelijke groet,

Maxime Birza, mede namens de studentenartsen van de Universiteit van Amsterdam

T: 06-14919597

E: m.j.j.birza@uva.nl

Sociale media

- Help mij afstuderen -

Lieve allemaal,

Voor de afronding van mijn bachelor doe ik een onderzoeksstage bij de studentenhuisarts van de Universiteit van Amsterdam. Het onderzoek gaat over het gebruik van ADHD-medicatie onder studenten en volwassenen. Het doel van het onderzoek is het achterhalen van persoonlijke factoren en omgevingsfactoren die invloed kunnen hebben op het gebruik van ADHD-medicatie.

Ben je boven de 18 jaar? Dan wil ik je graag vragen om mee te doen aan mijn onderzoek. Voor deelname hoef je geen ervaring te hebben met het gebruik van ADHD-medicatie. Het invullen is volledig anoniem en duurt **ongeveer 10 minuten**. Door de vragenlijst in te vullen maak je ook **kans** op een van de 5 **waardebonnen van bol.com ter waarde van €20**.

Linkje naar de Nederlandse versie van het onderzoek:
https://uva.fra1.qualtrics.com/jfe/form/SV_07h880xnBrbqbeS

Linkje naar de Engelse versie van het onderzoek:
https://uva.fra1.qualtrics.com/jfe/form/SV_71inktdarN6vN54

Alvast heel erg bedankt voor het invullen!

Maxime Birza, mede namens de studentenartsen van de Universiteit van Amsterdam

PS: delen wordt gewaardeerd!

Appendix IX: Factor analyses

Factor analyses Factor1_students

Component Matrix^a

| | Component 1 |
|---|----------------|
| Geef aan per situatie hoe vaak het voor komt: - Ik heb AD(H)D medicatie gebruikt op een feestje | .669 |
| Geef aan per situatie hoe vaak het voor komt: - Ik heb AD(H)D medicatie gebruikt met alcohol | .816 |
| Geef aan per situatie hoe vaak het voor komt: - Ik heb AD(H)D medicatie gebruikt om socialer te zijn | .684 |
| Geef aan per situatie hoe vaak het voor komt: - Ik heb AD(H)D medicatie gebruikt om gewicht te verliezen | .507 |
| Geef aan per situatie hoe vaak het voor komt: - Ik heb AD(H)D medicatie gebruikt om me energiever te voelen | .860 |
| Geef aan per situatie hoe vaak het voor komt: - Ik heb AD(H)D medicatie gebruikt om me beter over mezelf te voelen | .683 |
| Geef aan per situatie hoe vaak het voor komt: - Ik heb AD(H)D medicatie gebruikt om "high" te worden | .518 |

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Factor analyses Factor2_students

Component Matrix^a

| | Component 1 |
|---|----------------|
| Geef aan per situatie hoe vaak het voor komt: - Ik heb AD(H)D medicatie gebruikt om beter te kunnen concentreren in de les | .970 |
| Geef aan per situatie hoe vaak het voor komt: - Ik heb AD(H)D medicatie gebruikt om beter te kunnen presteren in een toets | .956 |
| Geef aan per situatie hoe vaak het voor komt: - Ik heb AD(H)D medicatie gebruikt om beter te presteren tijdens studie opdrachten | .926 |

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Factor analyses Factor 3

Component Matrix^a

| | Component 1 |
|--|----------------|
| Geef aan per situatie hoe vaak het voor komt: - Ik heb AD(H)D medicatie aangeboden gekregen door een andere student | .557 |
| Geef aan per situatie hoe vaak het voor komt: - Ik heb AD(H)D medicatie aangeboden gekregen door een collega | -.160 |
| Geef aan per situatie hoe vaak het voor komt: - Ik heb iemand anders zijn AD(H)D medicatie geprobeerd | .520 |
| Geef aan per situatie hoe vaak het voor komt: - Ik heb AD(H)D medicatie gekocht van een andere persoon | .599 |
| Geef aan per situatie hoe vaak het voor komt: - Ik heb AD(H)D medicatie verkocht aan iemand anders | .732 |
| Geef aan per situatie hoe vaak het voor komt: - Ik heb AD(H)D medicatie gegeven aan iemand anders | .783 |
| Geef aan per situatie hoe vaak het voor komt: - Ik ben een keer geforceerd in het geven van mijn AD(H)D medicatie aan iemand anders | .078 |

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Final factor analyses Factor 3

Component Matrix^a

| | Component 1 |
|---|----------------|
| Geef aan per situatie hoe vaak het voor komt: - Ik heb AD(H)D medicatie gekocht van een andere persoon | .580 |
| Geef aan per situatie hoe vaak het voor komt: - Ik heb AD(H)D medicatie verkocht aan iemand anders | .904 |
| Geef aan per situatie hoe vaak het voor komt: - Ik heb AD(H)D medicatie gegeven aan iemand anders | .869 |

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Bold numbers are included in the final analyses

Factor analyses Factor 4_student

Component Matrix^a

| | Component 1 |
|--|----------------|
| Geef aan in hoeverre je het wel of niet eens bent met de volgende stellingen: – AD(H)D medicatie is makkelijk te verkrijgen op de campus | .803 |
| Geef aan in hoeverre je het wel of niet eens bent met de volgende stellingen: – AD(H)D medicatie is net zo makkelijk te verkrijgen als alcohol | .861 |
| Geef aan in hoeverre je het wel of niet eens bent met de volgende stellingen: – AD(H)D medicatie is net zo makkelijk te verkrijgen als marihuana | .899 |
| Geef aan in hoeverre je het wel of niet eens bent met de volgende stellingen: – Het gebruik van AD(H)D medicatie onder studenten is een probleem | .395 |

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Factor analyses Factor 5

Component Matrix^a

| | Component 1 |
|--|----------------|
| Geef aan in hoeverre je het wel of niet eens bent met de volgende stellingen: – Het af en toe gebruiken van AD (H)D medicatie kan geen kwaad | .546 |
| Geef aan in hoeverre je het wel of niet eens bent met de volgende stellingen: – Het dagelijks gebruik van AD(H)D medicatie kan geen kwaad | .666 |
| Geef aan in hoeverre je het wel of niet eens bent met de volgende stellingen: – AD(H)D medicatie is veiliger dan marihuana | .681 |
| Geef aan in hoeverre je het wel of niet eens bent met de volgende stellingen: – AD(H)D medicatie is veiliger dan alcohol | .726 |
| Geef aan in hoeverre je het wel of niet eens bent met de volgende stellingen: – Ik heb het gevoel dat ik goed geïnformeerd ben over AD(H)D medicatie | .649 |
| Geef aan in hoeverre je het wel of niet eens bent met de volgende stellingen: – Ik heb het gevoel dat ik goed op de hoogte ben van de bijwerkingen van AD(H) D medicatie | .583 |

Extraction Method: Principal

Factor analyses factor6_student

Component Matrix^a

| | Component 1 |
|---|----------------|
| Geef aan of de volgende stellingen wel of niet op jouw van toepassing zijn: – Ik ken mensen die AD(H)D medicatie gebruiken op feestjes | .634 |
| Geef aan of de volgende stellingen wel of niet op jouw van toepassing zijn: – Ik ken mensen die AD(H)D medicatie gebruiken met alcohol | .677 |
| Geef aan of de volgende stellingen wel of niet op jouw van toepassing zijn: – Ik ken mensen die AD(H)D medicatie gebruiken met andere drugs | .551 |
| Geef aan of de volgende stellingen wel of niet op jouw van toepassing zijn: – Ik ken mensen die AD(H)D medicatie gebruiken tijdens het studeren | .797 |
| Geef aan of de volgende stellingen wel of niet op jouw van toepassing zijn: – Ik ken mensen die AD(H)D medicatie gebruiken tijdens tentamen weken | .788 |
| Geef aan of de volgende stellingen wel of niet op jouw van toepassing zijn: – Ik ken mensen die AD(H)D medicatie gebruiken tijdens toetsen | .707 |
| Geef aan of de volgende stellingen wel of niet op jouw van toepassing zijn: – Ik verberg mijn AD(H)D medicatie, zodat niemand het kan afpakken | .288 |

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Final factor analyses factor6_student

Component Matrix^a

| | Component 1 |
|---|----------------|
| Geef aan of de volgende stellingen wel of niet op jouw van toepassing zijn: – Ik ken mensen die AD(H)D medicatie gebruiken op feestjes | .626 |
| Geef aan of de volgende stellingen wel of niet op jouw van toepassing zijn: – Ik ken mensen die AD(H)D medicatie gebruiken met alcohol | .684 |
| Geef aan of de volgende stellingen wel of niet op jouw van toepassing zijn: – Ik ken mensen die AD(H)D medicatie gebruiken met andere drugs | .550 |
| Geef aan of de volgende stellingen wel of niet op jouw van toepassing zijn: – Ik ken mensen die AD(H)D medicatie gebruiken tijdens het studeren | .797 |
| Geef aan of de volgende stellingen wel of niet op jouw van toepassing zijn: – Ik ken mensen die AD(H)D medicatie gebruiken tijdens tentamen weken | .801 |
| Geef aan of de volgende stellingen wel of niet op jouw van toepassing zijn: – Ik ken mensen die AD(H)D medicatie gebruiken tijdens toetsen | .711 |

Extraction Method: Principal

Factor analyses factor1_working

Component Matrix^a

| | Component 1 |
|---|----------------|
| Geef aan per situatie hoe vaak het voor komt: - Ik heb AD(H)D medicatie gebruikt op een feestje | .616 |
| Geef aan per situatie hoe vaak het voor komt: - Ik heb AD(H)D medicatie gebruikt met alcohol | .804 |
| Geef aan per situatie hoe vaak het voor komt: - Ik heb AD(H)D medicatie gebruikt om socialer te zijn | .737 |
| Geef aan per situatie hoe vaak het voor komt: - Ik heb AD(H)D medicatie gebruikt om gewicht te verliezen | .526 |
| Geef aan per situatie hoe vaak het voor komt: - Ik heb AD(H)D medicatie gebruikt om me energiever te voelen | .862 |
| Geef aan per situatie hoe vaak het voor komt: - Ik heb AD(H)D medicatie gebruikt om me beter over mezelf te voelen | .724 |

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Factor analyses factor2_working

Component Matrix^a

| | Component 1 |
|--|----------------|
| Geef aan per situatie hoe vaak het voor komt: - Ik heb AD(H)D medicatie gebruikt om beter te kunnen concentreren op het werk | .921 |
| Geef aan per situatie hoe vaak het voor komt: - Ik heb AD(H)D medicatie gebruikt om beter te kunnen presteren met een werk deadline | .910 |
| Geef aan per situatie hoe vaak het voor komt: - Ik heb AD(H)D medicatie gebruikt om beter te presteren tijdens werk opdrachten | .952 |

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Factor analyses Factor4_working

Component Matrix^a

| | Component 1 |
|--|----------------|
| Geef aan in hoeverre je het wel of niet eens bent met de volgende stellingen: – AD(H)D medicatie is makkelijk te verkrijgen op werk | .753 |
| Geef aan in hoeverre je het wel of niet eens bent met de volgende stellingen: – AD(H)D medicatie is net zo makkelijk te verkrijgen als alcohol | .887 |
| Geef aan in hoeverre je het wel of niet eens bent met de volgende stellingen: – AD(H)D medicatie is net zo makkelijk te verkrijgen als marihuana | .853 |
| Geef aan in hoeverre je het wel of niet eens bent met de volgende stellingen: – Het gebruik van AD(H)D medicatie onder collega's is een probleem | .544 |

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Factor analyses Factor6_working

Component Matrix^a

| | Component 1 |
|---|----------------|
| Geef aan of de volgende stellingen wel of niet op jouw van toepassing zijn: – Ik ken mensen die AD(H)D medicatie gebruiken met alcohol | .612 |
| Geef aan of de volgende stellingen wel of niet op jouw van toepassing zijn: – Ik ken mensen die AD(H)D medicatie gebruiken met andere drugs | .503 |
| Geef aan of de volgende stellingen wel of niet op jouw van toepassing zijn: – Ik ken mensen die AD(H)D medicatie gebruiken tijdens het werk | .778 |
| Geef aan of de volgende stellingen wel of niet op jouw van toepassing zijn: – Ik ken mensen die AD(H)D medicatie gebruiken in de aanloop naar een werk deadline | .810 |
| Geef aan of de volgende stellingen wel of niet op jouw van toepassing zijn: – Ik ken mensen die AD(H)D medicatie gebruiken op belangrijke werkmomenten | .833 |

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Appendix X: Correlation table

Table 1. Correlation table all variables

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) | (16) | (17) | (18) | (19) |
|--|--------|---------|--------|--------|-------|---------|-------|-------|---------|---------|---------|---------|------|-------|--------|--------|------|------|------|
| Demographics | | | | | | | | | | | | | | | | | | | |
| (1) Age | - | | | | | | | | | | | | | | | | | | |
| (2) Gender | -.147* | - | | | | | | | | | | | | | | | | | |
| (3) Nationality | .022 | .174** | - | | | | | | | | | | | | | | | | |
| (4) Living arrangement | .335** | .107 | .222** | - | | | | | | | | | | | | | | | |
| (5) Professional status | .466** | -.149* | -.036 | .176** | - | | | | | | | | | | | | | | |
| (6) Educational level | .158* | .033 | .104 | .150* | .056 | - | | | | | | | | | | | | | |
| (7) Field of study | -.071 | .043 | -.112 | .059 | .008 | -.308** | - | | | | | | | | | | | | |
| (8) Work sector | .097 | .013 | .020 | .111 | .057 | .045 | -.167 | - | | | | | | | | | | | |
| Lifestyle | | | | | | | | | | | | | | | | | | | |
| (9) Alcohol | -.044 | -.183** | -.168* | .068 | -.048 | .013 | .033 | .031 | - | | | | | | | | | | |
| (10) Smoking tobacco | .194** | .066 | -.003 | .009 | .125 | .204** | .038 | .040 | -.225** | - | | | | | | | | | |
| (11) Smoking cannabis | .135 | .084 | -.118 | .001 | .104 | -.011 | .090 | .075 | -.241** | .497** | - | | | | | | | | |
| (12) Drugs | .158* | .124 | .040 | .006 | .094 | .116 | .077 | .155 | -.392** | .448** | .449** | - | | | | | | | |
| (13) Sorority/student association | .183* | .054 | .356** | .070 | .088 | .110 | -.050 | -.135 | -.350** | .091 | -.031 | -.073 | - | | | | | | |
| ADHD | | | | | | | | | | | | | | | | | | | |
| (14) Self diagnosis | -.083 | .061 | .191** | .076 | .037 | -.005 | 0.18 | -.030 | .048 | -.133 | -.052 | -.062 | .086 | - | | | | | |
| (15) Sharing of medication | -.087 | -.083 | .031 | -.041 | -.058 | -.050 | -.012 | -.018 | .110 | -.256** | -.267** | -.335** | .029 | -.026 | - | | | | |
| (16) Perception of safety and being informed | .065 | -.026 | .085 | .112 | -.007 | .009 | .102 | -.061 | -.025 | -.111 | -.076 | -.124 | .031 | .016 | .215** | - | | | |
| (17) Medication misuse | -.042 | -.138* | -.025 | -.057 | .063 | -.063 | -.122 | .155 | .088 | -.239** | -.236** | -.282** | .020 | .108 | .366** | .216** | - | | |

| | | | | | | | | | | | | | | | | | | | |
|---|--------|--------|---------|---------|-------|--------|-------|--------|---------|--------|---------|--------|--------|--------|---------|---------|---------|---------|--------|
| (18) Medication use | -.042 | .138* | .054 | -.032 | -.047 | .080 | -.064 | -.188* | -.023 | .126 | .119 | .215** | -.013 | -.014 | -.367** | -.486** | -.641** | - | |
| <i>Coping of stress</i> | | | | | | | | | | | | | | | | | | | |
| (19) Procrastination | .008 | -.034 | .168* | .089 | .056 | -.119 | .060 | .236* | -.047 | -.157* | -.154* | -.063 | .166* | .237** | .024 | .144* | .213 | -.210** | - |
| (20) Fear of failure | .022 | .241** | .319** | .046 | .047 | .012 | -.115 | .165 | -.143* | -.043 | -.060 | -.095 | .375** | .107 | -.030 | .046 | .098 | -.109 | .323** |
| <i>Students</i> | | | | | | | | | | | | | | | | | | | |
| (21) Use of ADHD-medication for Academic and Cognitive enhancement | .115 | -.073 | .054 | .073 | .108 | -.019 | -.014 | .027 | .022 | -.175* | -.223** | -.183* | .070 | -.010 | .294** | .434** | .401** | -.513** | .087 |
| (22) Use of ADHD-medication for recreational purposes | -.069 | -.119 | .062 | .044 | .062 | -.168* | .110 | .150 | -.055 | -.118 | -.125 | -.087 | .046 | -.066 | .334** | .508** | .374** | -.693** | .168* |
| (23) Availability and usage among students | -.043 | -.099 | -.345** | -.259** | .126 | -.092 | -.005 | -.170 | .185* | -.057 | -.050 | -.114 | -.036 | -.097 | .073 | -.189* | .126 | .056 | -.128 |
| (24) Usage among social contacts | -.041 | .003 | .003 | -.013 | .001 | .084 | -.133 | .087 | .007 | .282** | .180* | .261** | -.083 | -.160* | -.289** | -.368** | -.269** | .294** | -.068 |
| <i>Pressure to perform</i> | | | | | | | | | | | | | | | | | | | |
| (25) External expectations | .017 | .253** | .446** | .102 | .085 | .170* | -.114 | -.097 | -.157 | -.026 | -.112 | -.031 | .199* | .153 | .059 | .139 | .043 | -.008 | .139 |
| (26) Amount of work | -.044 | .378** | .311** | .026 | .092 | .180* | -.009 | .008 | -.175* | .032 | .012 | .104 | .170* | .030 | -.085 | .132 | .033 | -.111 | .101 |
| (27) Consequences | .056 | .300** | .792** | .240** | -.050 | .102 | -.065 | -.068 | -.260** | -.057 | -.067 | -.005 | .377** | .241** | .021 | .136 | .117 | -.042 | .226** |
| <i>Working professional</i> | | | | | | | | | | | | | | | | | | | |
| (28) Use of ADHD-medication for Cognitive and performance enhancement | .117 | -.067 | .064 | .084 | .112 | -.014 | -.008 | .030 | .011 | -.170* | -.209** | -.164* | .074 | -.012 | .277** | .443** | .385** | -.517** | .087 |
| (29) Use of ADHD-medication for recreational purposes | .236** | -.022 | .021 | .224* | .184* | .028 | .131 | .213* | .021 | -.049 | .025 | -.009 | -.087 | -.116 | .208* | .490** | .417** | -.678** | .134 |
| (30) Availability and use among colleagues | -.062 | -.006 | -.021 | -.193* | -.049 | -.035 | .154 | -.124 | .057 | .002 | -.129 | .104 | -.126 | -.120 | -.108 | -.194 | -.263** | .321** | -.016 |
| (31) Usage among social contacts | -.025 | -.074 | -.113 | -.176 | .031 | -.023 | -.209 | -.116 | .033 | .049 | .167 | .215* | -.176 | -.029 | -.194 | -.337** | -.331** | .375** | -.157 |
| <i>Pressure to perform</i> | | | | | | | | | | | | | | | | | | | |
| (32) External expectations | .189 | .296** | .263** | .210* | .232* | .125 | -.033 | .211* | -.099 | .012 | .081 | .080 | .081 | .030 | -.095 | .204 | .076 | -.046 | .088 |

| | | | | | | | | | | | | | | | | | | | |
|---------------------|-------|-------|--------|------|-------|------|-------|------|--------|-------|-------|------|--------|-------|-------|-------|------|-------|------|
| (33) Amount of work | .239* | .224* | .301** | .176 | .213* | .198 | -.054 | .097 | -.260* | .070 | .049 | .036 | .212 | .053 | -.108 | .218* | .009 | -.023 | .060 |
| (34) Consequences | .040 | .217* | .739** | .176 | .016 | .169 | -.077 | .054 | -.185 | -.033 | -.036 | .100 | .481** | .230* | -.158 | .128 | .142 | -.055 | .123 |

| | (20) | (21) | (22) | (23) | (24) | (25) | (26) | (27) | (28) | (29) | (30) | (31) | (32) | (33) | (34) |
|---|--------|---------|---------|---------|---------|--------|--------|--------|---------|---------|-------|---------|--------|--------|------|
| (20) Fear of failure | - | | | | | | | | | | | | | | |
| <i>Students</i> | | | | | | | | | | | | | | | |
| (21) Use of ADHD-medication for Academic and Cognitive enhancement | .080 | - | | | | | | | | | | | | | |
| (22) Use of ADHD medication for recreational purposes | .013 | .575** | - | | | | | | | | | | | | |
| (23) Availability and usage among students | -.092 | .029 | -.124 | - | | | | | | | | | | | |
| (24) Usage among social contacts | -.094 | -.291** | -.245** | -.174* | - | | | | | | | | | | |
| <i>Pressure to perform</i> | | | | | | | | | | | | | | | |
| (25) External expectations | .558** | .117 | .057 | -.052 | -.140 | - | | | | | | | | | |
| (26) Amount of work | .476** | .029 | .105 | -.124 | -.165 | .614** | - | | | | | | | | |
| (27) Consequences | .494** | .126 | .086 | -.246** | -.229** | .485** | .470** | - | | | | | | | |
| <i>Working professional</i> | | | | | | | | | | | | | | | |
| (28) Use of ADHD-medication for Cognitive and performance enhancement | .092 | .994** | .590** | .002 | -.277** | .130 | .062 | .137 | - | | | | | | |
| (29) Use of ADHD-medication for recreational purposes | .140 | .743** | .665** | -.011 | -.236 | .265* | .241 | .181 | .755** | - | | | | | |
| (30) Perception of safety | -.061 | -.249 | -.190 | .803** | -.061 | -.069 | -.064 | -.107 | -.250** | -.266** | - | | | | |
| (31) Usage among social contacts | -.132 | -.411** | -.367** | -.159 | .796** | -.132 | -.100 | -.244 | -.404** | -.453** | -.057 | - | | | |
| <i>Pressure to perform</i> | | | | | | | | | | | | | | | |
| (32) External expectations | .535** | .101 | .005 | .294* | -.230 | .505** | .338** | .390** | .116 | .273** | .061 | -.332** | - | | |
| (33) Amount of work | .567** | .069 | -.105 | .087 | -.262* | .445** | .357** | .415** | .079 | .156 | .063 | -.348** | .784** | - | |
| (34) Consequences | .497** | .119 | .084 | -.105 | -.160 | .326* | .281* | .826** | .119 | .162 | -.067 | -.296** | .551** | .571** | - |

Appendix XI: ANOVA Welchs Test

Robust Tests of Equality of Means

| | | Statistic ^a | df1 | df2 | Sig. |
|----------------------|-------|------------------------|-----|--------|------|
| CBT | Welch | 3.953 | 2 | 71.505 | .024 |
| Mindfulness | Welch | 4.724 | 2 | 79.912 | .012 |
| Coaching | Welch | .671 | 2 | 75.189 | .514 |
| Leefstijlverbetering | Welch | 1.068 | 2 | 78.631 | .349 |
| Running_therapy | Welch | 17.705 | 2 | 84.966 | .000 |
| Neurofeedback | Welch | 1.086 | 2 | 76.783 | .343 |

a. Asymptotically F distributed.

Multiple Comparisons

Games-Howell

| Dependent Variable | (I) | (J) | Mean Difference (I-J) | SE | Sig. | 95% Confidence Interval | |
|-----------------------|------|---------------|-----------------------|--------|------|-------------------------|-------------|
| | | | | | | Lower Bound | Upper Bound |
| CBT | 1.00 | niet_medisc | | | | | |
| | | h_nonmedis ch | .20000 | .17171 | .480 | -.2153 | .6153 |
| | 2.00 | 3.00 | .40000* | .14808 | .023 | .0450 | .7550 |
| | | 1.00 | -.20000 | .17171 | .480 | -.6153 | .2153 |
| | 3.00 | 3.00 | .20000 | .21196 | .614 | -.3062 | .7062 |
| | | 1.00 | -.40000* | .14808 | .023 | -.7550 | -.0450 |
| Mindfulness | 1.00 | 2.00 | .30235 | .19829 | .287 | -.1750 | .7797 |
| | | 3.00 | .53056* | .18060 | .012 | .0991 | .9620 |
| | 2.00 | 1.00 | -.30235 | .19829 | .287 | -.7797 | .1750 |
| | | 3.00 | .22821 | .23950 | .609 | -.3435 | .7999 |
| | 3.00 | 1.00 | -.53056* | .18060 | .012 | -.9620 | -.0991 |
| | | 2.00 | -.22821 | .23950 | .609 | -.7999 | .3435 |
| Coaching | 1.00 | 2.00 | .07821 | .17477 | .896 | -.3433 | .4997 |
| | | 3.00 | .19444 | .17182 | .498 | -.2172 | .6061 |
| | 2.00 | 1.00 | -.07821 | .17477 | .896 | -.4997 | .3433 |
| | | 3.00 | .11624 | .22482 | .863 | -.4200 | .6525 |
| | 3.00 | 1.00 | -.19444 | .17182 | .498 | -.6061 | .2172 |
| | | 2.00 | -.11624 | .22482 | .863 | -.6525 | .4200 |
| Leefstijl-verbetering | 1.00 | 2.00 | .19060 | .17570 | .528 | -.2329 | .6141 |
| | | 3.00 | .17778 | .15074 | .469 | -.1823 | .5379 |
| | 2.00 | 1.00 | -.19060 | .17570 | .528 | -.6141 | .2329 |
| | | 3.00 | -.01282 | .20830 | .998 | -.5104 | .4847 |
| | 3.00 | 1.00 | -.17778 | .15074 | .469 | -.5379 | .1823 |
| | | 2.00 | .01282 | .20830 | .998 | -.4847 | .5104 |
| | 1.00 | 2.00 | .83248* | .15003 | .000 | .4730 | 1.1919 |

| | | | | | | | |
|-----------------|------|--------|----------|--------|--------|--------|--------|
| Running_therapy | | 3.00 | .59556* | .17208 | .003 | .1842 | 1.0069 |
| | 2.00 | 1.00 | -.83248* | .15003 | .000 | - | -.4730 |
| | | 3.00 | -.23692 | .19982 | .465 | -.7134 | .2396 |
| | 3.00 | 1.00 | -.59556* | .17208 | .003 | - | -.1842 |
| | | 2.00 | .23692 | .19982 | .465 | -.2396 | .7134 |
| Neurofeedback | 1.00 | 2.00 | .20919 | .16502 | .419 | -.1886 | .6069 |
| | | 3.00 | -.08278 | .15575 | .856 | -.4555 | .2899 |
| | 2.00 | 1.00 | -.20919 | .16502 | .419 | -.6069 | .1886 |
| | | 3.00 | -.29197 | .20627 | .338 | -.7842 | .2002 |
| | 3.00 | 1.00 | .08278 | .15575 | .856 | -.2899 | .4555 |
| | 2.00 | .29197 | .20627 | .338 | -.2002 | .7842 | |

*. The mean difference is significant at the 0.05 level.

Reflection

The past few weeks of my internship have been a very important experience for me. It gave me the opportunity to put my few experiences of research into real practice and to learn what it means to be a health sciences researcher.

Starting off with my first weeks I made good progress with setting up the research. Scientific writing has always been a challenging part for me, probably also because of my dyslexia. However, I am determined to do as much as I can to achieve a proper level of scientific writing. Therefore, at the beginning of this internship I put up the objective to improve my writing skills as much as possible. Even though it will always be something of a struggle I improved my writing on some levels. Using some tricks that I learnt from my supervisor Claudia, I find it easier to put words on paper and follow the scientific writing style.

At the beginning of my internship I had envisioned a clear path of how everything would go. I had set up a schedule that I was sure I would follow as planned. Looking back at the last few weeks, I could never have imagined all the steps included in the research. Every step, starting from the first meeting with my supervisors at the GP practice up until these last moments of completing my thesis were important learning experiences for me. During my bachelor Health and Life Sciences, we already learned a lot of different practical aspects of conducting a research. However, putting all the aspects together in the real working field was quite different than expected. This largely contributed to my experience of conducting a whole experiment from beginning to end, something I hoped to learn during my internship.

Because of all the unexpected steps adding up to my work, the schedule that I put up for myself was no longer feasible. Some steps I encountered during my internship were completely unexpected, for example the many paperwork I had to do for the approval of the ethics review board. Other steps that I encountered were planned but turned out to be more work than expected. This was partly due to my lack of experience, but also because I was a little bit too eager sometimes, skipping important steps. This sometimes caused me to stress but luckily, I had supervisors that slowed me down at the right moments. It took me a while to adjust but at the end I learned how to deal with all different tasks.

Starting my internship, I was super motivated and excited to conduct a whole research. However, my excitement decreased over the weeks. The long hours after my desk made it difficult to keep concentrated. The COVID-19 pandemic certainly did not help with that. Because of the situation everything seemed to go in slow-motion, slowly getting closer to my deadline. While working very hard each day I came to the conclusion, together with my supervisors, that the first deadline was not doable. Fortunately, I got approval for a month extension. Without losing my good work tempo I worked my way up to the next deadline and I am very proud to have made it.

Looking back at my internship it has been a very good learning experience for me and I am proud of what I have achieved. As I hoped to learn at the beginning, this internship has given me the opportunity to see what it means to conduct research in health sciences from beginning to end, helping me to make future steps in my education.