Off-label prescribing of stimulant medication to students: a qualitative study on the general practitioner perspective

Reference:
De Bruyn Sara, Wouters Edwin, Ponnet Koen, Tholen Robert, Masquillier Caroline, Remmen Roy, Van Hal Guido F.- Off-label prescribing of stimulant medication to students: a qualitative study on the general practitioner perspective
Full text (Publisher's DOI): https://doi.org/10.1111/1467-9566.13166
To cite this reference: https://hdl.handle.net/10067/1709330151162165141
Off-label Prescribing of Stimulant Medication to Students: A Qualitative Study on the General Practitioner Perspective

Abstract

Students’ use of prescription stimulants to enhance study performance is increasingly under the spotlight. Medical guidelines discourage general practitioners (GPs) from prescribing stimulants to students without a diagnosis; yet a considerable proportion of students acquire them from GPs. Building on Eisenberg’s theoretical framework on clinical decision-making and Conrad’s sociological concept of biomedical enhancement, this study examined the social context of GPs’ off-label prescribing decisions for stimulants, using data from 21 semi-structured interviews, including vignettes, undertaken with Flemish GPs. Results identified two groups of GPs: (1) hard-liners who strictly follow medical guidelines and who would only prescribe in case of an appropriate diagnosis and (2) context-dependent GPs who would prescribe stimulants depending on the patients’ symptoms and extent of need. GPs’ decisions depend on one-on-one doctor-patient interactions (i.e. the extent of empathy from the doctor and the extent of assertiveness from the patient); the extent to which GPs define concentration problems as medical problems; GPs’ interactions with fellow health care workers; as well as GPs’ interaction with the wider community. By disentangling these influences, this paper advances both theoretical and practical understanding of the sociological context in which GPs’ off-label prescribing behaviour occurs.

Keywords: prescription stimulants, enhancement, general practitioners, prescribing behaviour, social context, ADHD, clinical decision making, doctor-patient relationship, qualitative research, vignette
Off-label Prescribing of Stimulant Medication to Students: A Qualitative Study on the General Practitioner Perspective

1. Background

Prescription stimulants, mainly methylphenidate, are generally prescribed to people with a clinical diagnosis of Attention Deficit Hyperactivity Disorder (ADHD) or narcolepsy. Research, however, has shown that these medicines are also used by students to enhance their academic performance (Benson, Flory, Humphreys, & Lee, 2015; Ponnet, Wouters, Walrave, Heirman, & Van Hal, 2015; Van Damme et al., 2018), and that physicians are an important source from which they acquire these medicines (Novak, Kroutil, Williams, & Van Brunt, 2007; Van Damme et al., 2018; Vrecko, 2015). This finding raises health concerns for two reasons: (1) the efficacy of these medicines in a healthy student population is unknown (Beyer, Staunton, & Moodley, 2014; Racine & Forlini, 2009), and (2) health risks might occur, including the risk of addiction, cardiovascular complication, increased blood pressure and panic episodes (White, Becker-Blease, & Grace-Bishop, 2006). That is why medical guidelines discourage GPs from starting these medicines among adult patients; they should only be started by secondary or tertiary healthcare professionals (e.g., psychiatrists) after an appropriate diagnosis (Hoge Gezondheidsraad, 2013; NICE, 2018). GPs prescribing these medicines to students without an appropriate diagnosis are thus prescribing off-label (Van Nieuwenhuysen et al., 2015).

Although this off-label prescribing of stimulant medication is not illegal in Belgium, questions do arise about the reasons why GPs prescribe these medicines, despite medical guidelines discouraging this behaviour and the known health risks of the drugs. The existing limited research on off-label prescribing suggests that prescribing physicians either ask too few questions or are being deceived by students, by for example not being honest about their
symptoms or their history of ADHD (Novak et al., 2007; Vrecko, 2015). These findings
however, neglect the fact that physicians could also consciously prescribe the medication to
increase students’ abilities to perform better academically. As previous research indicated,
decisions to prescribe are often based on other factors than merely biomedical considerations
(Eisenberg, 1979). This research aims to understand the social context that shapes GPs’
decision-making process in either refusing or enabling prescribing stimulants to students
without an appropriate diagnosis. In doing so, we build on two sociological frameworks in this
research: (1) the work of John Eisenberg (1979) on the sociological factors influencing clinical
practice; and (2) the sociological concept of biomedical enhancement as discussed by Conrad
(2008).

First, Eisenberg (1979) stated that clinical decision-making, although generally based on
biomedical criteria, is also influenced by non-clinical, sociological factors. He demonstrated
the importance of four types of sociological influences: (1) characteristics of the patient (e.g.,
social class, sex), (2) characteristics of the clinician (e.g. disease oriented vs patient oriented),
(3) the interaction between the doctor and their profession and the healthcare system (e.g. client-
dependent (i.e. responding to patients’ wishes) vs colleague-dependent (i.e. following norms of
other physicians), practices), and (4) the interaction between doctor and patient. Especially the
doctor-patient relationship has increasingly influenced the clinical decision-making process in
past decades (Britten, 2001; Timmermans & Oh, 2010). The traditional patriarchal relationship
has shifted towards a mutual participation relationship in which patients are actively involved
in their treatment. Timmermans (2010) has referred to this as the rise of patient consumerism,
in which patients have the freedom to consult a physician of their choice and have easy access
to information, predominantly through the internet, “equipping them with decision-making
leverage during patient-doctor interactions” (Timmermans & Oh, 2010) This consumerism is
especially relevant in a Belgian context, in which patients have the freedom to choose and
change their GP as they wish.

Although Eisenberg’s work was published in the seventies, recent literature has acknowledged
the idea that clinical decisions that appear irrational from a biomedical viewpoint might be
rational from a sociological viewpoint. To our knowledge, at least two studies confirmed
Eisenberg’s work with respect to GPs’ antidepressant prescribing (Sleath & Shih, 2003) and
pharmacological treatments for sleep difficulties (Balkrishnan, Rasu, & Rajagopalan, 2005). In
addition, studies on antibiotic and opioid prescribing with low pharmacological indications
pointed to the importance of relational doctor-patient factors influencing prescribing behaviour
(Broom, Broom, & Kirby, 2014; McCrorie et al., 2015; Petursson, 2005). Thus, in an effort to
minimize risk in practice, physicians do not only take health risks into account, but also non
health-related risks (Gale, Thomas, Thwaites, Greenfield, & Brown, 2016). It is interesting to
note that there might also be tensions between several risks: Broom et al. (2014) concluded in
their research on ‘irrational’ antibiotic prescribing that social risks, such as reputational
consequences, and relational risks, including doing everything possible for a patient, often
outweigh biomedical risks. To sum up, it is widely accepted that decisions are not made in a
social vacuum, rendering a formal assessment of the impact of the social context on off-label
stimulant prescribing to students a research priority (Balkrishnan et al., 2005; Clark, Potter, &

Secondly, besides Eisenberg’s more applied framework, a sociological understanding of the
concept ‘enhancement’ is needed in order to situate this research within a broader socio-cultural
context. The terms ‘cognitive enhancement’, ‘neuroenhancement’ or ‘biomedical
enhancement’ are often used in literature in contrast to ‘treatment’, as if enhancement is meant
to extend the abilities of the healthy, and treatment is meant to heal the sick (Ott, Lenk, Miller,
Neuhaus Bühler, & Biller-Andorno, 2012). Sociologically, however, the distinction between
therapy and enhancement is blurred, as medical definitions (such as ‘sick’ or ‘healthy’) can change over time and conditions or behaviours can thus “move in and out of medical jurisdiction” (Conrad, 2008: p. 86). In his work ‘the medicalization of society’, Conrad (2008) conceptualises three aspects of biomedical enhancement: (1) normalisation: to bring the body into a state that the physician or patient believes to be the ‘normal’ or socially accepted standard; (2) repair: to restore the body or bring the body back to a previous condition; and (3) performance edge: to improve the body with the purpose of acquiring a competitive edge. By focusing on these several aspects of enhancement, he aims to indicate that on a macrosociological level the treatment-enhancement dichotomy is actually difficult to uphold. For example, he states that much of the ‘treatment’ of adult ADHD may actually be enhancement, in which adults who face disorganisation problems diagnose themselves with ADHD and seek treatment. Although the treatment – enhancement dichotomy may be interesting in ethical debates, it actually provides little normative orientation for GPs (Asscher, Bolt, & Schermer, 2012). Relying on this dichotomy thus can be difficult in daily clinical practice. Conrad’s conceptualisation, however, can help understand GP’s nuanced attitude towards enhancement and the extent to which they perceive study problems as medical problems and how this attitude influences their decision-making concerning stimulants.

In sum, this research aims to understand the social context that shapes GPs’ decision-making process in either refusing or enabling stimulant prescription to students without an appropriate diagnosis, by building on the sociological frameworks of Eisenberg and Conrad. We focus on GPs as (a) they are the gatekeepers of medical practice, (b) the first point of contact for students encountering prolonged study problems, and (c) the main prescribers of ADHD treatment (Upadhyaya et al., 2010). Increasing our knowledge about the social context in which GPs’ prescribing behaviour occurs, is necessary to better understand the wider picture in which stimulant use occurs, and to tailor effective prevention or intervention efforts.
2. Data and Methods

2.1 Sampling strategy and recruitment

GPs who are members of a GP union within the three main Flemish College and University cities (Antwerp, Ghent and Leuven) were invited by e-mail to participate in this study. 13 GPs responded to the initial call and all of them participated. After this first round of interviews, additional GPs were both purposively sampled in order to diversify the socio-demographic characteristics of the GPs, and theoretically sampled in which data is jointly collected and analysed in order to generate theory (Glaser & Strauss, 1967). We interviewed GPs until saturation was reached, which was 21 interviews in total, between December 2015 and August 2016. Each participant received a gift voucher of EUR 25, except one GP who declined.

2.2 Participants

We interviewed 11 female and 10 male GPs. Participants’ age ranged from 26 to 66 years. Most GPs were working in group practices; four GPs were working independently. Years of experience ranged from 1 year (as a trainee) to 38 years. In total, 13 of the 21 GPs were working in the city centre of the three main Flemish College and University cities (Antwerp, Ghent and Leuven), and 8 in the periphery.

2.3 Interview guide

The interview guide, including the vignettes (see below), was developed based on the available literature, and reviewed by four GPs other than the respondents. Semi-structured interviews were undertaken in which we asked open-ended questions about the GPs’ experience of the off-label prescribing of stimulant medication to college or university students, their knowledge about the medication and their attitude towards the off-label prescribing of stimulants. Off-label prescribing behaviour is defined as prescribing stimulants to college or university students without an appropriate diagnosis. Follow-up questions were asked depending on the GPs’
answers, and more specific questions were added in subsequent interviews in order to refine our theory (Glaser & Strauss, 1967). The interviews were conducted in Dutch; the quotes were translated into English by both the lead researcher and a translator.

2.4 Vignettes

In addition to the traditional interviews, we used vignettes as a methodological triangulation to unravel GPs’ attitude towards this relatively sensitive topic. Vignettes consist of “text, images or other forms of stimuli to which research participants are asked to respond” (Hughes & Huby, 2002: p. 382). Although vignettes do not exactly capture real life processes, and thus caution is needed in generalizing findings outside of the vignette situation, they can be valuable in studying people’s attitudes and beliefs (Hughes & Huby, 2002).

We read out loud five hypothetical case scenarios that may arise during a GP’s consultation (see appendix 1) and participants were then asked how they would respond from the perspective of the vignette’s character. By letting the GPs respond to the vignettes in the ‘third person’, the likelihood of socially desirable answers is reduced (Hughes & Huby, 2002). We started with a baseline case scenario to capture general attitudes. Next, four variations of the baseline vignette were read out loud. Each vignette triggered certain aspects of which literature has indicated they have an influence on prescribing behaviour, namely (1) a trusting doctor-patient relationship, (2) a strong moral obligation to help the patient to succeed, (3) a sense of urgency and (4) an expectation of the patient to receive a prescription. All case scenarios were identical with respect to the gender of the respective student, the setting and the fact that the student indicated experiencing problems similar to the drug’s main indications.

The second, moral obligation variation was similar to the case scenario used by Ott et al. (2012); the other case scenarios were written by the research team. Due to time constraints, one physician was not able to answer the final two case scenarios.
2.5 Data collection and analyses

All participants provided written informed consent to participate before the start of the interviews. The study was approved by the Ethics Committee of Social Sciences and Humanities of the first author’s university (file SHW_14_25).

The interviews were recorded and transcribed verbatim by the lead researcher. The shortest interview lasted 23 minutes, the longest one hour and 20 minutes (average of approximately 41 minutes). The data were analysed in Nvivo11 by the first author. A selection of data was additionally analysed by one of the other authors and discussed with the first author in order to augment reliability in the coding process. The analyses followed an abductive analytical perspective, as outlined by Timmermans and Tavory (2012), in order to explore the underlying factors that the GPs themselves indicated, and analyse them against a background of relevant sociological theories – outlined in the background section. This analysis process does not aim to deductively verify or falsify these theories, but rather build on these theories with the purpose of identifying novel or unusual findings (Timmermans & Tavory, 2012). The transcriptions were coded line-by-line in which we searched for themes emerging from the data itself. Recurring themes were then identified and organised into categories and over-arching themes in which relevant theoretical literature was used as “sensitizing notions that inform research but do not determine the scope of perceivable findings” (Timmermans & Tavory, 2012: p. 173). We constantly shifted between the codes and the data itself to make sure we stayed true to the initial data. Theoretical memos were written to highlight thoughts of the lead researcher during the interviews and coding process.

3. Results

3.1 Requests from students: GPs’ experiences and general behaviour
Most of the GPs we interviewed had experience with students asking for prescription stimulants, especially during examination periods. GPs indicated that their request was often related to poor study planning, or framed within a story of having a mild version of ADHD. Although some patients explicitly asked for the medication, some doctors reported a ‘hidden’ question in the sense that students consulted the doctor for another problem and (casually) asked for the medication at the end of the consultation. Moreover, students did not always ask specifically for prescription stimulants, but just wanted ‘something’ to help them with their exams, such as over-the-counter medication, sleep medication or a sick note in order to delay their exams. GPs indicated students often want a fast solution, they expect the GP to help them.

Generally, we could identify two main responses of GPs to patients’ requests for stimulants. On the one hand, we interviewed physicians who are categorical in not prescribing the medication to students. These hard-liners often had a strong negative attitude towards this practice, which was often related to drug safety issues. They perceived it as unhealthy or addictive, thus containing too many health risks. They believed these medicines are not effective for studying purposes and the GPs that had doubts about the effectivity in addition did not prescribe as there was no indication to prescribe. As this physician states:

“There is a Latin saying ‘primum non nocere’ (first do no harm). I think that should always be our starting point, that a drug remains a drug, with indications, and if the indication is not there, we should be really careful.” (Male GP, 55 years old, solo practice)

For other GPs, however, the decision to prescribe was context-dependent.

“Not only with regard to this, but with so many other things we constantly have to try to make a distinction between serious/not serious; justified/not justified; are they lying or not. We are even talking about ‘I have the flu’. Is this true or not? [...] So you try to assess the situation and go on from there”. (Female GP, 33 years old, group practice)
Why some GPs had a clear-cut attitude towards off-label prescribing and others had a more context-dependent attitude, depended on several factors. Data analyses indicated four important aspects in the social context of prescribing stimulants: (1) the extent to which GPs medicalise study problems, (2) the level of empathy towards the patient and the level of assertiveness towards the GP in the concrete one-on-one doctor-patient relationship, (3) the relationship of the GP with fellow health care workers and (4) the interaction of the GP with the wider (patient) community.

3.2 Medicalisation of study problems: what constitutes a medical problem?

Overall, we could identify three important aspects in the decision-making process of GPs with respect to defining study problems as medical problems that justify medicinal treatment: (1) is there a diagnosis (of mostly ADHD) present?; (2) how long since the initial diagnosis?; and (3) if no diagnosis is present, to what extent do patients exhibit concentration problems which are problematic when studying.

Firstly, all GPs indicated they would prescribe stimulant medication to students who have an official diagnosis of ADHD, as assessed by secondary health care. As indicated in the background section, Conrad outlines that the treatment-enhancement dichotomy is difficult to uphold, since sociologically these concepts overlap and change over time. In concrete daily clinical practice, however, the presence of a diagnosis was often a clear-cut reason to prescribe, and GPs did not tend to question every diagnosis. Most, however, were alert to misuse by checking that patients do not ask for more prescriptions than needed. Most GPs also asked for a diagnostic report, but some did not ask for any proof and trusted the patient. Since Flemish students generally visit their own GP in their hometown and only consult a GP in the college/university city during exams, the diagnostic report is not always readily available. Nonetheless, asking for diagnostic proof seems to be important as certain GPs suspected their patients of not always telling the truth or even deliberately trying to mislead the GP.
“A lot of times students say ‘I have had a diagnosis of ADHD in the past’ and they tell me this type of story. [...] And in the past, it worked, when I had just started and I didn’t have a policy about it. I didn’t know a lot about it and often you trust the patient. So once in a while I prescribed the medication. Now, those types of stories keep on coming, but we have a very clear policy. [...] And I tell the students each time: ‘You can’t just get a prescription for this, I need to have a psychiatric report’. And most of the time they leave without receiving anything.” (Female GP, 34 years old, group practice)

Secondly, although GPs indicated they would prescribe the medication to people with an official diagnosis, some GPs found it difficult to decide whether students really needed the medication in cases where they had a diagnosis as a child, but were no longer taking the medication, except during exam periods. Not only the diagnosis itself is thus important in the decision-making process for prescribing medicines, but also the timing of the diagnosis and the current need for the medication.

“If it is not indicated, you do not prescribe it. But there is this in-between group who may have had the diagnosis of ADHD as a child and they come here with a letter [diagnostic report] and actually we do not know enough [about their background]. And then it is really difficult to establish whether this is someone who might be seeing the benefits of the medication or if it is someone who is suffering?” (Female GP, 35 years old, group practice)

Thirdly, when there is no diagnosis present, there is a different approach between the hard-liners compared to the context-dependent GPs. We noticed that the first group, the hard liners, took a more disease-oriented focus. They found the use of the medication too dangerous and not justified without indication. They strictly relied on medical guidelines for diagnosis and referral. For the hard-liners, the treatment-enhancement dichotomy existed as they identified a strict border of what was defined as a medical problem and what justified medicinal treatment, i.e. the official diagnosis of, mostly, ADHD. They also mentioned the importance of assessing
other underlying issues, such as stress, fear of failure or panic. In addition, physicians identified certain vignettes as containing a student suffering from fear of failure. Physicians were in these cases quite coherent in their therapeutic approach, namely that these underlying problems should not be treated with stimulants, but rather with a conversation or referral to other health care workers, such as student counsellors. The second group, however, took a more patient- or symptom-oriented focus in which the factor of need, or suffering played a very important role. These GPs indicated prescribing if the patient was experiencing severe concentration difficulties or had ‘mild ADHD’, without having an official clinical diagnosis. In this sense, they justified medicinal treatment based on the amount and severity of symptoms experienced by patients. Raynes (1980) refers to this as a ‘symptom-management approach’ (Ott et al., 2012). These GPs were thus more likely to intervene compared to the hard-liners who put the locus of control within secondary health care in every single clinical encounter they had. This is in line with Eisenberg (1979) who states that physicians generally can be characterised as either being health-maintenance-oriented, i.e. more likely to observe the situation, or more interventionist, i.e. more likely to act immediately.

“I think I would prescribe if I notice from the description that it is probably someone who needs it or who might have had mild ADHD during his childhood, but never diagnosed and who has ever used medication for that and who will really get in trouble during exams although it is generally a good student. Then I feel more inclined to prescribe, but under strict conditions.” (Female GP, 26 years old, group practice)

It becomes apparent that some GPs who followed the symptom management approach might differentiate between types of enhancement: they acknowledged stimulant use for normalisation purposes but not for performance purposes (Conrad, 2008).

“If you have diabetes, you also get a pill for it, so also if you have a concentration problem.
If students are just going to take it to concentrate better while there isn’t in fact an underlying
problem, then it is not ok. Then I think you can regard it as doping, just like sportsmen who use doping to perform better. And that’s not right. (...) Either it is medically justified and you take away their chances by not giving it, or you dope them and that’s not ok because it is unfair competition.” (Female GP, 38 years old, group practice)

3.3 Doctor-patient relationship

Eisenberg (1979) emphasises the doctor-patient interaction as an important sociocultural source of influence on clinical decision-making. He refers to three basic models of doctor-patient interaction that have been described in the literature: (1) the model of activity-passivity, in which the physician does something to the patient; (2) the model of guidance-cooperation, in which the patient is expected to “obey” the doctor; and (3) the model of mutual participation, in which doctor and patient have approximately equal power (Armstrong, 2015; Szasz & Hollender, 1956). Support for the mutual participation model has grown (Mead & Bower, 2000), especially in clinical situations with a certain level of uncertainty (Eisenberg, 1979; West & West, 2002). Our study findings indicated two important drivers of a mutual participation relationship with respect to stimulant prescribing: empathy of the GP towards the patient and the patient’s assertive communication style.

3.3.1 Morality of off-label prescribing – GPs’ empathy towards the patient

An inherent part of being a medical doctor is that they are trained to help patients and are often driven by a desire to help their patients, “to do good even if this was medically unnecessary.” (Asscher et al., 2012: p. 4). We noticed this in our research as well: for some GPs it was difficult not to act.

Often they related with the patient and felt responsible for their patient’s academic success; GPs wanted to help patients to succeed. The moral obligation vignette was most likely to trigger
GPs to prescribe. These GPs highlighted that it is not fair for some students to study hard and still do badly in their exams.

“They come to ask something and if you say ‘no I won’t do that’ and he fails, that’s difficult. You don’t want to be held responsible for that. There is much at stake because these are their final and decisive exams.” (Female GP, 38 years old, group practice).

Feelings of empathy were often more felt in (a) trusting relationships in which the GP knew the patient, (b) situations in which GPs themselves had used stimulants when they were a student at university, thus identifying themselves with the patient and (c) precarious study situations, often related to short term use of the medication, in which patients had little time to study. These situations triggered off-label prescribing more easily.

Nonetheless, the ‘moral obligation’ also worked in the other direction since some GPs stressed moral reasons not to prescribe. They stated that this use results in unfair competition or that it is not fair that the efficacy of the medication differs between students. Students have to accept their own limits and find ways to deal with it.

This indicates that GPs differed in how they define morality: some GPs felt more empathy with their patients and deemed it unfair if they experienced study problems and as a consequence perhaps lower grades. Other GPs were however more empathetic towards students who do not use stimulants: they deemed it unfair if a student takes medication and as a consequence might score higher than others.

3.3.2 Demanding patients - Assertive personality/communication style

Besides GPs’ empathy towards the patient, we found that patients’ assertive communication style can also contribute to a mutual participation relationship. Physicians indicated that students were often well-informed about the medication, generally knew exactly what they wanted and were quite assertive. One GP indicated that she did not always like to prescribe
stimulant medication, but she had nevertheless done it. Another GP told us that the student indicated he would access the medication in any case through friends or the internet, but that he preferred to acquire it from the GP. In this case, the GP found it difficult to refuse.

“You do have people who can be very persuasive or who are very emotional about it and whose story you can really understand. That makes it all the more difficult, harder to say no. [...] I think that it might be easier to say ‘you’re asking the wrong person’ and not to have any discussion about it either. But I find that much more difficult, because in the end it is still a real person sitting in front of you and it is also not such an unreasonable request.” (Female GP, 26 years old, group practice)

In a time of patient consumerism (Timmermans & Oh, 2010), the ‘knowledge gap’ between physicians and patients decreases, making patients well-informed consumers (Britten, 2001). Interestingly, is that this assertiveness not only came from students themselves asking for medication, but also from their parents. Although GPs did not always concede, it was sometimes difficult to refuse as the parents could be really assertive.

“She (mother) still kept on going and left rather angry because she didn’t get it, so that is a really difficult discussion. I think I have prescribed it once but wrote in the computer ‘on urgent demand from the mother’ or ‘her responsibility’. She also didn’t ask it again, but she got one box [of medication], while I normally never do that.” (Female GP, 52 years old, group practice)

3.4 GPs’ interaction with their profession: shared practices and level of responsibility

Eisenberg (1979) describes that physicians’ medical decision-making is affected by their professional environment. He indicates the influence of, amongst others, formal and informal interactions between physicians in shared offices, rather than published literature on the matter or the physician’s formal training. Generally, there are both colleague dependent physicians,
who are largely influenced by their professional community and are “likely to conform with the norms of other physicians”, as well as client dependent physicians, who are more likely to respond to their patients’ desires (Freidson, 1988). In our study, GPs working in group practices described both positive and negative influences from their direct colleagues. One GP told us that she used to work in a group practice that had a very loose policy with regard to prescribing stimulants. Starting as an inexperienced GP-in-training, she therefore used to prescribe the stimulants. In contrast, some GPs worked in a group practice whose collective policy was not to prescribe the medication. These GPs stated that consequently they have never prescribed it.

“No we have an agreement here [in the group practice] that it is not prescribed. I think if people would know, that a lot of students would say ‘ok there we should go because there you can get it’. No we have been categorical from the beginning, that there must be a report present or a diagnosis.” (Male GP, 39 years old, group practice)

Besides the influence of direct colleagues in shared offices, most GPs also expressed their responsibility in relation to secondary healthcare and other health care professionals, as indicated in paragraph 3.2. Most GPs expressed that they have too little knowledge about the topic, that both the diagnostic procedure as well as the start of prescription stimulants were not their responsibility; most GPs would also refer to a psychiatrist. When the medication had been started by a psychiatrist, the GP was then able to prescribe further, but the general follow-up should be done by a psychiatrist. Other GPs also indicated referring to student health services or other health professionals in cases where the patient had, for example, fear of failure issues. Only two GPs did not indicate the importance of referring to other health care professionals and they had already prescribed the medication in the past. Possibly they were more client- than colleague- dependent and viewed it as their responsibility to help the patient.

3.5 GPs’ interaction with the community
Eisenberg (1979) highlights the importance of the GPs’ environment towards their clinical decision-making. He, however, focuses exclusively on the medical community (e.g., influence of fellow colleagues) and the direct patient contact. Our study found an additional important sociological influence of the wider (patient) community and location in which the physician works. For example, we noticed that in our study, physicians working in the city centre near universities/colleges were often well experienced with the topic of stimulant use and/or with students asking for these medicines. It is possible that these physicians have had more opportunities to develop a vision and a suitable approach towards stimulant use among students, as in our research these GPs were often stricter about not prescribing the medication, compared to GPs working in the periphery or in more rural places.

Not only region, but also the extent to which they are established as a physician within their community and have built a patient network, influenced their prescribing behaviour. One GP stated, being a young physician, he had to be slightly more compliant in order to build up a patient network. Other physicians claimed that they could be stricter since they already had a large patient network. One physician indicated that the shortage of physicians in certain locations could influence prescribing behaviour:

“I don’t think that we are currently in a situation where GPs need to beg for patients and therefore, we don’t have to present ourselves to our patients as the doctor who prescribes it or not. There is a serious shortage of GPs in this region so I do not think in that way...it’s the same thing with writing a note for incapacity to work. I think that as a physician you really have the choice (...) to really be a good physician and you will not win or lose people through this.” (Female GP, 28 years old, group practice)

Some GPs also deliberately thought about the role they play in their community regarding the use of stimulants. Patients often also knew whether GPs prescribed stimulants easily or not. Those who did not prescribe indicated receiving fewer such requests from students.
“I am really not known as a GP that prescribes a lot of psychotropic medicines. People soon find out who they can try this sort of things with. But of course, there are GPs who prescribe it easily and are not as alert. I can imagine that it happens, but I am a GP, a young GP with a clear idea about psychotropic medication.” (Male GP, 35 years old, solo practice)

Certain GPs expressed being very careful with prescribing the medication as they indicated it is often used and/or shared among students. One physician talked about the medication being sold in high school.

“I have become even more cautious since I’ve heard from different sources that they sell it in schools. Really, in every school. Apparently there are a number of young people who have a large quantity of the medication available and simply sell it during the exams or revision period.” (Male GP, 55 years old, solo practice)

4 Discussion

Despite medical guidelines stating that prescription stimulants should be started only by secondary or tertiary healthcare professionals within a diagnostic treatment framework (Hoge Gezondheidsraad, 2013; NICE, 2018), research has indicated that GPs do sometimes prescribe them to students without any diagnosis. The aim of the current research study was to examine GPs’ perspectives on whether or not they (would) prescribe stimulants to students without an appropriate diagnosis and understand the social context that shapes this off-label prescribing behaviour. This study builds on Eisenberg’s (1979) framework on sociological influences in clinical decision-making, as well as on Conrad’s (2008) concept of biomedical enhancement.

First of all, this study shows that in clinical practice, enhancement is no clear-cut concept (Conrad, 2008) and GPs operate under widely varying norms in terms of which problems are perceived as medical and justify medicinal treatment. We could differentiate two main types of
responses of GPs. On the one hand, there were the hard-liners who act according to a strict
treatment-enhancement dichotomy: they identify a strict border between a medical problem on
the one hand (i.e., a clinical diagnosis of ADHD) which justifies medicinal treatment and
enhancement on the other hand (i.e. not having a diagnosis) for which they never prescribe
stimulants as it contained too many health risks. On the other hand, an important number of
physicians prescribe stimulants for academic purposes without any diagnosis, thereby
legitimizing this behaviour. An even larger number of physicians would do so in at least one of
the vignettes. They stated that the decision to prescribe was context-dependent. For this group
of GPs, not only the diagnosis itself determines justification of prescription, but also the purpose
of use and the extent to which the patient suffers.

The second main finding is that off-label prescribing decisions of stimulants are influenced by
the broader social framework in which GPs operate (Balkrishnan et al., 2005; Eisenberg, 1979;
Sleath & Shih, 2003): This study highlights the important sociological influences of one-on-
one doctor-patient interactions (i.e. the level of empathy towards the patient and the level of
assertiveness towards the GP), the interaction of GPs with their professional community (i.e.
influence of fellow colleagues), GPs’ characteristics (i.e. GPs attitude towards enhancement
and how they define medical problems) and GPs interaction with the patient community. With
respect to the latter, Eisenberg almost exclusively focuses on influences from the healthcare
community. Our findings, however, also highlight the important role of the wider (patient)
community. GPs consciously think about the role they (want) to play within the community and
want to portray an image of prescribing responsibly.

The findings of this study have some important theoretical and practical implications.
Theoretically, this study enhances sociological understanding about the reasons behind off-
label prescribing behaviour and highlights the importance of social context on clinical decision-
making. These results can also improve understanding of other off-label prescribing behaviour,
for example with respect to antibiotics or pain medication. Secondly, scholars wondered whether it is ethically justified to prescribe the medication not for prevention or treatment purposes, but only for enhancement purposes (Drabiak-Syed, 2011). Within clinical practice, however, the treatment – enhancement dichotomy may not be that useful in decision-making processes. Practicing medicine is not black and white; the border between what constitutes treatment or enhancement is blurry. This is especially the case with the diagnosis of ADHD and its related symptoms (Conrad & Potter, 2000). Although ADHD is theoretically a dichotomous diagnosis, as there is an agreed cut-off based on DSM criteria, our study indicates that in reality GPs experience patients’ underlying symptoms as continuous (McLennan, 2016). Patients may not experience enough symptoms to be diagnosed but still experience problems, especially in times of increased academic stress. It is therefore not surprising that some GPs faced dilemmas in the decision to prescribe stimulants.

Practically, this study harmonises the biomedical and sociological viewpoints on off-label prescribing which can guide GPs’ decision-making processes in their own practice. Synofzik (2009) argues that the use of these medicines is not “intrinsically unethical” and that decision-making should be case- and context-specific and based on “extrinsic” criteria such as safety, effectiveness and side effects. A large proportion of the interviewed GPs highlighted the negative health risks of the medication. Especially when students believe their academic successes are related to the intake of the medication (Maier & Schaub, 2015), caution in prescribing is needed. As Brody (1980) indicated, an essential step in a mutual participation doctor-patient relationship is that both the patient and the physician have the right to refuse treatment. In our research, however, this final step was sometimes skipped as certain physicians felt pressured into prescribing. This is related to the Belgian context which is vulnerable to patient consumerism as patients can freely choose their GP, and they also pay the doctor for the consultation. Receiving money from the patient but refusing treatment can be difficult.
Agreeing clear policies, and giving training on real life situations could be useful, especially for young physicians, this could prevent them from prescribing medication they actually do not want to prescribe.

This study is highly innovative for three reasons. Firstly, we extended the empirical research about stimulant use from a predominant focus on the demand side to the supply side of this public health problem, aiming to understand the social context influencing GPs’ off-label prescribing behaviour. Secondly, by using an abductive analytical approach, which aims to identify novel findings, building on pre-existing theories, this study was able to extend and elaborate on both Eisenberg’s theoretical framework on clinical decision-making and Conrad’s concept of biomedical enhancement. This paper advances theoretical understanding of the sociological context in which GPs’ prescribing behaviour occurs. For example, our study finds an important influence of the wider patient community on the individual GP’s prescribing behaviour. Thirdly, we used vignettes in order to measure GPs’ attitudes to prescribing stimulants to students in this way reducing social desirability (Hughes & Huby, 2002).

Despite these strengths, our study has some limitations. As for all qualitative studies, the results of this study could not be generalised to the wider population of GPs. The aim of this study, however, was not to measure the magnitude of GPs prescribing stimulants to students without an appropriate diagnosis, but rather to explore underlying sociological factors that influence their clinical decision-making. Secondly, the results of this study are based on interviews and not on clinical observations. This research has provided us a first insight into how GPs deal with potential moral dilemmas, but based on interviews alone, we cannot exactly state how this plays out in concrete real-life practice. Because of the nature of the topic, it is possible that physicians could be hesitant about acknowledging they prescribed medication for students without an appropriate diagnosis. This was shown by some physicians who started disclosing the ‘real’ story at the end of the interview. We believe the use of vignettes reduced social
desirability as much as possible. Finally, our research has one other delimitation. Eisenberg (1979) indicated that certain patient characteristics such as gender influence the clinical decision-making as well. Although this might be true, these characteristics were less apparent in our interviews. This was partly because these cannot always be known and/or recalled by the physician. But more importantly, this was due to the fact that this study’s scope of interest focuses on the supply side perspective of off-label stimulant use. We believe that, in order to understand the influence of patients’ characteristics, other research methods are favoured, such as observation of real-life clinical encounters, examining patient files or interviewing patients.

To conclude, we believe three areas are especially interesting to explore further. Firstly, we exclusively focused on the supply side of off-label prescribing of stimulants. It would be interesting if future research could combine both the supply and demand side, based on research methods such as observation of clinical encounters or interviews with both patients and GPs. Secondly, since prescribing behaviour is largely influenced by the social and cultural context in which GPs operate and the way health care is organised, results are probably country- or culture specific. For example, in Belgium patients can freely choose their GP and pay their physician. It would be interesting to investigate the possible difference in prescribing with respect to countries where patients have a fixed GP. Finally, it is important to investigate why some students go to the physician and ask for stimulant medication whereas others opt for illegal routes. In order to develop appropriate preventive measures, more in-depth research is needed on the heterogeneity of students misusing stimulants.

5 Declarations of interest

**insert ‘Declarations of interest’ section here**

6 References


25


Appendix 1
Vignettes

Baseline vignette

Pieter is a student at the university. During the exam period he experiences a lot of difficulties studying. He doesn’t manage to concentrate for a long time and he also can’t stay awake. He goes to his doctor and asks if he/she can prescribe something for this (note: depending on the gender of the respondent, he or she is chosen).

Variation 1: Trusting doctor-patient relationship

Jan has been a patient of his GP since he was a child and he has a good relationship with him/her. During his school years, he was ill for a long time and his doctor helped him a lot. Now, during his education at the university, Jan visits his doctor and explains that he is experiencing a lot of difficulties in studying large amounts of material during the exams. He has concentration problems and can hardly stay awake. That’s why he does not manage to get everything done. He asks his doctor if he / she can prescribe something for this.

Variation 2: Moral obligation to help the patient to succeed
Tom will be completing his final and most important series of examinations at the university in a few months. If he succeeds, he will obtain his diploma and can start a well-paid job. If he does not succeed, his learning credit is over and he can no longer continue his studies. He will then have to quit university. He has already had to re-sit a number of exams because of difficult personal circumstances. Although he is well prepared, he is now experiencing concentration difficulties and can hardly stay awake. He goes to his doctor and asks if he/she can prescribe something for this. In this way he can spend the time that is left to him more efficiently in the preparation of the exams.

Variation 3: Sense of urgency

Maarten is in the middle of the examination period at the university. Studying is much more difficult compared to the previous exams. The day after tomorrow he has his final and hardest exam and he is unable to work through the large amounts of subject material. In a panic, Maarten calls his doctor and asks him to prescribe him something so that he can concentrate better and stay awake better.

Variation 4: Expectation of the patient to prescribe Ritalin®

Max experiences many difficulties during his time at the university. He is unable to concentrate for a long time and he has difficulty staying awake. He has already had several very bad exams. A friend suggests using Ritalin®. This friend used Ritalin® while studying for his exams and said that it helped him to concentrate better and stay awake. Max visits his doctor and asks him/her to prescribe Ritalin®. It is his last hope.