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On the Forbidden Front: Russian University Student Thoughts about Cannabis for Medical Conditions

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Abstract. *Objective***:** To study Russian university students' thoughts about using cannabis for medical conditions where it is prohibited by government policy. *Methods***:** This cross-sectional study used data collected from 828 professional students (e.g., medicine, psychology, and social work) at two Russian universities (2019/2020 academic year). They were administered a 32-item questionnaire measuring knowledge, attitudes, and beliefs about medical and non-medical cannabis. Demographic variables used in this study included age, gender, religion, religiosity level, and academic study area. *Results***:** A majority of the students (76%) did not express support for using cannabis for medical purposes; 87.5% reported they lacked knowledge and education about the substance; and a majority believed it was not effective for treating medical conditions. Academic discipline, religiously, recreational cannabis use and support for cannabis legalization were key factors associated with students' thoughts and knowledge about medical cannabis use. *Conclusions***:** This is the first study on university students' views on medical cannabis to be conducted in Russia. The results have possible implications for policy, education, and health intervention purposes in Russia, and elsewhere where cannabis is prohibited.

Keywords: Cannabis; Medical Cannabis; University Students; Knowledge and Beliefs, Russia

Introduction

Cannabis use in Russia dates back to the year 600 BCE with the Scythians, or Scyths, an Indo-European nomadic people living in the region (Long, et al., 2017). The substance, mainly Cannabis Sativa, began to be cultivated in the 8th century, at which point it became a popular crop for use among the peasant class (Grigoriev et al., 2020). Beginning in the 15th century, cannabis products had a role within Russian foreign trade and that lasted until the revolution of 1917 (Serkov et al., 2018). During this time, it was also used for treatment of medical conditions including pain and insomnia (RIA Novosti, 2011).

Cannabis—including the dried resin of the female plant known as hashish—was primarily produced in the Asian and Caucasian regions of the Russian Empire. For most Russian people, alcohol was the substance of choice, but shortly before World War I began in 1914, prohibition was introduced to reduce its consumption. Consequently, people turned to other substances, including opiates (e.g., opium, morphine, and heroin), cocaine, and cannabis. After numerous regulatory changes, the alcohol prohibition law was repealed in 1925.

As the Russian revolution unfolded between 1917 and 1921, Lenin's efforts to stabilize the economy and win the civil war included giving attention to the county's alcohol and drug addiction problem (Bogdanov, 2017; Panin, 2003; Shkarovsky, 1997). However, such concern was short lived, as other priorities took centre stage as unrest grew throughout Europe leading to the second world war.

Recognized as a plant with psychoactive properties, cannabis production was placed under state control by the Soviet Union in 1934 (Kramer, 1992). Weak regulation enforcement tended to enhance its popularity during that time, continuing through World War II, and thereafter. Soviet authorities acknowledged that such conditions contributed to an illegal market for raw opium and cannabis that continued to be used for traditional folk medicine purposes. In 1960, the Soviet Union began to combat illegal cultivation and trafficking of opium and cannabis with enhanced regulation enforcement and punishment; and ratified the UN Single Convention on Narcotic Drugs a year later, launching action against cannabis use in all forms (Serkov et al., 2018).

Despite continued regulation and punishment, cannabis and hashish popularity grew in the following decades. This was especially the case among soldiers in the Soviet-Afghan war of 1979 to 1989. More than half of Russian soldiers reportedly used local Afghan hashish "charas," contributing to the drug trafficking of mostly opiates and hashish from Afghanistan to the Soviet Union that was occurring at the time (Chikishev, 2004; CIA, 1999). Today, the main region providing Russia with cannabis/hashish is the Chui Valley located in Kyrgyzstan and Kazakhstan, where approximately 400,000 hectares (or nearly 1 million acres) of the plant grows, making it the world's largest cannabis

field (UNODC, 2006).

Except for medical research purposes, the state's official position toward cannabis remains unchanged—it is prohibited, and there is no university education available about its use and possible benefits as treatment for certain medical conditions (Pharma Boardroom, 2019). Medical cannabis for pain, cancer related symptoms and other conditions is generating widespread attention, legalization and use throughout Europe and North America—yet a dearth of knowledge and action remains in Russia due to the government's steadfast position toward the substance.

We hypothesize, based on Russian drug policy, regulations, and law enforcement, academic discipline (i.e., medicine, psychology and social work) does not influence students' knowledge, attitudes and beliefs about cannabis use for medical conditions.

Method

Design, Participants, Procedures

In 2018, faculty members from multiple Russian universities were in contact with the Ben Gurion University of Negev's Regional Alcohol and Drug Abuse Research Center (RADAR Center) in Israel to address mutual substance use issues of concern and interest. The RADAR Center has received recognition and awards from the US National Institute on Drug Abuse for its "contributions to scientific diplomacy through outstanding efforts in international collaborative research." This recognition, and contact with the Center's Russian speaking personnel, promoted interest in a multi-national study of professional education about medical cannabis despite the Russian government's policy toward its use.

This present cross-sectional study included 828 health profession students—56% (n = 464) females and 44% (n = 364) males; 55.9% (n = 463) medical, 24.8% (n = 205) psychology, and 19.3% (n = 160) social work students. The study was conducted at two Russian institutions of higher education from 2019 to 2020, with questionnaires distributed in the classrooms of medical, psychology, and social work students. This method was chosen instead of an on-line approach to maximize the number of responses in the limited time period allowed for data collection. Participation was voluntary and all students agreed to participate. No incentive or compensation was provided for participation.

Instrument and Measures

In 2018, the RADAR Center recognized the importance of transdisciplinary global research into medical cannabis use and put a focus on the education of health profession students on the subject. Drawing on existing research of medical students' attitudes and beliefs about marijuana (Chan et al., 2017), the Center prepared a 32-item data collection instrument for its efforts, consisting of demographic and questions on knowledge, attitudes, and beliefs about MC in educational and clinical settings,

including the domains of usefulness, risks, benefits, treatment, training, and research. For a detailed description of the data collection instrument, see Isralowitz et al. (2021). The survey instrument used in Russia was translated from English to Russian, and back translated to English by English-speaking lecturers from Moscow State University of Psychology and Education (MSUPE) and Penza State University (PSU) to ensure uniform content and vocabulary. The translation method used was consistent with that described by the World Health Organization for research purposes (WHO, 2003).

The methods proposed for this research were by the MSUPE and PSU ethics committees, in a process equivalent to established regulations to help protect the rights and welfare of human research subjects (Breault, 2006). No external grant funding was received for this study.

Overall, the survey instrument used for Russian students was found to be valid and reliable (Cronbach's Alpha = .79). Descriptive statistics were calculated (mean and standard deviation for continuous variables, frequencies and percentages for categorical). Two-sided *t*-tests and Pearson's chi-squared with Fisher exact tests were performed using Statistical Package for the Social Sciences (SPSS), version 26. Responses to the questions about medical cannabis, depending on the domain, included categories of agree/disagree/don't know, or effective/ineffective/don't know. Scores were calculated and analyzed for differences according to gender and study area.

Results

Table 1 presents background characteristics of the respondents. The mean age of the respondents was 21.6 (*SD* = 5.5); 32.7% (*n* = 271) reported being secular and 66.1% (*n* = 547) were religious, 1.2% (n = 10) did not provide information about their religiosity. Findings evidence that 10.4 % of the students, 5.9% of their family members, and 23.6% of their friends used recreational cannabis. There are no reliable data on the use of MC by Russian students.

Table 1

Russian University Student Background Characteristics

	Total (*n* = 828)	Female (*n* = 464)	Male (*n* = 364)	*t* or χ^2	*p*-value
Age, Mean (*SD*) (Median)	21.6 (5.5) (20.0)	21.9 (6.2) (20.0)	21.3 (4.3) (21.0)	1.502	.134
Study Area, % (*n*)					
Medicine	55.9 (463)	44.8 (208)	70.1 (255)	56.504	<
Psychology	24.8 (205)	33.0 (153)	14.3 (52)		.001***
Social work	19.3 (160)	22.2 (103)	15.7 (57)		

Religious preference, % (*n*)					
Christian	53.4 (442)	46.8 (217)	61.8 (225)	27.039	<
Muslim	18.2 (151)	19.0 (88)	17.3 (63)		.001***
Jewish	0.7 (6)	0.4 (2)	1.1 (4)		
Non denomination	24.8 (205)	31.0 (144)	16.8 (61)		
Other	2.9 (24)	2.8 (13)	3.0 (11)		
Religiosity, % (*n*)					
Secular	33.1 (271)	39.4 (183)	24.2 (88)	21.892	<
Religious	66.9 (547)	59.3 (275)	74.7 (272)		.001***
Prior recreational cannabis use, % (*n*)	10.4 (86)	10.6 (49)	10.2 (37)	0.015	.903
Family member recreational cannabis use, % (*n*)	5.9 (49)	7.1 (33)	4.4 (16)	2.526	.112
Friend recreational cannabis use, % (*n*)	23.6 (195)	28.8 (129)	18.1 (66)	10.273	.001**

Gender and discipline of study, particularly psychology and social work, were not found to significantly influence student responses. Therefore, the data was not split by gender for the data analysis, and psychology/social work students were grouped into a category called "allied health profession." Medical students were less likely to recommend MC for patient treatment than allied health students (32.6% vs. 52.8%; $p < .001$), and to believe cannabis has benefits for physical health (32.6% vs. 49.9%; $p < .001$) or mental health (35.4% vs. 56.7%; $p < .001$). Regardless of academic field, only 25.4% students expressed support for legalizing cannabis for recreational use, and large majorities reported believing that cannabis can be addictive (77.9%), and that its use poses serious physical health risks (66.9%) mental health risks (70%; See Table 2). Regarding MC treatment effectiveness, in most cases, no significant differences were found between medical and other students regarding its use for various medical conditions (see Table 3). On average, 24% of students believed in the effectiveness of medical cannabis—ranging from 10.9% for nausea treatment to 43% for chronic pain treatment.

Table 2

Medicine and Allied Health Profession Student Medical Cannabis Attitudes and Beliefs[1]

	Total (n = 828)	Medicine (n = 463)	Allied health profession (n = 365)	χ^2	p-value
1. I would recommend medical marijuana for patient/client use, % (n)	41.1 (340)	32.6 (151)	52.8 (189)	29.899	< .001***
2. Physicians should recommend marijuana as a medical therapy, % (n)	37.3 (309)	30.2 (140)	46.3 (169)	21.106	< .001***
3. There are significant physical health benefits using medical marijuana, % (n)	40.2 (333)	32.6 (151)	49.9 (182)	24.009	< .001***
4. There are significant mental health benefits using medical marijuana, % (n)	44.8 (371)	35.4 (164)	56.7 (207)	34.770	< .001***
5. Training about medical marijuana should be incorporated into medical/ health/social wellbeing related academic curricula, % (n)	49.4 (409)	41.7 (193)	59.2 (216)	25.438	< .001***
6. Training about medical marijuana should be incorporated into residency/ field practice requirements, % (n)	52.3 (433)	45.1 (209)	61.4 (224)	21.414	< .001***
7. Medical/health/social wellbeing related professionals should have formal training about medical marijuana before recommending it to a patient/client, % (n)	69.9 (579)	65.7 (304)	75.3 (275)	9.227	.002**
8. Marijuana should be legalized for recreational use, % (n)	25.4 (210)	24.0 (111)	27.1 (99)	0.818	.366
9. Marijuana can be addictive, % (n)	77.9 (645)	75.6 (350)	80.8 (295)	2.353	.125
10. Using marijuana poses serious physical health risks, % (n)	66.9 (554)	68.3 (316)	65.2 (238)	0.796	.372
11. Using marijuana poses serious mental health risks, % (n)	70.0 (580)	71.5 (331)	68.2 (249)	0.939	.333
12. Medical professionals who prescribe medical marijuana should have ongoing contact with their patients/clients, % (n)	84.1 (696)	81.9 (379)	86.6 (317)	3.650	.056
13. Additional research regarding medical marijuana use should be encouraged, % (n)	68.2 (565)	62.4 (289)	75.6 (276)	14.680	< .001***

[1]Up to twenty subjects in each group missing data on some variables

Table 3

Medicine and Allied Health Profession Students Beliefs about Cannabis Effectiveness for Select Medical Conditions[1]

	Total (n = 828)	Medicine (n = 463)	Allied health profession (n = 365)	χ^2	p-value
1. Chronic pain, % (n)	41.1 (340)	38.7 (179)	44.1 (161)	1.408	.235
2. Mental health conditions, % (n)	41.6 (331)	41.1 (180)	42.2 (151)	0.095	.758
3. Insomnia, % (n)	39.3 (312)	36.7 (161)	42.7 (151)	2.938	.087
4. Persistent muscle spasm, % (n)	37.6 (298)	39.4 (172)	35.4 (126)	1.374	.241
5. Cancer, % (n)	34.1 (269)	32.8 (143)	35.6 (126)	0.680	.410
6. Terminal illness, % (n)	29.0 (229)	27.9 (121)	30.3 (108)	0.506	.477
7. Alzheimer's disease, % (n)	23.8 (186)	27.1 (118)	19.8 (70)	5.726	.017*
8. Parkinson's disease, % (n)	22.4 (177)	25.7 (112)	18.4 (65)	6.118	.013*
9. Seizure/Epilepsy, % (n)	20.3 (160)	21.9 (95)	18.3 (65)	1.589	.208
10. Arthritis, % (n)	19.9 (157)	19.0 (83)	20.9 (74)	0.428	.513
11. Eating disorders, % (n)	18.6 (147)	17.7 (77)	19.7 (70)	0.503	.478
12. Glaucoma, % (n)	17.8 (139)	19.3 (83)	15.9 (56)	1.570	.210
13. HIV/AIDS, % (n)	16.2 (129)	17.4 (76)	14.8 (53)	0.997	.318
14. Fibromyalgia, % (n)	15.1 (118)	12.9 (55)	17.8 (63)	3.595	.058
15. Multiple sclerosis, % (n)	14.6 (115)	16.2 (70)	12.7 (45)	1.899	.168
16. Inflammatory bowel disease, % (n)	14.0 (110)	14.9 (64)	13.0 (46)	0.551	.458
17. Cachexia, % (n)	13.3 (103)	15.3 (65)	10.9 (38)	3.125	.077
18. Nausea, % (n)	10.9 (86)	12.5 (54)	9.0 (32)	2.356	.125

[1]Up to twenty subjects in each group missing data on some variables

The data also shows that 85.7% of the students had received no formal education about medical cannabis, and 61% believed professionals should have formal training about the substance. Regarding MC information, medical students reported using formal sources (e.g., medical literature) more than other health students (69.1% vs. 52.3%; $p < .001$), whereas the latter were more likely to use informal information sources such as the internet (41.4% vs. 32.0%; $p < .01$). Medical students were also far more likely to feel prepared to answer patient/client questions about MC than others (48.3% vs. 29.0%; $p < .001$).

Discussion

To the best of our knowledge, this is the first and only study of Russian student knowledge and beliefs about MC to date. The results show the majority of students overall (76%) did not support using cannabis for medical conditions, and most (85.7%) reported lacking education on medical cannabis. The study results partially confirm our hypothesis. The attitudes of medical students toward medical cannabis were found to be more negative than those from psychology and social work. Also, medical students tended to be less interested in training about the use of MC for health professionals than other students (Table 2, items 1-7). Regardless of discipline, few students believed cannabis to be effective for treating medical conditions. Compared to other countries where medical cannabis is banned for use (e.g., Belarus) or where it has been banned until recent government policy (e.g., Thailand), Russian students do not support its use for medical conditions (Khamenka et al., 2019; Likhitsathian et al., 2021). This outcome was expected in a country that does not legitimize cannabis for any purpose—medical or otherwise. Furthermore, with the serious impact of the COVID-19 pandemic throughout Russia at the time of this writing (more than 36,000 new cases and 1,200 deaths daily [Our World in Data, 2021; Stop coronavirus, 2021]), no change of policy toward medical cannabis is expected in Russia— despite reports of cannabis compounds as possible treatment of COVID-19 symptoms like lung inflammation (Anil et al., 2021).

In this study, a small number of students (25.4%) supported legalizing cannabis for recreational use, and even fewer reported personal use or use by family members and/or friends. This is likely in part a result of restrictive government policy and regulation enforcement toward cannabis use causing concern about possible consequences for reporting any use.

Regardless of academic study area, these future Russian health service practitioners, managers and/or policy decision makers report a dearth of evidence-based knowledge about MC, and a lack of confidence in their inability to answer client questions about its use. Replication of the present study is needed across locations and over time throughout Russia to enhance the generalizability of the present study findings.

Despite some preliminary change in Russian policy toward medical cannabis (The Moscow Times, 2019), further study is needed to promote education about alternative therapies and integrative approaches to health provision, regardless of the country's restrictive policy toward cannabis use.

Study limitations

The primary limitation of this study is that findings were based on a restricted number of student respondents surveyed at one point in time. Survey responses from the two Russian universities involved may not represent students at other Russian institutions. Additionally, given the harsh political position toward cannabis, students may have under reported personal and family cannabis use, as well as downplayed their positive views toward the substance. Despite these limitations, this research initiative collected unique information that has applied implications for health promotion in Russia and other countries—especially those in Eastern Europe where cannabis use in any form is prohibited.

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Availability of data and material

The data that support the findings of this study are available from the corresponding author upon reasonable request.

Author's contributions

Conceptualization, methodology and research by Vsevolod Konstantinov and Valentina Gritsenko; data curation by Vsevolod Konstantinov, Valentina Gritsenko, Tatyana Marinova, Elena Vorobeva, and Irina Shilina; writing, review and editing by Vsevolod Konstantinov. All authors have read and agreed to the published version of the manuscript.

Conflict of Interest

Vsevolod Konstantinov, Valentina Gritsenko, Tatyana Marinova, Elena Vorobeva, & Irina Shilina declare that they have no conflict of interest.

Informed Consent

All procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation (institutional and national) and with the Helsinki Declaration of 1975, as revised in 2000. Informed consent was obtained from all participants for being included in the study.

Ethics Approval

University of Penza research ethics committee has approved this study. The procedures used in this study adhere to the tenets of the Declaration of Helsinki.

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