



## 【26<sup>th</sup> Edition】

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### **2017 Adolescents Substance Abuse Prevention and Counseling Conference and the 2<sup>nd</sup> Annual Meeting of Taiwan Society for Substance Abuse Research**

Dear Scholars and Experts:

Taiwan Society of Substance Abuse Research (TSSAR) and National Chung Cheng University, Education Center for Prevention of Drug Abuse (ECPDA) will host “The 2nd Annual Meeting of Adolescents Substance Abuse Prevention and Counseling Symposium and Taiwan Society of Substance Abuse Research” at the international conference room of National Chug Cheng University on December 7-8, 2017.

In view of the prevalence of substance abuse as well as narcotics abuse in recent years, the negative impacts have caused serious social crises all over the world. Moreover, the appearance of New Psychoactive Substances (NPS) and mixed drugs also cause serious damage to younger populations. Therefore, the theme of the symposium will focus on “The Prevention and Counseling of Substance Abuse in Adolescents”. Experts in Adolescent substance abuse and narcotics control will be invited to the symposium to share their invaluable experience in the field through brainstorming, and thus provide effective countermeasures for Adolescent substance abuse control and consequently achieve the goal of harm reduction caused by narcotics.

You are cordially invited to attend the meeting. Free round-trip shuttle service tickets for the meeting at regular times from the High Speed Rail Station or the Chiayi Train Station to and from National Chung Cheng University) will be provided. However, the accommodation fees and other transportation fees will be self-paid. MOE Student Affairs and Special Education Division are especially invited to provide guidance and assistance during the meeting. Researchers and experts are welcome to share their research outcome and practical work experience in order to make a positive contribution against drug abuse.

For matters concerning registration, invitation letter or article submission, please refer to our website at <http://tasar.ccu.edu.tw>.

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# UNODC Reports

## A Helping Hand For Adolescent Drug Users

➤ **Editorial Office**

" The first time I started using Amphetamine Type Stimulants (ATS) in parties it was just to relieve my emotional distress. I was more like an owl, escaping from home at nights to get drugs and returning to it before dawn, scared to be seen by family members". Farzad, 18 years old, used to be a healthy and energetic teenager before he started using drugs. "I've turned into a skeleton, nothing but bones and skin".

Biological, cognitive, social and psychological transitions are the main reasons behind the use of drugs and alcohol by teenagers. In order to address the problem of drug abuse, the Iranian authorities have developed successful drug demand reduction programmes that lay high emphasis on the role of Non-Governmental Organisations (NGOs). Under its new integrated Country Programme of Technical Cooperation on Drugs and Crime in the Islamic Republic of Iran (2011-2014), UNODC has been supporting and assisting the government in implementing drug prevention and drug treatment programmes.

"One day, my mother found me almost unconscious in my room. I still remember the fear in her look and the sound of her trembling voice. I fainted and when I woke up, I found myself in a place full of kind and caring people who were welcoming me. Since that day, I have been benefiting from treatment and support at the Rebirth Society short-term residential center in Verdij".

Often, parents of adolescent drug users do not have adequate information on available treatment facilities and programmes. Finding out about an adolescent child's drugs addiction problem can generate a sense of panic and great anxiety among parents. At this stage, experience tells us that



parents become concerned about the right choice of treatment as well as the methods, the cost and the duration. Finally, families who are faced with a teenager substance abuse problem often feel shame and face social stigma.

Both national policies and strategies give high importance to family education and strengthening of families. In the recent years, drug and life skills education programmes have been developed in the country. UNODC has been conducting trainings on parenting programmes and providing tailor made training/intervention packages on strengthening family programme (SFP) with a focus on families at risk.

Furthermore, UNODC organized a national roundtable on "Identifying the needs of drug abuse treatment for adolescents" on 15 September 2011. A number of psychologists, psychiatrists, counselors and drug treatment experts specialized in child and adolescents' problems gathered in an effort to share information on the general situation of adolescent drug abusers and to assess the specific needs related to evidence-based drug treatment. In addition and as a follow up of the roundtable, a five-day Training of Trainers workshop on "Evidence-Based Drug Abuse Treatment for Adolescents" was organized by UNODC from 16<sup>th</sup> to 20<sup>th</sup> of October 2011. This training aimed at increasing the level of knowledge, confidence, and skills of psychologists, psychiatrists and experts nationwide on evidence-based drug treatment for adolescents. As a result, the trained participants committed to conduct similar workshops with the assistance and support of the Medical Sciences University in order to build and enhance the capacity of drug treatment and rehabilitation for adolescents on a national scale.

"I don't hate myself anymore. I am feeling better every day and I'm sure that a bright future is ahead of me. I will be drug free and will attend university. Most importantly, my family won't be ashamed of me anymore".

*This paper is from: United Nations Office on Drugs and Crime*

<http://www.unodc.org/islamicrepublicofiran/en/a-helping-hand.html>



## NIDA Reports

# The Concerning Link Between Inadequate Sleep and Adolescent Substance Use

➤ Editorial Office

Children and adolescents require more sleep than adults. The American Academy of Pediatrics (AAP) defines a sufficient night's sleep for an adolescent as 8.5-9.5 hours per night. But according to data from the national Youth Risk Behavior Survey, just over a quarter of middle and high-school students (27.5 %) got 8 hours or more of sleep on the average night in 2015, and most got much less. Researchers have found striking links between insufficient sleep and a range of adverse outcomes in adolescents, including obesity, poor school performance, and behavioral problems including substance use.

For instance, a 2012 longitudinal study of youth (average age 14.7 years) participating in two Minnesota cohort studies found that less sleep—both weekday and total—at baseline was associated with more past-month cigarette and marijuana use 2 years later. A recent analysis of data on eighth graders from the 2010 and 2012 Fairfax County Youth Survey—an annual survey of middle and high school students in one of the largest school systems of the country—clearly showed that shorter sleep duration correlates with higher incidence in several risky behaviors.

Given this striking correlation, it is important to study the neurobiological mechanisms that link insufficient sleep and substance use. Sleep-deprivation–induced impairment of emotion regulation and executive function such as inhibitory control is likely involved. My colleagues and I have found that adults who are sleep deprived show reduced availability (down-regulation) of dopamine D2 receptors in part of the brain's reward circuit, the ventral striatum. Reduced availability of D2 receptors in the ventral



striatum could be expected to increase the risk for behaviors like drug use that produce large surges of dopamine to compensate for this deficit.

We also showed that reduced hours of sleep mediated the low levels of D2 receptors in individuals suffering from cocaine use disorder, which our laboratory and others' have shown are associated with higher risk for compulsive drug use. Down-regulation of dopamine D2 receptors in the striatum has also been associated with impairment in prefrontal regions necessary for exerting self-control and other executive functions.

The impact of lack of sleep on dopamine receptors suggests that stimulant misuse and impaired sleep could be a vicious cycle: Stimulants impair sleep, and reduced sleep produces changes in the brain that predispose to further drug use and addiction. Two-way interactions between reduced sleep and substance use are also possible with other substances. The Minnesota study, for instance, identified a bidirectional relationship between greater cigarette use and greater weekend oversleep (sleeping late on weekends to compensate for less weekday sleep) and between greater marijuana use and less total sleep.

From school start times that are too early to the nighttime use of computers and cell phones, today's adolescents face many challenges to getting a good night's sleep. The clear links between lack of quality sleep and risk behaviors like substance use make this a crucial target for prevention efforts. Recognizing the many health risks known to be linked to poor or insufficient sleep, the AAP has pressed for later start times (no earlier than 8:30 AM) in middle school and high schools. Parents should be aware of how important it is for their teenage children to get a full night's sleep every night, as a protective factor against substance use as well as other adverse impacts on their health and success.

*This paper is from: National Institute on Drug Abuse*

<https://www.drugabuse.gov/about-nida/noras-blog/2017/07/concerning-link-between-inadequate-sleep-adolescent-substance-use>



# Taiwan Research News

## I. 2016 Survey of Prevalence of Illegal Drug Use among Adolescent in Taiwan

**Shu-Lung Yang, Shu-Ping Tzeng, Shen-Feng Tai, Yi-Chien Ku, Jui-Ming Chen**

**Department And Graduate Institute Of Criminology, National Chung Cheng University**

Studies in the past have found that adolescents who take drugs are not only more likely to be subject to direct negative impacts, in terms of indirect social impacts, other criminal offenses, such as theft, robbery, drug trafficking, etc. may be further triggered. Obviously, illicit drug use produces tremendous impacts on the adolescents' living, health, and social aspects.

In this study, schools located in major cities in Taiwan are targeted (New Taipei City, Taichung City, Kaohsiung City) for random sampling. 2,580 student samples were collected, of which 2,270 were successful samples after error checking, accounting for a success rate of 88%. Under the confidence level of 95%, the sampling error is plus or minus 1.93%. For the juvenile shelter part, the investigation targeted the sheltered adolescents in shelters located in Taipei, Taichung, and Kaohsiung, a total of 102 samples were recovered.

Research findings show that among the types of drugs used, Ketamine comprises 31.94%, accounting for the highest, followed by methylphenylamine comprising 20.15%, amphetamine comprising 17.87% and ranking third, ecstasy comprising 13.31% and ranking fourth. Among the illicit



drugs used by today's adolescents, ketamine has become mainstream although amphetamine is also on the rise. Of all the drugs in possession, ketamine accounts for 30.90% or the highest, followed by methylphenylalanine of 19.93%, amphetamine of 19.27% ranking third, and ecstasy of 13.62 ranking fourth. In addition, in terms of usage, ketamine ranks first accounting for 31.94%, followed by methylphenylalanine accounting for 20.15%, amphetamine accounting of 17.87% and ranking third, and fourth in rank ecstasy accounting for 13.31%. Among the illicit drugs in adolescents' possession and used by adolescents, ketamine is mainstream, accounting for 72.04% and 79.76%, respectively.

The ratio of the total number of samples in the total population is 4.30%, but it occupies 65.2% of the total number of adolescents in possession of drugs. In addition, in illicit drug use, 4.4% of the adolescents have used one of the drugs, of which 1.3% are campus students and 3.1% are sheltered juveniles that have used any one of the drugs. If the two groups were observed separately, of the campus samples, 1.4% campus students have used any one of the drugs; the sheltered juveniles only account for 4.3% of the total samples, while the drug user population accounts for 70.2% of the total user population. Based on this year's statistics, it shows that sheltered adolescents have always been a group at high risk of illicit drug use.



## **II. The Impact of Family and Peer Factors on Ketamine Abuse by Adolescents**

**Chien-Yang Lin, Yi-Yin Lai, Shuo-Hsiang Chiang, Yu-Hsu Chen**

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**Department of Crime Prevention and Corrections, Central Police University**

This study is based on the social bond theory of Hirschi (1969), the informal social control theory of Sampson and Laub (1993), the social learning theory of Akers (1998), and the problematic behavior theory of Jessor and Jessor (1977). The main purpose is to compare the differences between regular adolescents and ketamine adolescent users in terms of their family, school, and deviated experiences, analyze changes in family and deviated peers before and after the ketamine adolescent users take drugs, thereby finding the significant factors affecting the adolescents' ketamine use and construct explanatory models.

The research samples consist of 444 enrolled students (divided into three regions: northern, central, southern Taiwan counties and cities; based on the total distribution of the students in the regions, tests were administered with classes as units, 12 classes in total) and 232 ketamine adolescent criminals (Chengjheng High School in Hsinchu, Ming Yang High School in Kaohsiung, Taoyuan Reform School Agency of Corrections, Ministry of Justice, Changhua Reform School Agency of Corrections, Ministry of Justice, Taichung Drug Abuser Treatment Center, Agency of Corrections, Ministry of Justice, Taipei Juvenile Detention House Agency of Corrections, Ministry of Justice, Tainan Juvenile Detention





House Agency of Corrections, Ministry of Justice, Hualien Juvenile Detention House Agency of Corrections, Ministry of Justice ).

Results show that the family structure (including parents' marriage and relatives serving sentences) deviated behavior (including smoking, drinking, betel nut chewing, truancy/dropouts/suspension, time of first truancy or number of truancy, etc.) and whether or not adolescents who administer ketamine show a significant correlation. Regular adolescents and adolescent ketamine users show significant differences in terms of family attachment, school attachment, deviated behavior, and deviated peers. Before and after the adolescents' drug use, the situation of reduced direct family control is more indirect and control is more obvious. Four factors, namely, soundness of parents' marriage, relatives serving sentences, family attachment, and school attachment are significant factors affecting adolescents' deviated behaviors and deviated peers. A sound family structure and social functions are important bases for school learning performance, input, and social link. Weak school attachment increases adolescents' deviated behaviors or increases the chances of contact with deviated peers and ketamine use, while deviated experience is an intervening variable affecting adolescents' ketamine use.



### **III. Correlation between Adolescent Drug Addiction and Violent Behavior: Brainwave Research**

**Chiao-Yun Chen**

**The Department and Graduate Institute of Criminology, National Chung Cheng University**

Adolescent drug addiction is a major health and social order issue of concern to countries around the world. Since a considerable ratio of drug addiction derived crimes involve violence, this brainwave research adopts signal stoppage operations to explore the inhibitory mechanisms and error monitoring mechanisms for adolescent drug addicts as well as simulating experiment situations that elicit offensive behaviors and emotional responses through Taylor aggression paradigm, TAP in order to gain an insight into the differences among adolescent drug addicts and regular adolescents in terms of modulating attack behavior related inhibitory control and the course of emotional management.

Two research methods were adopted: 1. Stoppage signal operations: The operations include Go and Stop operational situations. The Go operational situation involves requesting participants to respond to the arrow at the center of the screen, pressing the left key when the arrow directs left and pressing the right key when the arrow directs right. Each situation had the same number of attempts, which appeared randomly. For every attempt, a gazing point first appears for 500 milliseconds, and the stimuli appearance time is 500 milliseconds or until the participants pressed the button. In the Stop situation, the stoppage signals appeared until the stimuli disappeared or the participants pressed the button. The stoppage signal is a red block that appears on top of the stimuli in the middle.

2. Taylor aggression paradigm, TAP: The TAP design was adopted in this study to elicit adolescents' attack behavior. TAP is a type of fierce response competition where the winning side can punish the



opponent. Through the “win-loss ratio” and “punishment” manipulation in the experiment and the incident related potential experimentation approach, an insight was gained into the differences among violent adolescents and regular adolescents in terms of their behaviors and potential physiology.

Results of the TAP show that the experimental group’s total average score for “punishing the opponent” was significantly higher than that of the control group. A further analysis shows that at the beginning of the experiment (first segment), the experimental group’s score in “punishing the opponent” and that of the regular group showed no significant differences. However, in the second, third and fourth segment, the experimental group’s score in “punishing the opponent” was significantly higher compared to that of the regular group.

The brainwave results of the signal stoppage operations show that the Pe amplitude of the experimental group is significantly lower than that of the control group. The brainwave results of the TAP show that the experimental group’s N2 and DRN during the decision stage and the FRN during the result stage have smaller average amplitude compared to the control group.

The research results show that compared to regular adolescents, adolescent drug addicts in a negative emotional situation are more likely to display a high degree of offensive behaviors, and the highly offensive behaviors may be related to the poorer ability to regulate negative emotions, less empathy, or feedback learning according to external information.



# Latest Conferences Information

➤ Editorial Office

Conference	Host Organization	Date	Location
30 <sup>th</sup> European College of Neuropsychopharmacology Congress	European College of Neuropsychopharmacology (ECNP)	September 2-5 2017	Paris, France Contact : <a href="http://2017.ecnp.eu/?sc_lang=en">http://2017.ecnp.eu/?sc_lang=en</a>
6 <sup>th</sup> International Drug Abuse Research Society Meeting	International Drug Abuse Research Society (IDARS)	September 4-8 2017	Dubrovnik, Croatia Contact : <a href="http://www.idars.org/">http://www.idars.org/</a>
International Society of Addiction Medicine Annual Meeting	International Society of Addiction Medicine (ISAM)	October 26-29 2017	Abu Dhabi, United Arab Emirates Contact : <a href="http://www.isamweb.org/annual-meetings/">http://www.isamweb.org/annual-meetings/</a>
Annual Meeting & Expo" (APHA)	American Public Health Association (APHA)	November 4-8 2017	Atlanta, Georgia, USA Contact: <a href="https://www.apha.org/events-and-meetings/annual">https://www.apha.org/events-and-meetings/annual</a>
Annual Meeting of Asian Association for Substance Abuse Research 2017	Asian Association for Substance Abuse Research (AASAR)	November 27 – December 2 2017	Yun'an Huidu Hotel, Kunming, Yunnan Contact: <a href="http://www.lessdrugs.org/index.php/index">http://www.lessdrugs.org/index.php/index</a>