International Journal of Drug Policy 60 (2018) 18–23

Contents lists available at ScienceDirect

International Journal of Drug Policy

journal homepage: www.elsevier.com/locate/drugpo

Commentary

Beyond deficit and harm reduction: Incorporating the spectrum of wellness as an interpretive framework for cannabis consumption

Todd Subritzky

National Drug Research Institute, Curtin University, Perth, Australia

ARTICLE INFO

Keywords:
Cannabis
Marijuana
Harm reduction
Wellness
Public health

ABSTRACT

The cannabis academic literature is informed by dominant deficit, public health and harm reduction frameworks. However, a large majority of cannabis consumption appears to place outside the scope of these models that prioritise the identification and limitation of negative impacts. As such there are apparent analytical blind spots pertaining to: non-problematic use of cannabis (as defined by Global Commission on Drug Policy); the intersection of medical and recreational intents of use; and pleasure. This paper explores the academic and grey literature relating to the spectrum of wellness to assess its suitability as a framework for cannabis scholars. For millennia cannabis use has been associated with wellness models, particularly at the nexus of mind, body, and spirit. Despite this seemingly obvious match, the academic literature that incorporates cannabis consumption patterns into wellness conceptions is thin. The spectrum of wellness has both advantages and disadvantages compared to existing models and may be useful as a complementary framework that allows for broader examination of cannabis consumer activity.

Background

It has been suggested that historically a large body of drug policy research has been informed by the hegemonic pathology, or 'deficit' model of drug use (Barratt, 2011; Karlsson, 2010; Moore, 2002; O'Malley & Mugford, 1991). This view "positions [illicit] drug use as inherently aberrant, as destructive to both health and happiness, and as reflecting some kind of deficit in personality or social position" (Southgate & Hopwood, 1999 p. 308). On the face of it, international cannabis controls and prohibition in the US and other countries appear to be informed by the deficit model. Extreme perspectives of the deficit model confer the judgement that all drug use is 'bad' (Zinberg, 1986). To illustrate the point, Caulkins and Reuter (1997) noted that according to this view, even if an adult consumed a psychotropic drug that had zero risk of harm to herself or others, that use is seen as unacceptable because it is morally wrong.

The deficit model has been critiqued on the grounds that it dehumanises people who use cannabis as derelict, or deviant, and as belonging to the margins of society (the so-called 'othering') (Becker, 1963/2008; Lunze, Lunze, Raj, & Samet, 2015). An example of 'othering' is the term 'user', which is perceived as being associated with characteristics such as 'lazy', 'worthless', 'irresponsible', and 'no future' (American Society of Addiction Medicine, 2018; Global Commission on Drug Policy, 2018; International Society of Addiction Journal, 2018).

In part as a response to these concerns a public health framework has evolved. The public health approach, as it pertains to cannabis consumption, moves away from the pathological deficit model of drug use described above, towards a more nuanced recognition that most cannabis related harm is concentrated within a minority of high risk consumer activity (Centre for Addiction & Mental Health, 2014). Public health problems identified in the academic literature associated with cannabis consumption include increased risk of cognitive impairment, added risk of traffic crashes and fatalities and other accidents, dependency, and a greater association with mental health problems among others (Fischer, Rehm, & Hall, 2009; Hall & Degenhardt, 2014; Hall, Renström, & Poznyak, 2016; Room, Fischer, Hall, Lenton, & Reuter, 2010). From the public health perspective the risk of these harms is amplified by heavy and frequent use of cannabis, long user careers, and initiation of consumption in adolescence, particularly those 15 years or younger (Crépault, Rehm, & Fischer, 2016; Fischer et al., 2009). According to Fischer et al. (2009) p.102 "once these high risk cannabis users are specified there are two ensuing challenges: (i) … identifying individuals indicating high risk behaviours; and (ii) offering them appropriate interventions". In other words, according to this view, a public health framework as it relates to cannabis consists of assessment and monitoring (surveillance), and expanding access to treatment and interventions where needed. In this sense, the public health approach appears to operate on the assumption that people who use

E-mail address: todd.subritzky@postgrad.curtin.edu.au.

https://doi.org/10.1016/j.drugpo.2018.07.013
Received 27 June 2018

cannabis lack capacity to make health choices themselves, which aligns with the paternalistic philosophy of drug policy (e.g. MacCoun & Reuter, 2001).

As noted by Fischer et al. (2009), the public health approach has a general focus on reducing harms as opposed to use *per se,* which is very much aligned with the concept of harm reduction. There has long been ambiguity around the term harm reduction as it relates to drug policy (Wodak & Saunders, 1995). The concept encompasses a pragmatic approach of "accepting the reality of substance use behaviour, while directing effort at minimising the harmful consequences" (Crofts, Costigan, & Reid, 2003; Erickson, 1995, p.283; Hall & Degenhardt, 2014). Rhodes and Hedrich (2010) p.19 "envisage harm reduction as a 'combination intervention', made up of a package of interventions tailored to local setting and need, which give primary emphasis to reducing the harms of drug use". The Drug Policy Alliance (DPA) among others expanded these definitions to include harms caused by ineffective drug policies including prohibition. An example of harm reduction in a commercial cannabis market might include regulating limits to tetrahydrocannabinol (THC) potency, placing restrictions on predatory marketing strategies, or encouraging the cultivation of products with higher cannabidiol (CBD):THC ratios (Hudak, 2016; Kamin, 2016; Subritzky, Lenton, & Pettigrew, 2016).

A major critique of public health and harm reduction frameworks is that much cannabis consumption appears to take place outside of these realms and that they lack capacity to fully consider: (i) non-problematic use; (ii) the therapeutic nexus of medical and recreational use; and (iii) pleasure.

Person with non-problematic cannabis use

The term 'person with non-problematic cannabis use' recommended by the Global Commission on Drug Policy (2018) report is notable. It appears to introduce a new (or at least under represented) category to the cannabis (academic) literature. Scholars have long pointed out that, while consuming cannabis is not without risk, when considered in the context of burden of disease, most cannabis consumption does not constitute a significant threat to public health at the population level (Caulkins, Kilmer, & Kleiman, 2016; Kleiman, 1992; Room et al., 2010). Attempts to quantify and compare the contribution to the total burden of disease relating to cannabis, other illicit drugs, alcohol, and tobacco provided estimates of 0.2%, 1.8%, 2.3%, and 7.8% respectively (Degenhardt, Ferrari, & Hall, 2017; Room et al., 2010). Indeed, statistics indicate that approximately 90% of people who use cannabis will not reach levels of clinically defined dependence (Caulkins, Hawken, Kilmer, & Kleiman, 2012; Kleiman, 2014). This vast block of people who consume in a manner that is not immediately perceived as harmful, appear to be underrepresented in the cannabis literature. While many studies do point out most cannabis consumption is in the non-harmful category (in terms of global burden of disease), this contextualisation is often a secondary footnote to central findings. Given that "user" is the term most commonly employed across the literature to describe cannabis consumers, on the face of it the GCDP report appears to insinuate that much of the existing cannabis literature has used stigmatising language when reporting findings that emphasise the harms.

Beyond the general absence of consideration for non-harmful cannabis use, the deficit, public health, and harm reduction frameworks seem to lack the capacity to examine consumption that may be considered beneficial. Indeed, Caulkins and Reuter (1997) p.5 stated that "most people would exclude the benefits of drug use …" when devising strategies to reduce harm. It remains unclear why this might be the case, although it would seem such views emerge as the result of the hegemonic influence of the deficit model, which is helpful for harm identification purposes. This view appears to illustrate a noteworthy gap in the literature as it pertains to drug consumption generally and cannabis specifically. It seems to discount at least two potential benefits of cannabis consumption, namely: (i) the intersection of cannabis consumption for recreational and medical purposes; and (ii) pleasure.

Overlapping intention of consumption

First, a large portion of cannabis consumption appears to take place in a realm where medical and recreational intent overlap (e.g. Hakkarainen et al., 2017). However, it is usually dealt with as two separate issues. In part this is due to, as Mead (2014) pointed out, international controls that dictate cannabis must be considered separately for medical and recreational use. Colorado is an example of states in the US where the recreational market is built on a separate medical market (Subritzky, Pettigrew, & Lenton, 2016). The similarities and difference between them are beyond the scope of this paper and have been comprehensively reviewed elsewhere (e.g. Kamin, 2013, 2016, 2017).

As an example of this overlap, in a study describing patterns of cannabis use, Pacula, Jacobson, and Maksabedian, (2015) found approximately 85% of medical consumers also reported using cannabis recreationally. Furthermore, as part of a global study on cannabis cultivation trends, Dahl and Frank (2016) noted the definitional challenges of medical and recreational consumption of cannabis, and found that cannabis consumers who defined themselves as medical, tended to emphasise the relieving effect over pleasurable outcomes. Chapkis and Webb (2008) identified a group of consumers who refuse to distinguish between recreational and medical consumption. Iversen (2007), moreover, pointed out that the window between an effective medical dose, and one that intoxicates, appears to be quite narrow. Indeed, it has been argued that "defining cannabis consumption as elective recreation ignores fundamental human biology, and history, and devalues the very real benefits the plant provides" DeAngelo (2015) p.67. Well known cannabis advocate Dennis Peron reportedly stated that all cannabis consumption is medical, with the obvious exception to the rule being misuse (DeAngelo, 2015; Rendon, 2012). This view is illustrative of what Caulkins and Reuter (1997) have called the extreme social utilitarian perspective.

Pleasure

Second, in contrast, several scholars have found that the overwhelming reason for consumption provided by people who use cannabis is pleasure (e.g. Duff, 2008; Webb, Ashton, Kelly, & Kamali, 1998). This is perhaps unsurprising given that an often used description of the effect of cannabis on mood is euphoria (Ashton, 2001). As may be deduced, euphoria is not generally defined as a harm *per se.* In this respect, the harm reduction model has been critiqued for not giving consideration to the concept of pleasure (Houborg, 2010). Moore (2008) pointed out that the term pleasure has become marginalised in discourses that seek to understand drug use. It would not seem unreasonable to conclude that many people who use cannabis may do so with an aim of enjoying it.

Thus, following the cogent logic of the above scholars and studies, these categories of cannabis use (i.e. not significantly harmful, juxtaposed recreational and medical intent, and pleasure) are likely to constitute most consumers in both legalised and illicit markets. It is here where limitations of the dominant frameworks noted above become most salient. For millennia cannabis use has been associated with wellness, particularly at the nexus of mind, body, and spirit. Despite this seemingly obvious match, the literature that incorporates cannabis consumption into wellness conceptions is thin. The following section explores the literature pertaining to the spectrum of wellness and its potential relevance for cannabis scholars.

The Dunn spectrum of wellness as an interpretive framework

The concept of wellness is said to have a history of over 5000 years (Global Wellness Institute, 2017b). In modern times, the spectrum of

wellness has evolved as a variant of the psychosomatic health framework, which was conceptually defined as "involving or depending on both the mind and the body as mutually dependent entities" (Lipowski, 1984, p.154). According to several scholars, it developed as a response to changing demographics, existential angst of the modern world, and a critique of disease based models of health that prioritised funding for treatment as opposed to prevention (Dunn, 1959; Myers, Sweeney, & Witmer, 2000; Steiner & Reisinger, 2006).

The overall goal of a wellness approach to health is for individuals to lead full and rewarding lives, and ultimately maximise their potential (Dunn, 1959; Myers et al., 2000). Therefore health, as conceived within the spectrum of wellness, is considered more than simply being free of disease, or 'unsick' (Ardell, 1979; Dunn, 1959; Schuster, Dobson, Jauregui, & Blanks, 2004). Notions of wellness seek to move from dichotomous conceptions of sickness and health towards a graduated spectrum (Dunn, 1959). This approach is in alignment with World Health Organization (2017b) principles that state "health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity". To achieve this objective, wellness conceptions are holistic and encapsulate a range of strategies both for disease prevention and enabling of a positive lifestyle (Adler, 1927/2010; Myers et al., 2000). The spectrum of wellness is flexible and has applications both as an analytical framework and a counselling technique with a multi-level healing process (Scholl, McGowan, & Hansen, 2012). In this sense, problematic use of cannabis can be identified within the 'bigger picture' of wellness, and the person with problematic use is empowered to seek support regarding abstinence, harm reduction or counselling (Scholl et al., 2012). Central to this notion is the debate around the capacity, or agency of cannabis consumers to make decisions regarding their own health (e.g. Belackova & Wilkins, 2018; MacCoun & Reuter, 2001).

Philosophically, Heidegger conceived wellness phenomenologically, as encompassing four realms including earth, sky, mortals and divinities - the so-called ringing of the fourfold (Steiner & Reisinger, 2006). Although wellness was initially perceived as largely related to physical health (e.g. Hettler, 1984), Sweeney and Witmer (1991) added a multidisciplinary focus and theoretical grounding through their 'wheel of wellness'. The model included 16 interrelated dimensions of healthy functioning that can be assessed, including creativity, spirituality, nutrition, exercise, pleasure, and stress management among others (Hattie, Myers, & Sweeney, 2004). While historical and first-hand accounts of cannabis use activity have associated its consumption with the enhancement of many of these wheel of wellness components (e.g. Bey & Zug, 2004; Bienenstock, 2016; Pollan, 2002; Sagan, 1971), advocates of consuming cannabis as a tool for achieving wellness tend to frame its use around psychological, physical, and spiritual conceptions (Bello, 2010; Blesching, 2015). In considering wellness lifestyles, Schuster et al. (2004) p.6 contended that wellness is a bio-psychosocial phenomenon that integrates the "… internal and external environment, ranging from physical functioning (ability to deal with disease) to psychologic (emotional, cognitive) and spiritual well-being … to safety, wealth, freedom, opportunity, and happiness". In relation to drug use in general, these aspects can be linked to, and incorporate the notion of, a stable life structure as an important element for allowing the effective self-regulation of consumption (Decorte, 2001; Grund, 1993).

The motivation or intent for consuming cannabis is seen as a central premise of the spectrum of wellness (DeAngelo, 2015; Dussault, 2017). DeAngelo (2015) p.77, a long-time cannabis legalisation advocate and industry entrepreneur argued that in most cases, cannabis consumption can be categorised as either wellness use, or misuse, and "the difference can only be discerned in the mind of the consumer. When cannabis is ingested with conscious intent, to produce a desired effect that brings some value to life, … it is being used for wellness purposes". The intent can range from anger management, to enhancing a meal, laughter, or stress relief. According to DeAngelo, it is not the effect that is important, rather, "it is that the consumer be able to honestly identify the value [that consuming cannabis] brings to his or her life" (DeAngelo, 2015, p.77). From this perspective the key to consuming cannabis in a manner that enhances wellness is staying committed to a productive life and accepting responsibility for individual actions.

A key feature of the spectrum of wellness is the prioritisation of self-responsibility for the individual in making conscious health choices (Bello, 2010; Dussault, 2017; Palombi, 1992). This is in alignment with the liberal tradition (MacCoun & Reuter, 2001; Mills, 1859/1985). This aspect relates to the capacity of a cannabis consumer to self-identify when consumption is problematic, and then take steps such as seeking treatment, to address the issue. In this sense, cannabis consumption can be interpreted as a process of self-medication that allows consumers to take greater control in self-assessing their individual requirements (Hazekamp & Pappas, 2014).

Evaluating cannabis use in the spectrum of wellness

There are a range of psychometric instruments available to evaluate individual wellness using the Likert Scale. The concept has traditionally been assessed through: (i) clinical measures that focus on depression, distress, anxiety, or substance abuse (Keyes, 1998); or (ii) the psychological tradition, which follows a subjective evaluation of life satisfaction (Hattie et al., 2004). This is in line with the view of Schuster et al. (2004) who noted that self-perception of health is a strong predictor of subsequent health outcomes. Wellness evaluation tests that have been independently assessed for validity and reliability include: (i) the Five Factor Wellness Inventory that measures almost 100 items (Myers & Sweeney, 2014); and (ii) the Perceived Wellness Survey, which includes physical, spiritual, and psychological dimensions (Adams, Bezner, & Steinhardt, 1997; Kaveh, Ostovarfar, Keshavarzi, & Ghahremani, 2016).

Diagnostic criteria for cannabis dependence can be found in both the Diagnostic and Statistical Manual of Mental Disorders (DSM-5; American Psychiatric Association, 2013), and the International statistical classification of diseases and related health problems (ICD-10; WHO, 1992). While ICD-10 differentiates between dependent and harmful cannabis consumption, DSM-5 classifies level of dependency and associated damage to health as low, moderate or severe (WHO, 2016). DSM-5 has been critiqued for being unidimensional (MacCoun, 2013). Additional tools for evaluating cannabis use patterns specifically include the Severity of Dependence Scale that can provide a 'dependence rating' from 0 to 15 (Copeland, Frewen, & Elkins, 2009), and the Substance Abuse Subtle Screening Inventory (Clements, 2002). Results of these evaluations can then be placed within conceptions of overall health.

At the most fundamental level, DeAngelo (2015) p.78 posits three questions a cannabis consumer could employ to evaluate her or his use: "(i) what effect [is the person who consumes cannabis] seeking …?; (ii) how will that effect bring value to [the consumer's] life?; and (iii) will cannabis use at this time negatively impact [the person who consumes] or anybody else"?

Cannabis and the wellness industry

According to a report by the Global Wellness Institute (2017a) the wellness industry (not including cannabis) currently contributes US$3.7 trillion to the global economy annually - over three times that of the pharmaceutical industry. The report itemised numerous health aspects under the rubric of wellness, many of which are relevant to the nascent legal cannabis markets currently emerging around the world. For example, several companies have appeared that combine wellness activities such as hiking, infused massage, and art classes with cannabis consumption (e.g. Colorado Cannabis Tours, 2018). The GWI report also identified broader categories in the wellness industry that have an historical association with cannabis including: (i) complementary and alternative medicines (CAM); (ii) mind, body and spirit; and (iii) fitness. These are now discussed.

First, according to Schuster et al. (2004), the concepts of wellness and CAM are closely aligned, with shared underlying beliefs including the prioritisation of a wellness approach to health. While there are numerous CAM categories, the most common are: (i) the use of natural products such as botanicals, probiotics and nutraceuticals as dietary supplements (US Department of Health & Human Services, 2017); (ii) traditional techniques such as acupuncture and aromatherapy (Russo, 2013); and (iii) medicinal plants (World Health Organization, 2017a). While Mead (2014) noted psychoactive substances in general are not classified as herbal or dietary supplements, several authors have pointed out that this potential exists for herbal cannabis, and advocate for such a classification (Backes, 2014; Dolce, 2016; Small, 2007). Non-psychotropic cannabinoids of cannabis such as CBD and hemp seed oils are widely used in this regard (Small, 2007).

Second, there is a long association between the consumption of cannabis and wellness practices associated with mind-body techniques including yoga, meditation and spiritual exploration. For example Dussault (2017) contended that the use of plant medicines such as cannabis in yogic philosophy dates to the Yoga Sutras (ca. 400 CE). Based on years of self-experimentation, Dussault considers all cannabis consumption, when used in a mindful way, as medicinal (both as treatment and preventative). Furthermore, Dussault (2017) p.2 postulates that when combined with yoga, regular "moderate doses of cannabis, rather than larger amounts less frequently, are a tonic to support a powerful healing system for mental health and wellness". This perspective is in contrast to the public health approach that views all regular and sustained cannabis consumption as high risk (Fischer et al., 2009). Dussault advocates 'microdosing' cannabis to find the minimum effective dose. At time of writing, numerous firms were offering cannabis yoga classes and retreats in states such as Colorado that have legalised cannabis for both recreational and medical purposes (e.g. Cannabis Ganja Yoga Retreat, 2017).

Regarding spirituality, it was noted above this is an important component within the spectrum of wellness (Bello, 2010; Hattie et al., 2004). Spirituality can be defined in many ways. For example, Grof (2016) considered the notion of an expanded consciousness beyond limitations of space and time as spiritual. Myers et al. (2000), in contrast, contended that a feeling of connectedness to the Universe that transcends material aspects of life was an essential component of a spiritual outlook. These definitions are said to be distinct from narrow concepts of religiosity, which refer to institutional beliefs (Steiner & Reisinger, 2006). Descriptions of using cannabis to obtain spiritual states of consciousness (i.e. the entheogenic consumption of cannabis) are numerous with a history that spans millennia (Brown, 2012; Crowley, 2016; Estren, 2017; Gray, 2016). In 2017, a church was established in Denver, Colorado, with the reported aim to allow members to "consume the sacred flower to reveal the best version of self … through ritual and spiritual practice" (International Church of Cannabis, 2017, p.1). The spectrum of wellness may be a useful framework for gaining insights into the consumption of cannabis from this perspective.

Third, an apparently new development that has emerged within the spectrum of wellness is the relationship between cannabis consumption and fitness. Goldstein (2000) has argued there are multiple health related assumptions shared by the fitness movement and the wellness industry including: (i) the notion of taking personal responsibility for health; (ii) the interconnectedness of mind, body and spirit; and (iii) a belief in the positive connotations of 'getting back to nature'. A recent example of fitness and cannabis combining in the modern industry is the opening of the (self-reported) world's first cannabis gym in California. According to their website, Power Plant Fitness (2017) members may consume cannabis at the gym before or after working out "in a full blown health and wellness centre, focused on full body integrative health, wellness and fitness". There is little in the academic literature relating to the consumption of cannabis for fitness purposes beyond a systematic review of fifteen studies by Kennedy (2017), which concluded THC does not enhance exercise performance. However, there appears to be a growing number of anecdotal reports on the benefits of consuming cannabis for fitness purposes, particularly around the notion of increased stamina (e.g. BBC, 2018, May 31; Civilized, 2017, Feb. 20; Guardian, 2016, May 2; The Cannabist, 2017, Jun. 16; Well & Good, 2017, Apr. 3). As noted by Grinspoon (1997), anecdotal evidence and subjective experience can be a valuable source of knowledge regarding both adverse and beneficial effects of consuming cannabis. More research is needed regarding impact assessment of cannabis in this emerging industry, however within the spectrum of wellness, such use may be considered from harmful and abusive consumption, through to potentially beneficial to overall health.

Conclusion

The spectrum of wellness as an analytical framework to conceive cannabis consumption bestows several advantages. First, it offers the possibility of examining broader perspectives of cannabis consumption than the deficit, public health, and harm reduction approaches. Second, the spectrum of wellness is flexible analytically, with the ability to conceptualise both non-harmful cannabis use and high-risk activity. Third, it is complementary to, and can build on, practical harm reduction guidelines that aim to reduce risks associated with cannabis consumption. Fourth, there has been a long association between cannabis consumption and wellness, which is reflected in the emerging cannabis wellness industry in the US. Fifth the spectrum of wellness encourages individuals to take responsibility for their own health choices and devise strategies for improving life quality. Sixth the spectrum of wellness is not only useful in the analytical sense, it can also be employed in a counselling environment as a tool to assist the treatment of problematic drug use.

Conversely, the spectrum of wellness is also open to critique on many fronts. First, wellness can be difficult to measure clinically and relies on subjective interpretation. Second, the spectrum of wellness may seem to down play harms associated with cannabis consumption. Third, beyond the identification of problematic consumption, it lacks the capacity to identify harms, for example early initiation of use careers among young people, driving under the influence, or the consumption of contaminated cannabis (Subritzky, Pettigrew, & Lenton, 2017). Fourth, marginalised and vulnerable people with problematic cannabis use may have difficulty in taking responsibility for their actions or making rational choices around consumption. Fifth, there is a possibility that a tool becomes a crutch, therefore increasing risk of dependency. Sixth, dishonest promotion of benefits is possible (if not likely) (e.g. Voelker, 2017). Seventh, considering any consumption of cannabis as potentially beneficial is likely to be viewed as controversial.

If proponents of the dominant deficit perspective that focuses on harmful drug use were concerned that the harm reduction model was sending the wrong message by pragmatically accepting that people will use cannabis, whether it is outlawed or not, they may be challenged by a theoretical model that can consider potentially beneficial consumption within the context of a wellness approach to health. However, there appears to be broad consensus among the deficit, public health, harm reduction, and wellness models around the notion that cannabis consumption is problematic and harmful for some consumers (Copeland et al., 2009; DeAngelo, 2015; Fox, Armentano, & Tvert, 2009; Hall, 2015). Furthermore, there are broad areas of overlap between the concepts of wellness and harm reduction, particularly around the notions of controlled use (Zinberg, 1986), stable life structures (Decorte, 2001; Grund, 1993), and self-responsibility for health choices (Harm Reduction Coalition, 2017). A key difference between the spectrum of wellness and the public health approach relates to surveillance. In the former, the individual is encouraged to self-monitor, check for harmful consumption patterns and seek help where required, while in the latter, public health professionals oversee survey instruments and guide the most vulnerable to treatment interventions.

At the heart of the matter, the contrasting approaches of the spectrum of wellness and public health framework are informed by the liberal and paternal philosophies respectively, whereby the former will encourage self-ownership of individual health, while the latter may argue cannabis consumers lack capacity to make informed choices. Additionally, the spectrum of wellness differentiates from the harm reduction framework in that it can consider some cannabis use as potentially beneficial within broader conceptions of health, as opposed to limiting harm. The spectrum of wellness has both advantages and disadvantages compared to existing models and may be useful as a complementary framework that allows for broader coverage of cannabis consumer activity.

Conflict of interest statement

None.

References

Adams, T., Bezner, J., & Steinhardt, M. (1997). The conceptualization and measurement of perceived wellness: Integrating balance across and within dimensions. *American Journal of Health Promotion, 11*(3), 208–218. https://doi.org/10.4278/0890-1171-11.3.208.

Adler, A. (1927/2010). Understanding human nature. New York: Blue Ribbon Books.

American Psychiatric Association (2013). *Diagnostic and statistical manual of mental Disorders* (fifth edition). Arlington (VA).

American Society of Addiction Medicine (2018). *Patients with addiction need treatment - not stigma.* Retrieved 21/01/2018 fromhttps://www.asam.org/resources/publications/magazine/read/article/2015/12/15/patients-with-a-substance-use-disorder-need-treatment—not-stigma.

Ardell, D. (1979). *High level wellness, an alternative to doctors, drugs, and disease.* Cincinnati, Ohio: Bantam Books.

Ashton, H. (2001). Pharmacology and effects of cannabis: A brief review. *The British Journal of Psychiatry, 178*(2), 101–106.

Backes, M. (2014). *Cannabis Pharmacy: The practical guide to medical marijuana.* New York, NY: Black Dog & Leventhal.

Barratt, M. (2011). *Beyond internet as tool: A mixed-methods study of online drug discussion Doctural thesis.* Melbourne, Australia: Curtin University.

BBC (2018). *Cannabis and sport: NBA winner Matt Barnes' smoked before games'* (2018, May 31). Retrieved 27/06/2018 fromhttps://www.bbc.com/sport/basketball/43836214.

Becker, H. (1963/2008). Outsiders: Studies in the sociology of deviance. New York, NY: Free Press.

Belackova, V., & Wilkins, C. (2018). Consumer agency in cannabis supply–exploring auto-regulatory documents of the cannabis social clubs in Spain. *The International Journal on Drug Policy, 54*, 26–34.

Bello, J. (2010). *The benefits of marijuana: Physical, psychological and spiritual.* Susquehanna, PA: Lifeservices Press.

Bey, H., & Zug, A. (2004). *Orgies of the hemp eaters: Cuisine, slang, literature & ritual of Cannabis culture.* Autonomedia.

Bienenstock, D. (2016). *How to Smoke Pot (properly): A highbrow guide to getting high.* New York, NY: Penguin Publishing Group.

Blesching, U. (2015). *The Cannabis Health Index: Combining the science of medical marijuana with mindfulness techniques to heal 100 chronic symptoms and diseases.* Berkley, CA: North Atlantic Books.

Brown, J. (2012). *Marijuana and the bible (Volume 2) CreateSpace independent publishing platform*.

Cannabis Ganja Yoga Retreat (2017). *Weekend yoga retreats.* retrieved 22/12/2017 fromhttp://www.420yogaretreats.com/.

Caulkins, J., & Reuter, P. (1997). Setting goals for drug policy: harm reduction or use reduction? *Addiction (Abingdon, England), 92*(9), 1143–1150.

Caulkins, J., Hawken, A., Kilmer, B., & Kleiman, M. (2012). *Marijuana Legalization: What everyone needs to know.* New York, NY: Oxford University Press.

Caulkins, J., Kilmer, B., & Kleiman, M. (2016). *Marijuana legalization: What everyone needs to know* (2nd edition). New York, NY: Oxford University Press.

Centre for Addiction and Mental Health (2014). *Cannabis policy framework.* Centre for Addiction and Mental Health.

Chapkis, W., & Webb, R. (2008). *Dying to get high: Marijuana as medicine.* New York, NY: New York University Press.

Civilized (2017). *The Cannabis health challenge - how to add microdosing to your fitness routine* (2017, Feb. 20). Retrieved 13/12/2017https://www.civilized.life/articles/the-cannabis-health-challenge-how-to-add-microdosing-to-your-fitness-routine/.

Clements, R. (2002). Psychometric properties of the substance abuse subtle screening inventory-3. *Journal of Substance Abuse Treatment, 23*(4), 419–423.

Colorado Cannabis Tours (2018). *Colorado Cannabis Tours, classes, and 420 friendly hotel bookings.* Retrieved 23/01/2018 fromhttps://coloradocannabistours.com/.

Copeland, J., Frewen, A., & Elkins, K. (2009). *Management of cannabis use disorder and related issues: A clinician's guide.* Retrieved 23/11/2017 fromNCPIC, National Cannabis Prevention and Information Centrehttps://cannabissupport.com.au/media/3069/gp-kit_resource-pack.pdf.

Crépault, J., Rehm, J., & Fischer, B. (2016). The cannabis policy framework by the centre for addiction and mental health: A proposal for a public health approach to cannabis policy in Canada. *The International Journal on Drug Policy, 34*(August), 1–4.

Crofts, N., Costigan, G., & Reid, G. (2003). *Manual for reducing drug related harm in Asia.* Melbourne, Australia: The Centre for Harm Reduction.

Crowley, M. (2016). *Secret drugs of buddhism: Psychedelic sacraments and the origins of the vajrayāna.* Hayfork, California: Amrita Press.

Dahl, H., & Frank, V. (2016). Medical marijuana: Exploring the concept in relation to small scale cannabis growers in Denmark. In T. Decorte, G. Potter, & M. Bouchard (Eds.). *World wide weed: Global trends in cannabis cultivation and its control*. London: Routledge.

DeAngelo, S. (2015). *The Cannabis manifesto: A new paradigm for wellness.* Berkeley: North Atlantic Books.

Decorte, T. (2001). Drug users' perceptions of 'controlled'and 'uncontrolled'use. *The International Journal on Drug Policy, 12*(4), 297–320.

Degenhardt, L., Ferrari, A., & Hall, W. (2017). The global epidemiology and disease burden of Cannabis use and dependence. In V. Preedy (Ed.). *Handbook of cannabis and related pathologies: Biology, pharmacology, diagnosis, and treatment*. Cambridge, Massachusetts: Academic Press.

Dolce, J. (2016). *Brave New Weed: Adventures into the uncharted world of cannabis.* New York, NY: HarperCollins.

Duff, C. (2008). The pleasure in context. *The International Journal on Drug Policy, 19*(5), 384–392.

Dunn, H. (1959). High-level wellness for man and society. *American Journal of Public Health and the Nation's Health, 49*(6), 786–792.

Dussault, D. (2017). *Ganja yoga: A practical guide to conscious relaxation, soothing pain relief and enlightened self-discovery.* New York, NY: HarperCollins Publishers.

Erickson, P. (1995). Harm reduction: What it is and is not. *Drug and Alcohol Review, 14*(3), 283–285.

Estren, M. (2017). *One Toke to God: The entheogenic spirituality of cannabis.* Malibu, CA: Cannabis Spiritual Center.

Fischer, B., Rehm, J., & Hall, W. (2009). Cannabis use in Canada: The need for a'public health'approach. *Canadian Journal of Public Health/Revue Canadienne de Sante'e Publique*, 101–103.

Fox, S., Armentano, P., & Tvert, M. (2009). *Marijuana is safer so why are we driving people to drink.* Vermont, US: Chelsea Green Publishing.

Global Commission on Drug Policy (2018). *The world drug perception problem: Countering prejudices about people who use drugs*Geneva: Retrieved fromhttp://www.globalcommissionondrugs.org/wp-content/uploads/2018/01/GCDP-Report-2017_Perceptions-ENGLISH.pdf.

Global Wellness Institute (2017a). *Global wellness economy monitor, January 2017.* Retrieved 13/11/2017 from Global Wellness Institutehttps://www.globalwellnessinstitute.org/industry-research/.

Global Wellness Institute (2017b). *The history of wellness.* Retrieved 12/12/2017 fromhttps://www.globalwellnessinstitute.org/history-of-wellness/.

Goldstein, M. (2000). *The culture of fitness and the growth of CAM. Complementary and alternative medicine: Challenge and change.* 27–38.

Gray, S. (2016). *Cannabis and Spirituality: An explorer's guide to an ancient plant spirit ally.* Toronto, Canada: Park Street Press.

Grinspoon, L. (1997). *Marihuana: The forbidden medicine.* New Haven, CT: Yale University Press.

Grof, S. (2016). *Realms of the human unconscious: Observations from LSD research.* NY: Souvenir Press Ltd.

Grund, J. (1993). *Drug Use as a Social Ritual: Functionality, symbolism and determinants of self-regulation.* Rotterdam: Instituut voor Verslavingsonderzoek.

Guardian (2016). *Runner's high: The athletes who use marijuana to improve their training* (2016, May 2) Retrieved 27/06/2018 fromhttps://www.theguardian.com/society/2016/may/02/marijuana-athlete-running-performance-enhancing-drug.

Hakkarainen, P., Decorte, T., Sznitman, S., Karjalainen, K., Barratt, M., Frank, V., et al. (2017). Examining the blurred boundaries between medical and recreational cannabis – Results from an international study of small-scale cannabis cultivators. *Drugs: Education Prevention & Policy,* 1–9. https://doi.org/10.1080/09687637.2017.1411888.

Hall, W. (2015). What has research over the past two decades revealed about the adverse health effects of recreational cannabis use? *Addiction (Abingdon, England), 110*(1), 19–35. https://doi.org/10.1111/add.12703.

Hall, W., & Degenhardt, L. (2014). Harm reduction policies for cannabis. In R. Pertwee (Ed.). *Handbook of Cannabis.*. New York, NY: Oxford University Press.

Hall, W., Renström, M., & Poznyak, V. (2016). The health and social effects of nonmedical cannabis use. World Health Organization. Retrieved 15/03/2016 from http://www.who.int/substance_abuse/publications/cannabis_report/en (Archived by WebCite® at http://www.webcitation.org/6g1TjPH4C).

Harm Reduction Coalition (2017). *Principles of harm reduction.* Retrieved 20/02/2017 from Harm Reduction Coalitionhttp://harmreduction.org/about-us/principles-of-harm-reduction.

Hattie, J., Myers, J., & Sweeney, T. (2004). A factor structure of wellness: Theory, assessment, analysis, and practice. *Journal of Counseling & Development, 82*(3), 354–364.

Hazekamp, A., & Pappas, G. (2014). Self-medication with Cannabis. In R. Pertwee (Ed.). *Handbook of Cannabis*. New York, NY: Oxford University Press.

Hettler, B. (1984). Wellness: Encouraging a lifetime pursuit of excellence. *Health Values, 8*(4), 13.

Houborg, E. (2010). Regulating intoxication and disciplining pleasure. In T. Decorte, & J. Fountain (Eds.). *Pleasure, pain and profit: European perspectives on drugs*. Pabst, Wolfgang Science.

Hudak, J. (2016). *Marijuana: A short history.* Washington, D.C: Brookings Institution Press.

International Church of Cannabis (2017). *International church of Cannabis.* Retrieved 12/12/2017https://www.elevationists.org/about.

International Society of Addiction Journal (2018). *Statements and guidelines addiction terminology.* Retrieved 21/01/2018 fromhttp://www.isaje.net/addiction-terminology.html.
Iversen, L. (2007). *The science of marijuana* (second ed.). New York, NY: Oxford University Press.
Kamin, S. (2013). Medical marijuana in Colorado and the future of marijuana regulation in the United States. *McGeorge Law Review, 43*(12), 147.
Kamin, S. (2016). Legal Cannabis in the US: Not whether but how. *UCDL Reveiw, 50*, 617.
Kamin, S. (2017). Marijuana regulation in the United States. In E. Savona, M. Kleiman, & F. Calderoni (Eds.). *Dual markets: Comparative approaches to regulation* (pp. 105–119). Cham: Springer International Publishing.
Karlsson, P. (2010). Alternatives to the deficit model of adolescent drug use. In T. Decorte, & J. Fountain (Eds.). *Pleasure, pain and profit: European perspectives on drugs*. Pabst, Wolfgang Science.
Kaveh, M., Ostovarfar, J., Keshavarzi, S., & Ghahremani, L. (2016). Validation of perceived wellness survey (PWS) in a sample of Iranian population. *The Malaysian Journal of Medical Sciences: MJMS, 23*(4), 46–53. https://doi.org/10.21315/mjms2016.23.4.6.
Kennedy, M. (2017). Cannabis: Exercise performance and sport. A systematic review. *Journal of Science and Medicine in Sport, 20*(9), 825–829. https://doi.org/10.1016/j.jsams.2017.03.012.
Keyes, C. (1998). Social well-being. *Social Psychology Quarterly,* 121–140.
Kleiman, M. (1992). *Against excess: Drug policy for results.* New York, NY: BasicBooks.
Kleiman, M. (2014). A Nudge Toward Temperance. Retrieved 08/03/2015 from Washington Monthly http://www.washingtonmonthly.com/magazine/march_april_may_2014/features/a_nudge_toward_temperance049292.php. (Archived by WebCite® at http://www.webcitation.org/6YXUlwqoj). Mar/Apr/May.
Lipowski, Z. (1984). What does the word" psychosomatic" really mean? A historical and semantic inquiry. *Psychosomatic Medicine, 46*(2), 153–171.
Lunze, K., Lunze, F., Raj, A., & Samet, J. (2015). Stigma and human rights abuses against people who inject drugs in Russia—A qualitative investigation to inform policy and public health strategies. *PloS One, 10*(8), e0136030.
MacCoun, R. (2013). The puzzling unidimensionality of DSM-5 substance use disorder diagnoses. *Frontiers in Psychiatry, 4*.
MacCoun, R., & Reuter, P. (2001). *Drug War Heresies: Learning from other vices, times, and places.* Cambridge, UK: Cambridge University Press.
Mead, A. (2014). International control of cannabis. In R. Pertwee (Ed.). *Handbook of Cannabis*. New York, NY: Oxford University Press.
Mills, J. (1859/1985). On Liberty. Harmondsworth, England: Penguin Books.
Moore, D. (2002). Opening up the cul-de-sac of youth drug studies: A contribution to the construction of some alternative truths. *Contemporary Drug Problems, 29*(1), 13–63.
Moore, D. (2008). Erasing pleasure from public discourse on illicit drugs: On the creation and reproduction of an absence. *The International Journal on Drug Policy, 19*(5), 353–358.
Myers, J., & Sweeney, T. (2014). *Five factor wellness inventory (FFWEL): Adult, teenage, and elementary school versions.* Mind Garden, Incorporated.
Myers, J., Sweeney, T., & Witmer, J. (2000). The wheel of wellness counseling for wellness: A holistic model for treatment planning. *Journal of Counseling & Development, 78*(3), 251–266.
O'Malley, P., & Mugford, S. (1991). The demand for intoxicating commodities: Implications for the" war on drugs". *Social Justice, 18*(4 (46)), 49–75.
Pacula, R., Jacobson, M., & Maksabedian, E. (2015). In the weeds: A baseline view of cannabis use among legalizing states and their neighbours. *Addiction (Abingdon, England)*. https://doi.org/10.1111/add.13282.
Palombi, B. (1992). Psychometric properties of wellness instruments. *Journal of Counseling & Development, 71*(2), 221–225.
Pollan, M. (2002). *The botany of desire: A plant's-eye view of the world.* New York, NY: Random House Trade Paperbacks.
Power Plant Fitness (2017). *About power plant fitness.* Retrieved 23/12/2017 fromhttp://powerplantgym.com/about-power-plant-fitness/.
Rendon, J. (2012). *Super Charged: How outlaws, hippies, and scientists reinvented marijuana.* Portland, OR: Timber Press.
Rhodes, T., & Hedrich, D. (2010). *Harm reduction and the mainstream.* Retrieved 23/11/2017 from EMCDDA . EMCDDA Monographs http://www.drugs.ie/resourcesfiles/ResearchDocs/Europe/Research/2010/EMCDDA-monograph10-harm_reduction_final.pdf#page=21.
Room, R., Fischer, B., Hall, W., Lenton, S., & Reuter, P. (2010). *Cannabis policy: Moving beyond stalemate.* Oxford: Oxford University Press.
Russo, E. (2013). *Cannabis and cannabinoids: Pharmacology, toxicology, and therapeutic potential.* London, UK: Routledge.
Sagan, C. (1971). An essay. In L. Grinspoon (Ed.). *Marihuana reconsidered* (pp. 109–116). Mambridge, Massachusetts: Harvard University press.
Scholl, M., McGowan, A., & Hansen, J. (2012). *Humanistic perspectives on contemporary counseling issues.* Routledge.
Schuster, T., Dobson, M., Jauregui, M., & Blanks, R. (2004). Wellness lifestyles I: A theoretical framework linking wellness, health lifestyles, and complementary and alternative medicine. *The Journal of Alternative and Complementary Medicine, 10*(2), 349–356.
Small, E. (2007). Cannabis as a source of medicinals, nutraceuticals, and functional foods. *Advancement in Medicinal Plant Research,* 1–39.
Southgate, E., & Hopwood, M. (1999). Mardi Gras says 'be drug free': Accounting for resistance, pleasure and the demand for illicit drugs. *Health, 3*, 303–316.
Steiner, C., & Reisinger, Y. (2006). Ringing the fourfold: A philosophical framework for thinking about wellness tourism. *Tourism Recreation Research, 31*(1), 5–14.
Subritzky, T., Pettigrew, S., & Lenton, S. (2017). Into the void: Regulating pesticide use in Colorado's commercial cannabis markets. *The International Journal on Drug Policy, 42*(April), 86–96. https://doi.org/10.1016/j.drugpo.2017.01.014.
Subritzky, T., Lenton, S., & Pettigrew, S. (2016). Legal cannabis industry adopting strategies of the tobacco industry. *Drug and Alcohol Review, 35*(5), 511–513.
Subritzky, T., Pettigrew, S., & Lenton, S. (2016). Issues in the implementation and evolution of the commercial recreational marijuana market in Colorado. *The International Journal on Drug Policy, 27*, 1–12. https://doi.org/10.1016/j.drugpo.2015.12.001.
Sweeney, T., & Witmer, J. (1991). Beyond social interest: Striving toward optimum health and wellness. *Individual Psychology: Journal of Adlerian Theory, Research & Practice, 47*(4), 527–540.
The Cannabist (2017). *Cannabist Show: She's a fit cannabis girl breaking stigmas* (2017, Jun. 16). Retrieved 12/12/2017http://www.thecannabist.co/2017/06/16/s03e09-cannabist-show-jennessa-lea-break-the-stigma-fitness/81728/.
US Department of Health and Human Services (2017). *Complementary, alternative, or integrative health what's in a name?* Retrieved 20/12/2017 fromNational Center For Complementary and Integrative Healthhttps://nccih.nih.gov/health/integrative-health#types.
Voelker, R. (2017). *News from the food and drug administration: FDA pursues unproven Cancer claims.* Retrieved 22/01/2018 fromhttps://jamanetwork.com/journals/jama/article-abstract/2666486?redirect=true.
Webb, E., Ashton, C., Kelly, P., & Kamali, F. (1998). An update on British medical students' lifestyles. *Medical Education, 32*(3), 325–331.
Well and Good (2017). *7 reasons why Cannabis will dominate the wellness world in 2017* (2017, Apr. 3). Retrieved 15/12/2017https://www.wellandgood.com/good-advice/cannabis-health-wellness-trends-2017/.
WHO (1992). *The ICD-10 classification of mental and behavioural disorders. Clinical descriptions and diagnostic guidelines.* Geneva.
WHO (2016). *The health and social effects of nonmedical cannabis use.* Geneva.
Wodak, A., & Saunders, B. (1995). *Harm reduction means what I choose it to mean.* Taylor & Francis.
World Health Organization (2017a). *Traditional medicine: Essential medicines and health products information portal.* Retrieved 23/ 12/2017 fromhttp://apps.who.int/medicinedocs/en/cl/CL10.1.1.2.4/clmd,50.html#hlCL10_1_1_2_4.
World Health Organization (2017b). *Constitution of WHO: Principles.* Retrieved 23/11/2017 from WHOhttp://www.who.int/about/mission/en/.
Zinberg, N. (1986). *Drug, set, and Setting: The basis for controlled intoxicant use.* Binghampton, NY: Yale University Press.