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RESEARCH ARTICLE

From badness to illness: Medical cannabis and self-diagnosed attention deficit hyperactivity disorder

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Abstract

While the use of legal medical cannabis is increasing in the USA, the trend is less pronounced in Europe. However, several studies indicate that illegal cannabis use is increasingly given medical justification even in European countries. In this qualitative study of cannabis users in Norway ($N = 100$), a considerable proportion reported that they used cannabis for allegedly medical reasons, even if none of them had obtained cannabis legally. Attention deficit hyperactivity disorder (ADHD) was the most prevalent medical motive reported ($n = 18$), although most users had self-diagnosed this condition. We found that: (i) the ADHD diagnosis was typically a response to various social problems in the participants' lives; (ii) cannabis reduced symptoms believed to be associated with ADHD and thus reinforced the perceived validity of the diagnosis; (iii) symbolic boundaries were drawn to cannabis used for intoxication and pleasure; and (iv) cannabis was compared with traditional ADHD medications, which were described as more harmful. The findings suggest that stigmatising social problems and drug use may be transformed into "illness" by means of an ADHD diagnosis, reflecting widespread processes of medicalisation. However, at the same time, drawing on the "green" values in the cannabis culture, participants substituted traditional ADHD medication with cannabis.

Keywords

ADHD, cannabis, medical cannabis, medicalisation, subculture

History

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Introduction

In the USA, a rapidly increasing number of patients obtain physicians' recommendations to use medical marijuana (Dyer, 2013; Reinarman, Nunberg, Lanthier, & Heddleston, 2011). It has been argued that this development has drawn the drug into a therapeutic framework, and that the substance is increasingly defined and treated medicinally rather than criminally (Conrad & Potter, 2000; Williams, Martin, & Gabe, 2011). A recent study of students from Colorado – one of the two US states that have now legalised nonmedical cannabis use (Room, 2014) – revealed that many ordinary marijuana users had become ''cardholders,'' and thus able to obtain legal, high-quality medical marijuana (O'Brien, 2013). In this way, they could avoid an unpredictable illegal market, criminal sanctions and possible career damage. A more subtle change was related to how they changed their vocabulary and identities. They began referring to marijuana as ''cannabis'' and to themselves as ''patients,'' and to categorise the substance by brand, effects and utility. Increasingly, they became able to define their use of marijuana in ways not available in a criminalised system (O'Brien, 2013, p. 434).

While there has been a steep increase in medical cannabis use in the USA during the past decades, in Europe, the use of legal medical cannabis is still much less prevalent (Hazekamp & Heerdink, 2013). However, medical motives for *illegal* cannabis use have been reported in, for example, the UK (Ware, Adams, & Guy, 2005). In part, this recent development has been interwoven with the increased small-scale home growing of marijuana in many European countries, where medical usage often may be a motive (Dahl & Asmussen Frank, 2011). Moreover, the research-based evidence for the utility of medical cannabis has been rapidly growing during the past decade (Kickman & King, 2014). The use of cannabis as an appetite stimulant in cancer and AIDS patients, for treatment of spasticity in multiple sclerosis (MS), and for treatment of chronic pain is well documented (Amar, 2006; Leung, 2011). More prevalent conditions such as insomnia and muscular tensions are also treated with medical cannabis (Ogborne, Smart, & Adlaf, 2000; Reinarman et al., 2011), even if less research-based knowledge supports such treatment. A recent large-scale study of medical cannabis use in Canada reported that sleep, pain and anxiety were the most common motives reported (Walsh et al., 2013), and the researchers pointed out the disconnect between such findings and research on the risks and benefits of cannabis use when it comes to such problems.

In Norway, cannabis was introduced in the late 1960s, and the prevalence rates have remained at medium-to-low levels by European standards. Generally, Norway is considered a zone of penal moderation (Pratt & Eriksson, 2013). However, the drug area is an anomaly in this respect, with a punitive

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approach and strict sentences (Lappi-Seppälä, 2007), and a recent study indicated that a high proportion of regular, adult cannabis users in fact receive substance-related charges (Pedersen & Skardhamar, 2010). When it comes to legal, medical use of cannabis, the cannabinoid medicine Sativex now totally dominates the market; it is primarily used by patients suffering from MS and was approved for medical use in 2012. However, in 2013, only 402 persons (out of a population of almost 5 million) received prescriptions (http://www.norpd.no/). Thus, the legal use of medical cannabis is extremely limited. We do not have population-based data about the *illegal* use of cannabis with a medical motive. However, in the present large-scale qualitative study of regular cannabis users ($N = 100$), the numerous reports of medical motives came as a surprise. Participants reported that cannabis was used to treat muscular pain, insomnia, stress and headache. However, attention deficit hyperactivity disorder (ADHD) was the most common condition reported.

Medical justifications for cannabis use may be on the increase. However, while this tendency in the USA may be apparent among broader groups of young people who obtain their marijuana from legal dispensaries, our data indicate that this trend is typically witnessed in adult age groups in Norway among people who have considerable experience with illegal use of cannabis and who still have to rely on the illegal market. The fact that the first generations of cannabis users are growing older and are more often struggling with health problems may speed up this development of cannabis use for allegedly medical reasons.

Previous research based on the so-called normalisation hypothesis has centred on recreational cannabis use among young people, and investigated to what degree such patterns of cannabis use have been accommodated in the typical cultural understandings of ''normality'' (Parker, 2007; Sandberg, 2012a). We believe that we may witness another type of ''normalisation'' among older users by which cannabis is drawn into the medical sphere, but outside the health care system, and often based on rather vague symptoms.

The aim of the present study is to investigate such patterns, while centring on the most typical medical motive for cannabis use in our sample, namely ADHD. However, medical cannabis may also give pleasure, and the boundaries between medical and recreational use are not clear-cut and rigid. As the use of cannabis for recreational purposes is criminal in Norway, we will show how these medical cannabis users actively draw symbolic boundaries (Lamont & Molnár, 2002) to the use of cannabis with intoxication as a motive. Moreover, as most medical users have a prehistory of recreational cannabis use, this sometimes also implies the need to mark one's distance from one's own previous lifestyle.

Adult ADHD has only recently become the focus of attention. Studies from different countries now indicate a prevalence rate between 3 and 7% (Fayyad, De Graaf, Kessler, & Angermeyer, 2007; Kessler, Andler, Barkley, & Biederman, 2006). However, many question the validity of the ADHD diagnosis (Timimi & Leo, 2009) because it is based on subjective symptoms that always occur along a continuum. Thus, it may be difficult to define the cut-off between ''normal'' and ADHD. There is no medical test and no clearly identified cause for the condition. Moreover, unusually high proportions of those with ADHD also suffer from other conditions. The comorbidity rates are estimated to range from 35 to 60% for conduct disorder and are up to 90% for learning disabilities and up to 60% for anxiety and mood disorders, making the boundaries of these diagnoses unclear (Furman, 2009).

The history of ADHD diagnosis can be traced back to the 19th century, and it has precursors such as hyperkinesis, minimal brain damage and attention deficit disorder (Singh, 2002). The diagnosis has been taken as an example of the so-called neurologisation (Rose, 2007; Singh, 2013) or medicalisation (Conrad, 2007). Peter Conrad coined the term medicalisation, which implies ''the extension of medical jurisdiction or the expansion of medical boundaries'' (Conrad & Schneider, 1992, p. 559). Conrad argues that, first, classic cases of deviance such as alcoholism, drug addiction and insanity were medicalised. Second, the process came to include phenomena such as erectile dysfunction, obesity and educational difficulties. However, one of the first examples described by Conrad was in fact the ''medical discovery'' of what was then called hyperkinesis, later developed to childhood ADHD and finally – through so-called domain expansion – to adult ADHD (Conrad, 1975, 2007). The issue for adults is performance, not behaviour, he argues (Conrad, 2007, p. 64): ''Individuals feel that they should/could be doing better and they seek help in improving their performance. The ADHD diagnosis provides a medical explanation for their underperformance.'' Thus, medication such as methylphenidates (e.g. Ritalin) helps adults perform. However, despite the vast research literature on ADHD, a recent review suggests that few studies have investigated the cultural factors influencing who in fact gets such a diagnosis (Asherson, Akehurst, Kooij, & Huss, 2012). Moreover, a recent comparison of rates of prescription of ADHD medication between the Nordic countries, which in most respects are rather similar, revealed surprisingly large variations, suggesting that such cultural factors may be important (Zoega, Furu, Halldorsson, & Thomsen, 2011).

While the normalisation-of-cannabis hypothesis has centred on recreational patterns of cannabis use, a new tendency may be witnessed in which medical patterns of cannabis use develop as solutions to health complaints in larger groups. The present paper takes a large-scale qualitative study of Norwegian cannabis users as its point of departure. In this study, many reported that they used cannabis for what they understood to be medical reasons, and ADHD was the most common disorder reported. We first ask how the participants got their ADHD diagnosis. We then investigate what kind of alleged ADHD symptoms were treated by means of cannabis and how the therapeutic effects were perceived. Many of the participants also had experience with traditional ADHD medication, and we examine how the use of cannabis was compared with such medication.

Methods

The study was based on fieldwork and interviews with 100 cannabis users from all over Norway (Sandberg & Pedersen, 2010). Users were recruited through various personal

networks, students at the University of Oslo, organisations such as NORML (National Organisation for the Reform of Marijuana Laws) and an Internet advertisement. In addition, some respondents were recruited in prisons, where they were serving terms for drug-related offences. The rationale behind the sampling was to cover a broad range of experiences with cannabis. Participants included sporadic and regular users, small- and large-scale dealers, domestic growers and cannabis activists. By means of different channels, we also sought out older cannabis users who had taken part in the introduction of the substance in Norway in the late 1960s. All participants had used cannabis for several years – some sporadically, others heavily. No one was recruited from a clinical setting. They varied in their degree of social integration, ranging from those who were highly educated and socially functional to others living in a marginal situation. The study was based on active and informed consent to participate, in accordance with standards prescribed by the Norwegian Data Inspectorate and the Regional Committee for Medical Research Ethics. In addition, the data collection in the prisons was endorsed by the Norwegian Prison Administration, based on their principles for research in prisons. All co-workers in the project worked according to a code of professional secrecy, and all information collected in the course of the study were anonymised during the transcription.

Interviews followed the form of a life story, which covered participants' lives from childhood to the present. In total, 18 participants, 14 males and 4 females, linked their cannabis use to ADHD symptoms. Some participants only mentioned such symptoms in passing; among others, large parts of the interview centred on how ADHD had come to dominate their lives. In addition, many others referred to ADHD symptoms among friends and fellow inmates, and several claimed that such symptoms were ''a typical reason for medical cannabis use.''

All interviews were conducted by sociologists with a good knowledge of the field and experience in qualitative interviewing of hard-to-reach populations (the author himself conducted 40 interviews). The interviews were semi-structured and lasted between 1.5 and 2.5 h. We followed a general interview guide developed in advance, but interviewers were free to follow up themes that emerged in the course of the interviews. Even though the use of cannabis is illegal in Norway, the atmosphere in the interviews generally was relaxed, suggesting that the habit was not regarded by these users as very stigmatised. All interviews were conducted in Norwegian, and relevant excerpts were later translated into English.

Interviewees in this study comprised 88 men and 12 women. In adolescence, there are small gender-based differences in the prevalence of cannabis use in Norway; however, from the early 20s, the gender ratio gradually changes, and in adult samples, there are approximately three times as many male as female cannabis users (Pedersen, 2009). In the present sample, we also included inmates from a prison, home growers and dealers – all these segments were almost exclusively male. This accounts for the skewed gender composition. Most participants were in their 20s or early 30s. Nine participants were aged over 50 years, and all of them had been using cannabis for several decades. Approximately one-third of the participants were employed, one-third were students and one-third were imprisoned or received unemployment or other state benefits. Those who used medical cannabis were slightly older than the rest of the sample. Among those who reported ADHD symptoms, four were incarcerated, five were living on social welfare or disability pensions, and the rest were students or employed. Thus, the ADHD subsample used in this study was slightly more marginalised than the total sample, and participants were also slightly older. This may also reflect the fact that, generally, older cannabis users are more socially marginalised than younger users in Norway (Pedersen, 2009). None of the participants in our study had obtained medical cannabis legally.

The semi-structured interviews were audio recorded, transcribed and coded for analysis in NVivo 9, a qualitative data processing program (QSR, 2011). The main coding schema contained 134 codes. Those most relevant to our analysis were the general ''medical cannabis'' code (general description of medical cannabis use) and the subcode ''ADHD.'' Other motives reported for medical cannabis use were ''muscular pain,'' ''back pain,'' ''rheumatism,'' ''multiple sclerosis,'' ''mental health problems,'' ''anxiety,'' ''stress'' and ''insomnia.''

Results

The ADHD diagnosis

Susanne, a 23-year-old female student told us that she had a long history with learning disabilities. She described the drawn-out process leading to the ADHD diagnosis in this way:

> First, in primary school, I was diagnosed with ADHD. The second time they were unsure, because they wondered if I had reached puberty. Therefore, they tested me a third time, when I had passed that phase of becoming a young woman. Then the results were positive again.

She had cooperated with the school-based health care system over a long period, was examined by a physician several times, eventually got the ADHD diagnosis, and then was also given Ritalin medication. The health care system had followed up thoroughly to monitor how the medication had worked.

However, gradually it emerged that her history of close contact with the health care authorities leading to a diagnosis was an exception in our dataset. Most participants who claimed that they had ADHD had never received a formal diagnosis. Glenn, a man in his 50s, who was living on social benefits in a rural district, and growing cannabis himself, described his situation thus:

> Glenn: My agitation is partly due to ADHD. But you didn't call it that when I was a kid . . .
> Interviewer: You mean that you had ADHD, but it was not diagnosed?
> Glenn: No, we were mischievous, today that would be called ADHD. You didn't need a paper on such things in the old days.

Glenn had started school in the mid-1960s, and described how the ADHD diagnosis was not available at the time. When we interviewed him, he argued that he had at least ''a light version'' of ADHD, even if he had never been given the diagnosis by the health care system.

Other participants argued that they ''probably'' had ADHD, based on what they knew about this disorder from various sources such as the media or friends. John, a male inmate in his 30s, described his situation like this:

> Interviewer: Did you have a diagnosis as hyperactive or ADHD?
> John: No, but I had a suspicion about it when I was a kid.
> Interviewer: You had a suspicion yourself?
> John: There was a clear suspicion about it. I had many of the classical symptoms when I was growing up.

Note how his story changes during this short sequence. First, he claimed that *he himself* had a suspicion about ADHD. However, in response to a clarifying question, he replied that ''There was a clear suspicion about it.'' Later in the interview, he told us that it was his mother who held this view. She knew the typical symptoms of ADHD and had contacted the school and the child welfare system several times, but nothing had happened:

> Interviewer: Your mother was worried?
> John: She tried all the time to press the child welfare system. But nobody took the initiative to make an evaluation [with regard to ADHD].

Many participants had difficulties keeping calm at school and problems with concentrating. When they entered their teens, they started to use alcohol and cannabis, and often to show signs of conduct problems. Much later in life, they developed a frame of reference implying that these behaviours had in fact been early manifestations of ADHD. Most of them never had the diagnosis confirmed by a physician; nevertheless, they had come to believe that they ''probably'' had ADHD.

Several participants were, however, ambivalent or critical about getting an ADHD diagnosis. Julian, a 27-year-old inmate, said:

> Julian: They [the staff in prison] say, hey, you've got to go down to the physician [in the prison]. So I have to get an evaluation, but I'm not ill. I don't need that in my papers. Hell, I don't feel ill; people around me get stressed, but . . .
> Interviewer: You haven't got that diagnosis?
> Julian: No . . ., but it's in the records: ''Probably ADHD, if he gets an evaluation,'' blah-blah-blah, understand? That's what they sit here and write. Hell, I don't have any problems with it [my behavior], obviously others have problems with it, but that's not my problem.

He did not want the diagnosis; he wanted to be ''normal.'' Still, he was sure that he would have been diagnosed with ADHD if examined. He had a long history of violence and delinquency, and he was often ''restless.'' One reason why he gave his problems this interpretation was probably that other inmates in the prison ward also told us that they had ADHD. Many of the officers in the prison were also preoccupied with the ADHD diagnosis, and several told us that they had been in seminars where the diagnosis had been described. It was commonly believed among them that ''criminals'' were often suffering from ADHD, a point of view also given support from recent research (Young, Adamou, Bolea, & Gudjonsson, 2011). Among many of those who described themselves as not having ADHD symptoms, this diagnosis was still mentioned – and linked to partners or friends, or described as a category of typical medical cannabis users.

In summary, some of the participants had been given the diagnosis by the health care system, but the majority had themselves concluded that they ''probably'' had ADHD. For some, the diagnosis came as a relief; others were more sceptical. For both groups, however, the diagnosis was used to give meaning to their life history and problematic present situation. Unrest, aggression, drug use and criminality were in this way transformed into an ''illness'' requiring treatment. Even some of those who actively refused to accept that they had ADHD seemed to have the diagnosis as an underlying reference. They presumed that they would have been diagnosed if they had only been examined properly. For those in the younger part of the sample, the ADHD frame of reference had always been available. For the elder ones, their childhood was often understood retrospectively in light of the ADHD diagnosis, which had not been available at the time.

Goffman (1974) shows how we always ''frame'' our experiences by drawing on different schemata of interpretation that are necessary to understand and respond to events. In Goffman's understanding, a frame is a set of concepts and perspectives that organise and guide our perception and our actions. The ADHD diagnosis seems to have become one such frame for a number of social problems and symptoms, such as conduct problems, bad temper, difficulties with concentration and restlessness. This development was evident among the medical cannabis users; however, among prison guards and social workers, we also heard references to the ADHD diagnosis. Zerubavel (1991) shows how ''dividing lines'' are important elements of these frames and how things become meaningful only when they are situated in specific social contexts with names, identities and values. Our findings indicate that among our participants, ''ADHD'' functions as such a frame, implying that stigmatised behaviours become symptoms of an illness and no longer of, for example, mischief and bad behaviour.

Medical cannabis is a validation of the diagnosis

For some, the effect of cannabis had been instant and overwhelming when they first started to smoke. Peter was 40 years old and living on social benefits. He said that he suffered from post-traumatic stress syndrome from a traumatic childhood and from ADHD. He said: ''I remember the first time I smoked. The feeling was unbelievable. 'Relief of all pain' [said in English] – isn't that what you usually say?''

Cannabis was described as having at least three types of therapeutic effects for those who claimed they had ADHD: It made them calm down and relax, their level of function increased and some became more sociable. The following

excerpt from 19-year-old Roger, who had just dropped out of school, was typical:

> Interviewer: You said that smoking cannabis is a common, daily thing. But it's also something you use against ADHD?
> Roger: If I didn't smoke so much, I wouldn't be able to sit here, calm.
> Interviewer: You'd become too jumpy?
> Roger: Yes! You're able to see that I am stressed?

Daniel, a 26-year-old man who was working as a cook in a restaurant said: ''I become calmer a few days [after I smoke]. Even if I don't feel anything in my body, I feel quieter afterward.'' Kenneth, a 34-year old inmate, said: ''I have been on all kinds of diets, other sorts of things for hyperactivity, since I was a kid. With hash, I become calm. A little dizzy in the head, for sure. But calm in my body.'' When they used cannabis, restlessness and uneasiness, which they linked to ADHD, disappeared.

Several participants said that they became more sociable and were able to relate better to friends and colleagues. For some, the effects were indirect and mediated through effects on the body. Peter, 40 years, said: ''I managed to be present, in the moment; the migraine that I had suffered from since I was a kid disappeared. I managed to be social.''

Daniel was quite sure that he had ADHD, but he never had the diagnosis confirmed by a doctor. He described an intense workplace. He could be ''very tense and excited'' in the evening, after the restaurant closed, and he had difficulties falling asleep. Then he smoked cannabis. He continued:

> Sometimes I feel that the smoking may be a kind of self-medication. If I smoke, I feel calmer. I don't know if this is a placebo effect. I do, however, know that medical marijuana is legal for the treatment of ADHD in the Netherlands and in the USA.

Cannabis gave him rest after an exhausting day at work. Note how he uses medical jargon such as ''self-medication'' and ''placebo effect,'' systematically drawing on medical terminology. This may be surprising, as he worked as a cook – an activity far from the health care system, where such jargon probably would be more typical. However, he told us that he was following a number of blogs and websites where research on medical marijuana was discussed. Many participants in the study reported similar use of the Internet.

Atomised individuals do not negotiate symbolic boundaries; they are collective products created by individuals who relate to each other, who often struggle, and who over time gradually ''come to agree upon definitions of reality'' (Lamont & Molnár, 2002. When it comes to medical cannabis, social media and the Internet play a key role in these processes. There are, for example, numerous websites dedicated to the subject (see medicalmarijuana.org, medicalmarijuana.procon.org). These websites present information about new research, diseases that may be treated with marijuana, and law reform work. Previous studies have revealed how efficient the Internet may be in developing subcultural identities (Williams & Copes, 2005). Thus, even if the medical cannabis culture is in many ways looking backward, oriented toward nature and ecology, one should not underestimate the importance of Internet-based communication in these processes.

In many interviews, the beneficial effect of cannabis seems to be taken as a kind of validation of the ADHD diagnosis; the symptoms the participants linked to ADHD could be medicated with the help of cannabis. Thus, they became more certain that they in fact suffered from ADHD. When their problems were conceptualised within an ADHD frame, and cannabis in fact relieved their symptoms, this was taken as additional evidence for ADHD being an adequate diagnosis. Even if medical marijuana has not been documented as a treatment for ADHD, the substance may obviously have an effect on typical ADHD symptoms: relaxation and stress reduction have been among the most typical effects described in previous studies of medical cannabis (Bottorff et al., 2011). Our participants experienced the relief as substantial. This was regarded as important in its own right. However, it also made them more certain that they in fact suffered from ADHD.

Symbolic boundaries to intoxication and previous drug use

All those participants who told us that they used cannabis on medical grounds had a previous history of recreational cannabis use. Some had also used alcohol heavily and used other illegal drugs, such as amphetamines and ecstasy. Some had even been involved with dealing and drug-related crime. After they started to use cannabis with a medical motive, it was important to draw boundaries to recreational drug use and partying. Edward, who was 27 years old and suffered from Tourette's syndrome as well as ADHD, said: ''I don't need so much THC [tetrahydrocannabinol]; I only need cannabinoid that doesn't result in intoxication. That's called CBD [cannabidiol].'' He was familiar with the new research on the possible therapeutic benefits of CBD (Pertwee, 2009). At the same time, this knowledge gave him the possibility of marking his distance from traditional cannabis use aimed at intoxication. However, it was not easy to obtain cannabis with a sufficiently high level of CBD. Thus, he had started to grow certain species in a rather advanced greenhouse. In this way, his medical cannabis use was situated in a symbolic landscape based on horticultural knowledge. Moreover, he managed to keep his distance from criminal actors in the cannabis distribution networks.

Sara was 29 years old and working as a hairdresser. For several years, she had been a mid-level dealer of cannabis, ecstasy and amphetamines in various clubs in downtown Oslo. She said: ''I was on the run, living my life. I was happy, happy, happy [stated in English]. I was independent. I managed the [economic] expenses of the life I lived. However, there were other costs, costs on my body.'' Sara quit dealing, quit the use of ecstasy and amphetamines, and talked about her present use of cannabis in this manner: ''I'm not part of that anymore. I've quit dealing, and now it [cannabis] is only medical and relaxing. It's not about getting intoxicated or stoned anymore.'' She had changed her life and changed her way of talking about her cannabis use. She also tried to avoid her previous milieu.

Indeed, Edward, Sara and several of our other medical cannabis users reported that they tried to keep illegal dealers at a distance, in the same way as described in O'Brien's study (2013, pp. 428–430). The same motive has been reported for small-scale cannabis growing (Hakkarainen, Asmussen Frank, Perälä, & Dahl, 2011). Several also claimed that they needed lower dosages and less frequent intake of cannabis than those who used the substance for intoxication purposes. Further, they claimed that they used cannabis not to become ''stoned'' or ''high'' but rather to control ADHD symptoms. Pharmacological knowledge was often used to support such a position, and they also distanced themselves from the traditional cannabis argot (Johnson, Barrdhi, Sifaneck, & Dunlap, 2006). Moreover, they downplayed possible intoxication effects and presented their pattern of cannabis use as highly regulated.

Recent studies on medical cannabis reveal that authorised and unauthorised users exhibit few differences with regard to medical conditions and patterns of use (Walsh et al., 2013). Thus, the medical cannabis landscape is not typically characterised by clear borders between legal and illegal medical users, even if some have and others do not have legal access to the substance. Self-perceived medical users without a prescription may thus get into a difficult situation, prompting their wish to mark their distance from other illegal users without a similar medical motive. Even if the number of medical users with legal access is still negligible in the Norwegian context, we found that such processes of marking one's distance from other cannabis users without a medical motive were prevalent among the medical users in our sample. Their stories were also replete with statements pointing to the non-recreational character of their own cannabis use.

The process of medical cannabis users identifying themselves vis-à-vis other cannabis users is not an unusual and extraordinary activity. Rather, such classification is a basic activity, in which we take part all the time and which shapes our daily lives (Zerubavel, 1997). We attach meaning to words, gestures and physical objects, and in this way, we shape others' ideas about ourselves. Dichotomies such as ''medical cannabis patient'' versus ''pothead'' indicate socially constructed boundaries that may be culturally standardised and utilised routinely in interaction. Lamont and Molnár show how one may draw such symbolic boundaries ''for creating, maintaining, contesting or even dissolving institutionalised social differences'' (Lamont & Molnár, 2002, p. 168). Symbolic boundaries are used to categorise objects and practices. By means of negotiation about where such boundaries are drawn, agreement may be reached with regard to the character of various phenomena. Our medical cannabis users transmitted a number of subtle subcultural symbols during the interviews, relating not only to their diagnoses and motives for cannabis use but also to the therapeutic components in various types of cannabis, which may be considered elements of such symbolic boundary drawing.

Fine (1983) shows that individuals may develop ''a subcultural self'' through interaction with other individuals who may or may not agree with their ideas and practices, and that the interactions between ''insiders'' and ''outsiders'' typically will differ. Our participants were also eager to categorise the interviewers, and to position them with regard to Norwegian law on medical cannabis. Previous studies have uncovered how recreational cannabis use may also be linked to such boundary drawing, where cannabis users agree upon specific images of the drug and where guidelines for use are identified: spontaneous and social use may be accepted, while too frequent, dependent-like and solitary use of cannabis may not (Järvinen & Demant, 2011).

Comparison with traditional ADHD medication

A key theme in the participants' narratives was the comparison between cannabis and traditional medication for ADHD. Ritalin is a methylphenidate and the brand most commonly used for ADHD in Norway. It was also the most common medication mentioned. All participants were critical of Ritalin. They deemed it equivalent to ''amphetamine'' and were well aware of the potential for misuse and dependence. Thus, on the one hand, they accepted that they suffered from a disorder that implied the need for medical treatment. On the other hand, they were critical of the standard treatments for this disorder.

Roger, 19 years old, was diagnosed with ADHD in early childhood. His mother had contacted the health services at his school. He was often in conflict with other kids and also had trouble concentrating at school. He was prescribed Ritalin. However, he did not like the side effects. When he started to smoke cannabis in his mid-teens, he realised that cannabis worked better for symptoms such as lack of concentration. He started to think of cannabis as ''an alternative medication,'' with fewer side effects, and gradually he quit the use of Ritalin. When smoking cannabis, he became ''calmer.''

Mikkel, 27 years old and a cannabis activist, had used Ritalin for many years and described it thus: ''I had hell with it. I was depressed for many years, and it was due to Ritalin. I got the same effects from cannabis as from Ritalin, but without the horrible side effects.'' Thea, a 28-year-old female who had lived in a foster home as a child, said that she was forced to take Ritalin by her foster parents. ''Got it mixed in squash or on a slice of bread. I didn't want to take it.'' For her, the side effects were also the main reason why she did not want to take it anymore: ''I became indifferent, in a way. I lost my sparkle, which I like so much.''

Many participants had experience with recreational use of amphetamines, and many drew parallels between the side effects of this substance and Ritalin: ''You're not able to sleep, you lose contact with your own feelings, you become restless.'' Most participants claimed that, for a minority of users, cannabis could in fact have adverse side effects and result in dependence. However, compared with Ritalin, cannabis was described as less dangerous.

Cannabis was often described as ''a plant,'' as ''natural'' and as ''organic'' (see also Sandberg, 2012b; Wiecko & Thompson, 2014). In contrast, prescription drugs for ADHD such as Ritalin and Concerta were described much more negatively. First, they were classified together with benzodiazepines (Valium, Sobril) or codeine-based pain relievers (Paralgin Forte). Then these medications were described as ''chemical,'' as ''toxic'' and associated with a high risk

of dependence. Several participants also described how a profit-oriented pharmaceutical industry produced these medications, whereas cannabis was described as, for example, ''a plant that grows in the wilderness.'' Some also described how they had been pressed by parents or the health care system to use Ritalin, while cannabis was framed in a narrative of freedom and autonomy. The effects of Ritalin were described as destructive: You may go for days without sleeping; you may lose contact with your own feelings; you may become ''numb'' and ''indifferent.'' Several of the side effects they linked to Ritalin (e.g. risk of misuse and dependence as well as tension and insomnia) have also been documented by research (Kaye, Darke, & Torok, 2014; Klein-Schwartz, 2002).

Furthermore, several participants described how your ''real'' feelings return and you enjoy a more ''natural'' relationship with yourself when Ritalin is substituted with cannabis. All the medical cannabis users were aware that the use of cannabis might cause problems. However, the problems were described as being of a much smaller magnitude than those related to Ritalin. Peretti-Watel (2003), drawing on Sykes and Matza's (1957) concept of ''neutralisation,'' shows that cannabis users often utilise what he labels ''risk denial,'' which he considers an updated variant of neutralisation theory. Risk denial implies specific techniques, and while traditional neutralisation theory primarily protects individuals from the blame of others, risk denial is a justification addressed at the individual herself/himself. One of the ways of denying a risk lies in comparing it with similar risks that are already well accepted or what Peretti-Watel calls ''comparison between risks'' (Peretti-Watel, 2003, p. 28). The medical cannabis users systematically used this technique when they compared cannabis with Ritalin.

Discussion

In this study of illegal cannabis users, a considerable proportion reported that they used cannabis for what they perceived as medical reasons. A number of disorders and problems were given as the motive, but self-diagnosed ADHD was most prevalent. We found that: (i) the diagnosis contributed to transforming stigmatised behaviours into a morally neutral ''illness''; (ii) the use of cannabis reduced the symptoms allegedly associated with ADHD, and these effects were taken as evidence for the validity of the diagnosis; (iii) symbolic boundaries were drawn with cannabis used in the ''wrong way,'' i.e. for intoxication and recreation; and (iv) cannabis was compared with traditional ADHD medication, which was described as having many more negative effects.

The illegality of cannabis and the risk of convictions are the backdrop for these findings. Even though all the medical cannabis use we uncovered was officially illegal, it was important for our participants to situate it in a medical and not a recreational context. However, the broader frame we revealed was also that conduct problems, drug use and criminality increasingly seem to be transformed into ''ADHD symptoms.'' This development gave the participants the opportunity to reinterpret their own life histories. Medical cannabis was regarded as better suited than standard medication, such as Ritalin, for the treatment of their ADHD. Even if research-based evidence for the use of cannabis for ADHD is lacking, we can assume that cannabis may relieve the symptoms typically associated with the disorder (see Room, Fischer, Hall, Lenton, & Reuter, 2010, pp. 25–45). In addition, traditional ADHD treatment was rejected as being ''chemical,'' while cannabis was seen as ''an organic and natural product.'' Moreover, traditional ADHD treatment was described as producing dependence and having numerous side effects, while cannabis was described as posing a low risk of dependence and producing few side effects. Indeed, participants' views on traditional ADHD medication reflect recent research on possible problems associated with these substances. A review of the diversion and misuse of pharmaceutical stimulants suggests that the prevalence is higher among adolescents and students than in the general population, and that a particularly high level is found among adults with ADHD symptoms (Kane & Darke, 2012).

The most surprising finding in the study was the degree to which the ADHD diagnosis seemed to have become part of participants' daily language and available as a resource of which they could take advantage. The diagnosis seems to be rather loosely defined, and vague concepts, such as ''restlessness,'' ''problems with concentration'' and ''tension'', were used to describe the symptoms. The ADHD diagnosis seems to be part of general lay knowledge, a kind of folk wisdom (see also Moncrieff, Rapley, & Timimi, 2011), even among a group that at the same time is clearly influenced by values from the cannabis culture, where scepticism toward professions and authorities is widespread (Pedersen, 2009).

Several participants described how, early in their childhood, they had heard suggestions that they ''perhaps'' had ADHD. One prison inmate said: ''Almost everybody here has ADHD.'' These views echo the broad public attention given to ADHD in Norway. A search of an electronic Norwegian news media archive revealed that there was a six-fold increase in the use of the term ADHD in the 10-year span 2003–2013 (www.retriever.no). Case histories are regularly presented in the media, and many describe a life of drug abuse and crime as a result of untreated ADHD. The basic narrative in the accounts seems to be one in which drug treatment is justified. In a study of media representations of ADHD in the UK, the same narrative was identified (Horton-Salway, 2011). However, in a Dutch study of persons with ADHD, a broader variety of narratives was identified. Although patients borrowed from psychological as well as sociological perspectives, even here neurobiological perspectives and the need to medicate ADHD symptoms were at the centre (Broer & Heerings, 2012). These patterns are consistent with the rapid present increase in prescriptions for ADHD medication in the Nordic countries (Dalsgaard, Nielsen, & Simonsen, 2013).

A medical diagnosis may provide benefits. Early on, Balint (1957) pointed out that it transforms ''unorganised illness'' – symptoms that may be unconnected and mysterious – into a more understandable entity. In some instances, it may function as a kind of self-labelling that provides a new identity; in other cases, it may facilitate medical treatment (see, e.g. Conrad & Potter, 2000). Previous studies have revealed how an ADHD diagnosis may relieve parents of the

burden of guilt and shame. ''Naughtiness'' may be transformed into ''illness'' (Garro & Yarris, 2009). A qualitative study by Singh (2004) showed how this development included a narrative of blame transformation: ''Ritalin wielded enormous power in the construction of an alternative understanding of the boys' behaviors'' (Singh, 2004, p. 1201).

However, there is another context for these findings that may also be important. There has been a steep increase in the proportion of Norwegian heroin addicts in opiate substitution programs; more than 50% are currently registered in such programs (Waal, Clausen, Håseth, & Lillevold, 2012). The users are now characterised as ''ill,'' whereas only a few years ago, metaphors centring on crime and deviance were typical. This development has been driven by the high level of heroin overdose fatalities (Ravndal & Amundsen, 2010). Even if substitution programs may be efficient preventive tools to avoid overdoses, there has been a surprising lack of reflection on this change and the possible consequences. Anthropologist Philippe Bourgois termed the development a change from ''a criminalizing morality to a medicalising model of addiction-as-a-brain-disease'' (Bourgois, 2000, p. 165). In a similar vein, Singh (2013, p. 813) has shown how we increasingly ''read essential dimensions of the self – mood, personality, cognition, morality and gender – through the brain, primarily via neurochemistry and brain scan images.'' One may suggest that this new symbolic landscape of medicalisation and neurologisation may also facilitate the development of cannabis used for the conditions described in our study.

When some of our participants were examined as children for ADHD, it was usually grounded in parents' and teachers' concerns. Several told us that the diagnosis had ''made things fall into place.'' The diagnosis had – not least for parents – given new meaning to problematic life courses: Dropping out of school, conduct problems, drug use and crime were no longer interpreted as mischief and deviance, but rather as symptoms of ADHD. Often the diagnosis was used as a way to question responsibility and guilt. A female participant said: ''I have ADHD.'' When asked whether it helped to use cannabis, she answered: ''Yes, I can become really furious. I feel like that now; it's because I haven't smoked today.'' Her fury was seen as a manifestation of ADHD, which she then needed to control by means of cannabis.

Drug problems and crime were no longer regarded as morally reprehensible when linked to ADHD. Similar findings have been reported in previous studies. A study of amphetamine-dependent patients seeking treatment revealed that the category ''ADHD patient'' was used to claim membership of a morally neutral category. It was also used to mark one's distance from the more stigmatised category ''illegal amphetamine user.'' The category ''ADHD patient'' was deployed as an account for past and present problems, and as a medical diagnostic label that removed social responsibilities (Schubert, Hansen, Dyer, & Rapley, 2009). Our material was also full of examples of such processes. By means of the ADHD diagnosis, the participants were able to tell a completely different story from the one that had developed throughout their teenage years and into adulthood.

Does our study indicate that the ADHD diagnosis is not valid? A more fruitful perspective is probably to regard it as a resource that is actively used to reinterpret life narratives and to find solutions to problems related to school, work, drugs use and crime. In the critical research tradition linked to the concept of medicalisation, several studies have centred on ADHD (Conrad, 1975, 2007; Timimi, 2005). However, Nikolas Rose has pointed out how this kind of critique may fail to see the historically situated meanings related to practices around the various diagnoses. In this way, one may also lose the individual's potential for agency. In addition, one may end up with a dubious dichotomy according to which the disorder is either ''medical and real'' or ''socially constructed and unreal'' (Rose, 2007). With such a perspective as the background, the most striking aspect of the material presented here is how the ADHD diagnosis is interwoven into the participants' efforts to tackle personal and social problems, as well as to legitimate the use of a psychoactive substance with desired effects but which is illegal, and for whose use a surprisingly high proportion are still punished in the Norwegian context (Pedersen & Skardhamar, 2010).

However, to understand the link between ADHD and medical cannabis, one must also take into consideration that treatment by means of prescription drugs is included in the standard narrative on ADHD. When the participants described what it meant to have this disorder, it was accompanied by descriptions of medications such as Ritalin, Strattera, and Concerta. The ADHD narrative is associated with the necessity of medical treatment.

Our participants were familiar with recreational, illegal use of cannabis before they initiated their medical use, a finding that has also been reported from the USA (Ilgen et al., 2013). Based on the same sample as this study, we previously investigated the rich subculture surrounding cannabis use in Norway (Sandberg & Pedersen, 2010). The importance of ''nature'' lies at the centre. Cannabis is regarded as a ''natural'' product, and mushrooms are also accepted, whereas ''chemical'' drugs such as cocaine and amphetamines are not. This cultural opposition is embedded in a larger conflict between nature and culture, and sociologist Howard Becker described a similar framework as early as the 1950s in the USA (Becker, 1963). In the ''cultural package'' around the ADHD diagnosis, medication through, for example, Ritalin is an element that is taken for granted. However, those who are familiar with the cannabis culture easily substitute Ritalin – coded as ''a chemical substance'' – with cannabis.

The broader frame around our findings also relates to the fact that the medical cannabis user identity is still vague and fragile in the Norwegian context. Generally, identities are social constructs that classify persons, and they are always enacted and purposeful (Copes, Hochstetler, & Williams, 2008). To become a medical cannabis user will always be a multivalent process, and what we witness in our data is how complex and negotiated the process in fact is. It seems to be demanding to claim membership in the category of medical cannabis user; it is necessary to identify oneself in terms of similarity to some and difference from others (Jenkins, 2004).

From a drug policy perspective, does this recent development imply that cannabis use in the general population may increase? There is little evidence to indicate such a trend. It should be noted that even if the use of medical marijuana is

rapidly increasing in the USA, the introduction of new medical marijuana laws does not so far appear to have had consequences for the level of adolescent marijuana use in those states affected (Lynne-Landsman, Livingston, & Wagenaar, 2013). Note also that some of those who initiate medical cannabis use seem to reduce the use of other substances, such as alcohol, other illicit substances or prescription drugs (Lucas et al., 2013). However, future developments in this area should be monitored carefully.

Conclusion

Medical legitimations for the use of cannabis may be spreading. The ADHD diagnosis seems to be at the centre of the new pattern of medical cannabis use in Norway. In our study, the diagnosis was used by the participants themselves, often to give new meaning to problematic life courses. In addition, they developed symbolic boundaries to unacceptable forms of cannabis use and sometimes to their own previous lifestyle. There are two striking backdrops for these findings. One is that cannabis is still an illegal drug in Norway, despite increasing evidence that the substance is among the less harmful psychoactive substances. The other is related to the increasing tendency to medicalise conditions previously categorised as immoral or simply as bad behaviour.

Declaration of interest

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