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Extended Abstract

The Use of Synthetic Cannabinoids among Youths and Related Factors

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Abstract

This research was carried out to obtain in-depth knowledge about the sociodemographic characteristics of young people who are using synthetic cannabinoids, the reasons for this use, and what they experience afterwards. The study was conducted between June and August of 2016 with six young people 25 and under who use synthetic cannabinoids and live in central Aydın. The research began with a person in this age group and through the snowball technique reached others who also used synthetic cannabinoids. In the study, the in-depth interview technique was used to collect data, and the descriptive analysis technique was used to analyze the qualitative data. As a data-collection tool, a semi-structured interview form consisting of 10 questions was used. Each question was prepared in order to obtain different data. The study found that the youths had started using synthetic cannabinoids in early adolescence, their families generally had good levels of education and income, and they used other addictive substances besides this. Youths were found to have weak and negative family relationships in general, not thought of treatment, and lack knowledge and awareness this substance's danger. Determining youths' reasons for using synthetic cannabinoids, and what they experience before, during, and after use is thought able to lead to initiatives preventing the use of this and similar substances.

Keywords

Bonzai • Synthetic cannabinoid • Youths • Substance dependence • Family • Peer

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The World Health Organization (WHO) uses the term "drug abuse" instead of drug habit (Özmen & Kubanç, 2013). Using addictive drugs can be defined as a disease that begins with small doses and progresses to an unstoppable impulse that ruins most users' lives. In that case, what are the factors that cause people to fall into this vicious cycle?

Among drug-addicted youths, the two main factors that affect the processes that lead to drug use are negative familial relationships and miscommunications arising from parent-teenager/parent-child conflicts (Tamar, Gürol, & Ögel, 2014). Studies about youths who use addictive drugs and their families have shown an increase since the 2000s in Turkey. Drug abuse is more common, especially for children whose family income is lower than others; poverty and migration are also determinative factors in negative relationships in the family (Ögel, Taner, & Eke, 2006; Ögel, Taner, Eke, & Erol, 2005). Other research has confirmed that the rate of alcohol use and marijuana use among youths who weekly spend enough time with their parents is 2.4 times and 10-15 times less, respectively, than children who don't spend enough time with their parents (Evcin, 2011).

Synthetic cannabinoids (SC), undetectable with standard cannabinoid screening tests, started to become popular under the brand names, *Spice* and *K2*, as legal drug stimulants in the early 2000s (Castaneto et al., 2014). Use of the next-generation stimulant, which is called *Bonsai* (phenazepam) because of being produced from the leaves of the bonsai tree in addition to a variety of dried plants, is also quickly increasing in Turkey. SCs can be consumed by steeping, as well as in a pipe, hookah, or rolled in a cigarette paper (Pakiş & Polat, 2016). SCs were formally made illegal for the first time in Turkey in May 2010 (Gurdal et al., 2013). In 2012, 4,784 suspects were caught in 3,401 SC cases in Turkey. The number of cases in 2013 is 19 times greater than it was in 2012, and the number of individual arrests is 57 times more than it was in 2012 (Kaçakçılık ve Organize Suçlarla Mücadele Daire Başkanlığı [Department of Anti-Smuggling & Organized Crime], 2013). Because Bonsai affects users more than other drugs and is inexpensive, users prefer it more and drug dealers sell it easily (Solmaz & Okumuş, 2015). The Silk Road is a virtual drug marketplace that has been found on the Deep Web since 2011. Products such as marijuana, codeine, mephedrone, cocaine, heroin, LSD, amphetamines, and morphine are sold here. This virtual environment is accessed through encrypted software on the Internet; purchases are untraceable and shopping is done using Bitcoin. Most individuals who shop at this virtual market are men with professional occupations who have graduated from a higher education institution (Van Hout & Bingham, 2013).

The increase in the prevalence of SC use in many countries worries health care staff (Brents & Prather, 2014). SCs cause physiological and psychological disorders (Ekim

& Ekim, 2016). Additionally, one can mention cases stemming from these substances that have resulted in death (Kalyoncu, Ünlü, & Taştan, 2014). SCs, also known as Bonsai, are perhaps the most dangerous substance these days. Also, some warnings on Bonsai's label identify that it is not fit for human consumption but is suitable as incense or aromatheraphy (Kılıç, 2016). Complications include sympathomimetic effects to serious cardiovascular symptoms and psychosis (Lank, Pines, & Mycyk, 2013). These substances are serious chemicals that cause cognitive and behavioral disorders as a result of synaptic dysfunction (Hoffman et al., 2016); they affect emotional and perceptual processes, as well as sensory knowledge (Lank et al., 2013; Monte et al., 2014). The low cost of these substances, sometimes even given away free, is a factor that increases initial and continual usage rates (Küçük, Küçük, & Kirazaldı, 2015).

New projects and approaches are needed to solve the problem of drug abuse, whose prevalence is gradually increasing, especially in the younger generation. Reasons that lead youths to drug use, the family environment where they first grew up and socialized in, and how to gain cognitive behavioral attitudes must be examined thoroughly (Yaman, 2014).

Method

Place and Time of Research

This study was conducted between June and August 2016 with youths 25 and younger who use bonsai and live in central Aydın.

Target Population of the Research and Participants

The target population of the research is all youths 25 or under who have used bonsai and live in central Aydın. This research started with only one person in this age group; five other youths who have used Bonsai were accessed through the snowball/splicing technique. Qualitative data collection methods such as observation, interviews, and document analyses are used in qualitative research, which attempts to show perceptions and events realistically and in a completely natural environment (Yıldırım & Şimşek, 2005). People were accessed using the snowball sampling method in this study because it is being conducted as qualitative research.

Data Collection

An interview form has been used as the data collection tool. The interviews were performed in a convenient place for the participants that they also preferred. Some participants were asked follow-up questions in the interview if necessary, which completes the semi-structured interview. Interviews took nearly 60 minutes to finish.

Results and Discussion

In this section, results are gathered under specific themes and discussed.

Theme 1: Users' Sociodemographic Characteristics

When examining participants' age range, one sees three people under 18 and three people between 18-25. As one participant answered the question of "People in your age group use it in which social environment?" with "I haven't seen a person use it from my age group. They usually use it in their 20s or 30s" (14-year-old secondary-school student), and another participant answered it with "I have met lots of people who use it. They were 17 or 18 years old; others were between 30 and 35" (25-year-old male university graduate). This shows that the age range of bonsai users is changing; more importantly, very young age groups have access to it. Other research results that have been performed show parallels with this finding (Barratt, Cakic, & Lenton, 2013; Castaneto et al., 2014; Hu, Primack, Barnett, & Cook, 2011; Hoyte et al., 2012; Küçük et al., 2015; Yılmaz et al., 2015). When examining the educational backgrounds of youths, one sees one primary-school student, two secondary-school students, one high-school graduate, and two with bachelor's degrees and more. Evren et al. (2001) stated that drug users usually begin in primary school and abandon their educational life for reasons such as absenteeism or dropping out. When examining their parents' educational backgrounds, half of the parents are seen to be university graduates; all have at least a primary school education. In support of our research findings, Vatandaş, Can, Mahitapoğlu, Yaman, and Kırbaşoğlu (2015) found that the rate of drug use for people whose fathers are literate is higher than those with illiterate fathers; drug use isn't objected in families where the mother, father, or both have a master's degree, doctorate, or both. When examining the state of families' monthly income, 50% of the participants' families have a monthly income of more than 3,000 Turkish lira; one participant's family has an income below minimum wage. Vatandaş et al. (2015) found a higher rate of drug abuse for people who see their quality of life and economic condition as poor.

Theme 2: When Bonsai Was First Used and Frequency of Use

While one participant answered the question, "How long have you been using Bonsai and how often do you use it?" with "I started using it four years ago when I entered university. I use it every two or three months. I have used crystal meth or cocaine, but I have only used them a few times'' (23-year-old male university graduate); three other participants answered separately with "I have been using bonsai for two years at different time intervals, sometimes once a month, sometimes once or twice a day. I also use marijuana"(21-year-old male high-school graduate), "I have been using it two to three times a week for three years; sometimes I use it

every day. If I feel down, I use heroin and cocaine, too" (16-year-old male high-school student), and "I have used it three to five times a year for five years. I have used it with my friends in the summer months. I have used cocaine a few times" (25-year-old male university graduate). They stated using other addictive drugs aside from Bonsai. However two participants stated not using any other addictive drug aside from Bonsai: "I have used it a few times in the last three months. I haven't used any other drug" (17-year-old male high-school student) and "I have been using it once or twice a month for three years with my friends. I'm not using any other drug" (14-year-old secondary-school student). Castaneto et al. (2014) reported that users of synthetic cannabinoids have a past that includes multiple drug use, such as marijuana, alcohol, and tobacco. Addicts use more than one drug in order to complete the effects of the drugs and cope with withdrawal (Arıkan, 2012a). Drugs can be mixed to maximize the psychoactive experience, and a second drug can be used in order to balance the negative effects of a drug (European Monitoring Centre for Drugs and Drug Addiction [EMCDDA], 2009).

Theme 3: Reasons for Starting Bonsai Use

In the research, participants gave responses to the questions, "How and why did you start using it? In what social environment does your age group use it?" such as "I saw my friends with it. I was curious and tried it. My friends whose families don't care about them much and who don't have family support use it" (23-year-old male university student), "My friends recommended it to me. I had argued with my family and I hadn't thought to go home. I used it" (17-year-old male high-school student), "My friends recommended it to me. I was depressed. It relaxed me" (14-year-old secondary school student). This shows that negative family communications and lack of family support, attention, and love are important determinants that cause youths to use these drugs. Additionally, expressions were mentioned by other participants such as "I started when one of my friends recommended it. Everyone I know is using it, not just the poor but also the rich" (21-year-old male high-school graduate), "Everybody around me is using it. I tried it, too" (16-year-old male high-school student), and "I was already curious about it. When I talked to my friends, I learned they had used it. I wanted to, too" (25-year-old male university graduate) also emphasize the effect of peers and social circles in starting this drug, and the importance of again choosing the right social environment. Friends' characteristics and the effect of peers were also prominent in other studies (Erdem, Eke, Ögel, & Taner, 2006; Yörükoğlu, 1996). In addition to youths' individual characteristics, their families, parents' relationships, and family and peer relationships are important social factors (Erdamar & Kurupınar 2014; Erdem et al., 2006; Springer, Sale, & Hermann, 2004; Steinberg, 2007; Tekalan, 2012). A close relationship has been found among tolerance to stress, marijuana use, and marijuana-related problems in one study (Buckner, Jeffries, Terlecki, & Ecker,

2015). Another study reported that antisocial behaviors are seen more in marijuana users. Although antisocial behaviors start in early childhood, these behaviors usually peak between 15-19 years old when drug abuse starts (Popovici, French, Antonaccio, Pacula, & Maclean, 2014; Santrock, 2014). Families of children who show antisocial behaviors have been found to impose strict discipline, not watch their children's activities enough, not guide them enough, and show bad parental skills (Patterson, DeBaryshe, & Ramsey, 2000; Saçan, Artan, Erol, & Şimşek, 2014).

Theme 4: Characteristics of drug dealers

Participants answered the question "Who are the drug dealers?" as being middle-aged and older, supported by the expressions "I've never bought it; my friends usually buy it. But while we're walking, they sometimes say 'He is the drug dealer.' The people who seem homeless and nearly 50 years old" (14-year-old secondary-school student), "Drug dealers are usually old people" (21-year-old male high-school graduate), "Middle age; they use it every day. I've never seen them sober. They also sell it" (16-year-old male high-school student), and "Dangerous people sell it in solitary places" (25-year-old male university graduate). Ünlü and Evcin (2011) confirmed in their study that the characteristics of 845 drug-dealing individuals had been examined and most are male with an average age of 32. Another study also stated that these drug dealers have low educational levels and no regular income or job; their families usually came to the city center by migrating (Karakaya, 2013). When examining the profiles of drug dealers around the world, one finds in a study conducted in the United Kingdom that drug dealers are usually 30 years old and male; most of them had dropped out of school as a result of being suspended from school (May, Duffy, Few, & Hough, 2005). Drug dealers have been confirmed as usually having a regular income and job, doing it as an extra job (Jacinto, Duterte, Sales, & Murphy, 2008), being between 20-25 years old, and having an educational background of at least a college graduate (Fairlie, 2002).

Theme 5: Participants' Experiences after Using Bonsai and Their General Situations

After using SC by inhaling its smoke, which is called "Herbal Fume," some psychoactive effects such as euphoria, extreme self-confidence, relaxation, anxiety, panic attacks, and attention loss are witnessed as in marijuana (Gunderson, Haughey, Alt-Daoud, Joshi, & Hart, 2012; Kalyoncu et al., 2014). The question "What do you feel upon using it and while coming down?", which has been asked in order to learn what participants feel after using Bonsai was answered with "We go to the bar or club after using it. I sometimes feel as if my cells are moving. I am usually very nervous coming down; I even fight" (23-year-old male university student), "I feel very self-

confident when I use it. I feel as if there is nothing in the world I can't do. I get emotional coming down; I had gone to my family when I first used it. I thought they would die" (17-year-old male high-school student), "I feel that I'll laugh even when I get beat up for half an hour. I also have different dreams after 2–3 hours and can't sleep. I sleep all day long the next day" (14-year-old secondary-school student), "I feel very happy after using it, I forget everything. I experience totally opposite things coming down; I become aggressive" (21-year-old male high-school graduate), "I started to use 2–3 pieces at once. The most beautiful emotion it gives me is happiness; I want it to last all night long. I use the drug over and over. I want to sleep while falling. When I close my eyes, lights are flashing" (16-year-old male high-school student), and "I feel depressed coming down. I get bored. I want to fight and get exhausted" (25-year-old male university graduate). Anxiety and tachycardia findings have been found in acute deprivation, while neurologic findings and electrolyte abnormalities have not been found (Nacca et al., 2013). One study (Hoyte et al., 2012) stated that symptoms of tachycardia, agitation, drowsiness/lethargy, confusion, and hallucination are seen the most. Another study has stated that anxiety is usually seen after use (Schneir, Cullen, & Ly, 2011). Withdrawal symptoms such as headaches, nightmares, hypertension, and tachycardia have been seen when coming down after stopping use (Zimmermann et al., 2009). Additionally, the period of clinical effect usually doesn't exceed more than 8 hours in SC intoxications; this period can last up to 24 hours according to the user's characteristics (Hoyte et al., 2012). Ateş, Dağlı, Kocaoğlu, and Konuk's (2015) study states that young adults return normal clinical findings 12 hours after using it.

Theme 6: Users' Views on Treatment

While participants don't see themselves as needing treatment, they answered the question "What do you feel about treatment?" with "I'm not in a situation that requires treatment" (23-year-old male university student), "I don't think it hurts me. I'm not so addicted that I need treatment" (14-year-old secondary-school student), "I'm fine. I don't want to be treated" (16-year-old male high-school student), and "I don't think about treatment" (25 years old, male, university graduate). One participant stated that the anxiety of being caught is usually more common than wanting treatment: "I don't want to be treated. I'm afraid I'll get caught" (17-year-old male high-school student). People who are addicted to drugs think they'll be cast from society or won't find their worth with the effect of social and cultural structure. Additionally, this situation decreases addicts' self-confidence. It can disrupt their social relationships and functionality, keeping them away from treatment (Ögel, 2004). The fact that 76% of drug users see drug abuse as a situation that needs to be hidden also has indications (Link, Elmer, Rahav, Phelan, & Nuttbrock, 1997). As long as one thinks there's no problem with the addictive drug being used, one won't want to be treated or apply what is advised in treatment (Arıkan, 2012b).

Theme 7: Relationships of the users with their family and social environment

The question "How are your relationships with your family and social environment?" was also asked within the research environment. While some participants stated "My family is very good, but we argue a lot. I think because of exam stress. There are a few friends with whom I'm very close, I'm neutral towards everybody else" (17-year-old male high-school student), "I don't see my family much; they don't interfere with me at home. I can easily communicate with other people that I don't know. I am an active person and have a lot of friends" (14-year-old secondary-school student), "My parents were divorced. They got remarried. My friends are good" (21 –year-old male high-school graduate), and "I am a social person. I socialize with everyone. My family doesn't interfere with me much. My parents always fight" (16-year-old male high-school student). Two other participants stated, "I have good relationships with my family and friends. I'm a normal person. They like me" (23-year-old male university student) and "I have good relations with my family. My father died when I was little. I'm a social person. We always meet in social environments with my friends" (25-year-old male university graduate). Family and family relations play important roles in teenagers' behavioral problems (Öngel Atar, Yalçın, Uygun, Çiftçi Demirci, & Erdoğan, 2016). While families' wishes and expectations are appropriate for their capacity as children, families who establish rules towards events that negatively affect their children's lives and their positive adaptation to society (Ögel, 2010) and parents who are passive towards their teenager, who show oppressive and extremely authoritative attitudes, who behave inconsistently, who are perfectionists, who show tolerance toward everything, or who don't observe their teenager's behavior exhibit family approaches that lead the teenager to risky behaviors (Heyman & Adger, 1997). Positive parent-child relationship has been reported as an important protective factor that inhibits drug abuse during adolescence and early adulthood (Davis & Spillman, 2011; Kumpfer & Alvarado, 2003; Ögel, Taner, & Eke, 2004).

Theme 8: The Effects of Bonsai Use on Work and School Life

The question "How does it affect your productivity if you work or how does it affect your school life if you go to the school?" was also asked during the interview in the research. While five participants stated that using Bonsai affects both work and school life through the expressions "I usually use it on the weekends. I feel free because there's no school the next day. I probably wouldn't attend lessons if there were school" (23-year-old male university student), "I have a work schedule, I don't use it when I go to work" (14-year-old secondary-school student), "When I use it, I don't know what I'm doing at work or how much time has passed since I used it" (21-year-old male high-school graduate), "I don't go to school when I use it. My grades are bad, but they were bad in primary school, too" (16-year-old male high-school student), and "I don't want to work the next day because I'm so tired"

(25-year-old male university graduate), one of the participants stated that using it doesn't affect their school life: "I don't think it affects my lessons" (17-year-old male high-school student). The facts that there is a problem in Turkey's system of education that focuses on imparting information rather than teaching how the achieved information will be used or accessed and that societal values are being lost are important factors leading youths to use drugs (Vatandaş et al., 2015).

Theme 9: Financial Resources in Obtaining Bonsai

In the research, the participants were asked the question "Where do you get the money?", which is about how they provide the necessary costs for obtaining Bonsai. Those who are still students answered with "I have a scholarship and my family sends me money" (23-year-old male university student), "With the pocket money that I get from my family" (17-year-old male high-school student), "I'm working and sometimes my friends buy it for me because I have a good relationship with them" (14-year-old secondary-school student), and "I'm on good terms with the drug dealers. They usually give it to me freely. I make my friends buy for me, and if I have money, I'll buy, too" (16-year-old male high-school student). The two participants who are no longer students answered that they bear the cost by working, saying "I work" (21-year-old male high-school graduate) and "I work" (25-year-old male university graduate). One important aspect of this drug use is that it is biological warfare under the name of Bonsai, applied through exogenous factors onto the youths who are the future of society (Vatandaş et al., 2015). In addition, situations such as parents' behaving inconsistently, showing tolerance to everything, not being aware of their teenager's behavior or how the youth spends their allowance affect youths and children's addictive drug use (Heyman & Adger, 1997; Öngel Atar et al., 2016).

Theme 10: Users' Levels of Awareness on the Dangers of Bonsai

While three participants answered that Bonsai's danger is usually hallucinations with "I feel as if my heart skips a beat. I think it causes heart attacks in older people. People die because it causes them to see hallucinations. It breaks my concentration" (23-year-old male university student), "I've done research. Hallucinations are risky, but I haven't seen any deep hallucinations so far. I usually see my friends as other people. I see the trees as if they are people. It isn't deadly, but hallucinations are dangerous" (17-year-old male high-school student), and "It causes hallucinations" (21-year-old male high-school graduate) to the question "What do you know about the Bonsai's dangers?" This was asked in the research to learn about participants' awareness of the effects of Bonsai. The other three participants stated that Bonsai does them no harm with the expressions "People leaping from buildings is as much as I've watched on television. They hallucinate. I think my body is healthy; it just makes

me happy" (14-year-old secondary-school student), "I haven't seen any dangers with it, just one isn't enough to be dangerous" (16-year-old male high-school student), and "I haven't researched it. I haven't seen it hurt my body. I don't think that I use to the point that I'll get addicted. I've heard from around that it can cause hallucinations. I just see stars and effects" (25-year-old male university graduate). Most users think they can keep stay off these drugs when they want. They don't think of themselves as addicts because they believe they aren't addicted even when they see the damage of drug use over time (Türkiye Yeşilay Cemiyeti, 2014).

Theme 11: Is Failure a Factor in the Use of Bonsai and Other Substances?

The question "How is the scholastic success of Bonsai users? Is Bonsai used as result of failure or do success levels fall after using it?" was asked last in the research. While participants answered with "I have failed a few courses in school. However, I can't attribute it to drug use. I was also just a middle student in secondary school. I don't think it's about the courses" (23-year-old male university student), "I don't think it affects school success. Yet, my adapting to courses has been interrupted" (16-year-old male high-school student), "I have nothing to say about school. School success in my social circle is generally good" (17-year old male high-school student), and "I can't comment about school, but drug use decreases productivity" (25-year-old male university graduate). Two participants emphasized that experiencing a failure or feeling unsuccessful affects Bonsai use with the expressions "I don't know. I'm not a successful person" (14-year-old secondary school student) and "I think it's used after failure" (21-year-old male high-school graduate). Academic success during adolescence prevents drug use among young people (Santrock, 2014).

Consequently, using Bonsai or other synthetic cannabinoids increases day by day, and our teenagers and even children are lost in this vicious cycle because: drug manufacturers always sell different drugs on the market by changing the compound formula of SCs, obtaining these drugs is very cheap and easy, it is sold under the counter and in nooks, and it can't be easily tested for through laboratory analysis. One study has stated that mood disorders in infancy predict marijuana use, which develops in an individual after 20 years (Tarter, Kirisci, & Reynolds, 2014).

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