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# Introduction to Illicit Substance Use in Adolescence and Early Adulthood

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The use of psychoactive substances is widespread around the globe. Estimates of the World Health Organization (WHO) suggest that between 3.5 and 5.7% of the world's population aged 15 to 64 use psychoactive substances such as cannabis, amphetamines, cocaine, opioids, and non-prescribed psychoactive medication. Globally, cannabis is the most commonly used substance, followed by amphetamine-type stimulants, then cocaine and opioids. Of the users, about 10 to 13% show problematic consumption with drug dependence and/or drug use disorders. The comorbid prevalence of HIV, Hepatitis C, and Hepatitis B among injecting drug users adds to the global burden of disease.

Approximately one in every 100 deaths among adults around the world is currently attributed to illicit drug use. The use of psychoactive substances can engender health and social problems for users and their associates. In addition, illicit drug use creates negative consequences for society. The WHO estimates that about 200 billion to 250 billion USD would be needed to cover costs related to drug treatment worldwide. The actual amount society spends to treat drug abuse, however, is far lower (less than one in five drug-dependent persons receives treatment). In addition, illicit drug use impacts society's productivity and creates costs associated with drug-related crime.

While psychoactive substances have been consumed for thousands of years around the world within different cultures, the illicit drug usage problem has developed new characteristics over the past decades, with a higher concentration among youth (notably among young males living in

urban environments, with an expanding range of substances used). Thus, it is of particular interest to study antecedents of illicit substance use in adolescence and adulthood within well-designed scientific studies. Knowing risk and protective factors related to illicit drug use will enable society to plan adequate preventive and interventional strategies beyond the implementation of an international drug control system.

This special section focuses on the issue of illicit substance use in adolescence and adulthood. Outstanding authors in the field have contributed: The first paper by Steve Sussman investigates reasons to explain the potential growth in methamphetamine use which has arisen in Europe. The second paper by Marta Zapata and colleagues presents research on risk and protective factors for lifetime marijuana use among Columbian emerging adults who attend college. A third paper by Evelien Vermeulen-Smit and Karin Monshouwer presents a synthesis on the effectiveness of interventions against substance use, as designed for adolescents within special education, residential youth care, and juvenile justice centers. And a paper by Cerqueira-Santos summarizes research on the topic of illicit substance use in the Brazilian context.

Besides this summary of exciting new research in the field from international study groups, this *Bulletin* contains a country-focused report by Feyza Corapci regarding the scope of Turkish research on human development. It also includes a special report on the pre-conference workshop held at the 23rd Biennial Meeting of ISSBD in Shanghai last year (Dan & Junsheng). In the news sections, finally, we issue a call for proposals for regional workshops of ISSBD, and an announcement for a Prize, along with news from the Early Career Representative and a list of major conferences of interest.

We are happy to share the interesting set of papers in this Special Section, and news related to the society, with the members of ISSBD. We hope that you find the articles stimulating for your own research which may promote the development of new and effective intervention strategies to combat the worldwide problem of illicit substance use.

# Understanding the Potential Growth in Methamphetamine Use in Europe

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Methamphetamine ("meth") is a strong stimulant drug with a long duration of action that facilitates release of mesolimbic dopamine (Sussman & Ames, 2008). The subjective experience may be one of a "rush," intense wakefulness, novelty, agitation or euphoria. While Europe is not indicated as a focal region of concern by the United Nations (United Nations Office on Drugs and Crime, 2014), the popular press suggests a new surge in methamphetamine use across Europe (e.g., <http://www.dailymail.co.uk/health/article-2818909/Breaking-Bad-sparked-surge-crystal-meth-use-Europe-expert-warns.html>; accessed 12-2-2014). Reported data are tentative and some types of data (e.g., seizures of meth, forensic exams) are not necessarily representative measures of prevalence of regular use (European Monitoring Centre for Drugs and Drug Addiction [EMCDDA], 2014). Still the EMCDDA data are startling. For example, between 2006 and 2011 the number of methamphetamine seizures reported to the EMCDDA nearly tripled, and the quantities of seized methamphetamine increased six-fold. It is not clear if these data reflect increased smuggling, police enforcement, prevalence of use, some combination of these factors, or other reasons. However, this purported growth in use of a drug which has been known for some time to cause major negative consequences (e.g., paranoia, depression, impaired verbal learning, skin picking, tooth loss, addiction, sustained reduction in production of endogenous dopamine; <http://www.drugabuse.gov/publications/drugfacts/methamphetamine>; accessed 12-2-2014; Sussman & Ames, 2008) is disconcerting. Some of this rise in popularity is being attributed to TV shows, in particular "Breaking Bad," which became very popular in Europe. Paradoxically, while this TV show was filmed and aired in the United States, annual prevalence of use of methamphetamine among U.S. high school seniors has decreased from almost 5% to 1% over the

last 14 years (Johnston, O'Malley, Miech, Bachman, & Schulenberg, 2014).

What might explain this possible rise in use through Europe? One place to look is the research etiology literature. Controlling for subcultural factors (e.g., use by special populations, e.g., LBGTQ, heroin addict groups), there are some general common factors based on the few studies completed, mostly in the U.S. First, use among one's peers and a social environment relatively tolerant of drug use is predictive of meth use (Embry, Hankins, Biglan, & Boles, 2009; Sussman, Dent, & Stacy, 1999). Also, if such large social environmental media depictions as "Breaking Bad" increase tolerance for drug use, an increase in meth use is at least feasible. Second, mental health issues appear predictive of or associated with meth use. In particular, dysphoric mood or psychological distress/anxiety is related to meth use; predictive of onset or early experimentation (Chen et al., 2014; Embry et al., 2009 [males only]; Herman-Stahl, Krebs, Kroutil, & Heller, 2007; Sussman et al.); and may also occur during withdrawal from meth (e.g., Zhang et al., 2014). That is, there may be a bidirectional influence of psychological distress with meth use.

Third, anti-social behavior (Chen et al., 2014; Embry et al., 2009; Herman-Stahl, Krebs, Kroutil, & Heller, 2007) or high sensation seeking (Herman-Stahl, Krebs, Kroutil, & Heller, 2007) is associated with meth use. This is not surprising in that meth use is considered normatively extreme behavior (European Monitoring Centre for Drugs and Drug Addiction, 2014). Fourth, marijuana, alcohol, or other illicit drug use is associated with meth use (Chen et al., 2014; Embry et al., 2009; Herman-Stahl et al., 2007; Sussman & Dent, 1999). Finally, not surprisingly, behavioral expectation to use again in the next 12 months is predictive of later stimulant use (Sussman & Dent, 1999).

## The PACE Model

Sussman and colleagues (2011) developed a PACE model, which might explain how methamphetamine could increase in prevalence of use in Europe. There are four elements in this model: pragmatics, attraction, communication, and expectations. *Pragmatics* variables operate to discern whether or not one can access methamphetamine "product" and then engage in this behavior regularly. *Pragmatics* involves four aspects. First, there must be a supply of the object of the addiction available in the environment (e.g., methamphetamine distribution point). The EMCDDA (2014) report appears to indicate that meth production and distribution involves a loop, including production in Asia (e.g., Thailand, China) and Eastern-Central Europe (e.g., Czech Republic, Lithuania), and from the U.S. or Mexico, which is distributed



across Europe to or from Western-Northern countries (e.g., Sweden, Norway, U.K.) to various Asia-region countries (e.g., Australia, Japan). Methamphetamine will tend to be relatively available along distribution routes, which consequently, tends to be reflected in greater consumer demand for the product.

Second, one needs to be aware that there is a supply of “meth” available. Promotion of meth reaches the potential consumer by way of any number of channels, particularly word of mouth, observation of sales, public venues such as clubs, bars, or parks; and even web sites or early evening news stories. “Channels of introduction” to meth use likely contain cues specific to that behavior and begin a process of differential exposure to and learning of information related to the contexts of use (e.g., <http://www.tweaker.org/crystal101/waysguysdo.html>; accessed 12-3-2014). For example, meth may be swallowed, snorted, booty bumped, hot railed or slammed/injected. The contexts and accoutrements associated with meth use certainly will vary by the way in which it is used.

Third, an individual must have acquisition skills; that is, one needs to know how to obtain meth from the source. An individual needs to be able to converse appropriately with people who possess meth for sale, and to bring up relevant topics without being threatening (e.g., cost, location, type of service in exchange for meth [generally money]). Finally, an individual needs to have a means of exchange; that is, possess money or services to offer in return for meth (which is a relatively inexpensive drug). For example, one can provide money, a service such as being a drug transporter, or sexual favors, as means to procure meth. Situational opportunity and curiosity may predict that meth use will be engaged in at least once. However, it is doubtful that pragmatics per se is the only critical factor that leads to addiction.

*Attraction* to meth use effects, paraphernalia, and contexts of use plays an important role. Individual differences in the initial acute reinforcing effects of methamphetamine can shape one’s attraction to these behaviors. Indeed, there is marked between-person variability in the acute effects of a variety of addictive behaviors. That is, for some individuals meth use can result in extremely pleasurable experiences (e.g., high, rush, stimulation, social enhancement). For others the same behavior can result in severe aversive effects (e.g., anxiety, social and performance impairment, dysphoria), or relatively few or weak acute effects (neither positive nor negative). Certain intrapersonal traits may impact initial sensitivity to specific addictive behaviors. Anhedonia—the incapacity to experience pleasure in response to natural rewards—is associated with increased sensitivity to the “feel good” effects of stimulant drugs (e.g., methamphetamine, amphetamine or cocaine (Tremblay et al., 2002).

Attraction also involves the experiential pleasantness ascribed to addictive behavior-related stimuli and context. That is, one may feel attracted to the sight, smells, sounds, tactile stimulation, or social stimuli inherent in the context of meth use or, more specifically, to the routine of preparing and using the drug, and the surrounding context. Through associative learning and memory processes, contextual stimuli may come to represent appetitive effects associated with the behavior, affecting attraction to the behavior itself (Sussman et al., 2011). Between-person differences in disliking cessation of an addictive behavior also may be important

for explaining the specificity in whether or not one maintains an addictive behavior after a habitual pattern is already established.

*Communication* is an important facet of meth initiation, use and addiction. There exists a language of drug use associated with a community or subculture of users. Observing significant others (e.g., older siblings, close friends) engaging in meth use may teach one the language associated with meth and its use. Certainly, there are several avenues by which communication processes may contribute to an informational “expertise” or “bubble” regarding meth use, including observation of use, direct instruction of use, media portrayals (such as “Breaking Bad”), or the internet. As one continues to engage in meth use, a relationship develops that involves seeking, experiencing, and recovering from its effects. A system of communication about these aspects of the addiction may develop, encompass important features of one’s daily life, and call upon quite distinct personal and intergroup communication styles and techniques. As examples, a variety of “street names” for methamphetamine include “meth,” “speed,” “crank,” “crystal,” and “ice,” among others. Other terms include “biker coffee” (coffee laced with meth), “tweaker” (engagement in repetitive, stereotyped movements while under the influence of meth), “amped” (feeling of intoxication), “baggies” (1/16 ounce packages of meth), or “rose” (glass tube used to smoke meth) (see [http://www.kci.org/meth\\_info/slang\\_names.htm](http://www.kci.org/meth_info/slang_names.htm); accessed 12-2-2014). There may be use of code words to arrange a buy (e.g., “I am meeting with Tina at noon,” in which “Tina” refers to a small quantity of meth). In general, “insider speech” may develop to serve as a symbol of commonality and group identification pertaining to meth use. One may become an “expert” in the language of the addiction and feel like a “regular” or someone who belongs in that context. Communication about the addiction, therefore, can be a way of forming or solidifying exclusive social relationships with other addicts or addictive object providers.

Finally *expectancy* as a construct relevant to meth addiction involves the anticipated consequences of behavior or beliefs held about the likelihood of appetitive effects (Sussman et al., 2011). In general, expectancies are subjective probabilities regarding the likelihood of achieving various outcomes by engaging in some behavior. In terms of the PACE model, addiction expectancies or expectations are beliefs regarding the likelihood that or extent to which meth use is providing solutions to experiential requests. One may expect or anticipate that the addictive behavior will provide specific outcomes such as helping one live life more comfortably in the immediate present. There are several factors that contribute to development of specific expectancies for meth use. These include one’s genetically inherited sensitivity to the behavior, or emotional disposition (e.g., psychological distress). Importantly, though, specific expectancies develop through the interplay of individual difference variables with vicarious social learning, as well as with direct experience.

Direct experience may refute, confirm, or enhance pre-use expectancies. The learned expectations and experiences of specific outcomes as they occur with meth use likely play an important role in addiction specificity. Additionally, research suggests that individuals with a single addictive behavior (e.g., meth only) differ from those who engage



in multiple addictive behaviors (e.g., meth and marijuana, the latter in an attempt to calm the person down; meth and alcohol, the latter perhaps to help deal with meth withdrawal; e.g., Sussman & Dent, 1999; Zhang et al., 2014) in the degree to which they hold positive expectations about the second behavior, suggesting the possibility for an uncoupling of expectations across addictive behaviors.

Expectations associated with meth use also may involve one's perceptions of the social images (or general lifestyle characteristics) associated with participation in the behavior. For example, meth addiction may be associated with social images of living adventurously, being very awake, feeling as if one is accomplishing life tasks, or feeling euphoric. Through any number of determinants of expectancy differentiation (e.g., mass media impact, family or peer social learning, experiences with meth use), social image expectations may take shape. As an individual's social activities begin to increasingly involve meth use and other addicts or providers of the addiction, it may become possible to convince oneself that meth does not interfere with and may even actually facilitate one's daily activities. One may come to rely on meth use, if this addiction is perceived to meet many of one's expectations for their life (e.g., there are people who might say that their life is "all right" as long as they have their meth).

## Conclusion

Preliminary data suggests that meth use is proliferating in Europe, because Europe is a major current transit route (European Monitoring Centre for Drugs and Drug Addiction, 2014). However, accurate actual use prevalence data are needed. This paper highlighted this potentially severe issue, noted currently known predictors, and provided a model as a heuristic that might help explain reasons for growth in prevalence of meth use in Europe. The main importance of the current statement is to suggest new research needs in Europe: to assess the prevalence and etiology of meth use. Subsequent work will need to develop efficacious prevention and cessation programming, and effective policy efforts.

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# Risk and Protective Factors for Lifetime Marijuana Use among Colombian Emergent Adults Attending College

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## **Risk and Protective Factors for Lifetime Marijuana Use among Colombian Emergent Adults Attending College**

Marijuana or cannabis is the most widely used illicit drug in the world (UNODC, 2014). Its recreational, non-medical, regular use might lead to dependence and have an adverse effect on the psychosocial development and mental health of adolescents and young adults. Regular marijuana use has been linked to an increased risk for psychotic symptoms and disorders, poor school performance and low educational attainment. Marijuana also has been considered a "gateway" drug, as marijuana users may be more likely than non-users to use other drugs such as cocaine and heroin (see review by Hall & Degenhardt, 2009).

A recent study conducted in universities across four Andean countries found the highest rate of lifetime marijuana use among Colombian students (32.1%). Comparable rates were 21.3% in Ecuador, 11.8% in Peru, and 11.73% in Bolivia (PRADICAN, 2012). In Colombia, as in the rest of the world, male students are more likely than their female counterparts to report lifetime marijuana use (39.0% and 24.2%, respectively). Moreover, 27.1% of past-year

marijuana users present a pattern of abuse or dependence on the drug (PRADICAN, 2013). The present study aimed at advancing the field of substance use among Colombian emergent adults (16-29 years old) enrolled in college by identifying risk and protective factors for lifetime marijuana use particular to this group. The study was guided by the ecological theory of human development (Bronfenbrenner & Morris, 2006) and a risk and resilience perspective on substance use (Hawkins, Catalano, & Miller, 1992). Ecological theory posits that human development is the result of interactions between the individual and their context and that proximal as well as distal factors play an important role in developmental outcomes, including substance use. The risk and resilience approach to substance use aims at identifying factors that place individuals at risk for harmful substance use and dependence and factors that buffer or mitigate the effects of such factors. Risk and protective factors may not be causal factors, but rather the mediators or moderators of causal variables. However, the manipulation of risk and protective factors through policy and programmatic interventions help determine the incidence of substance use behavior (Pollard, Hawkins, & Arthur, 1999).

Research with adolescents and young adults conducted in North America has identified being in the late-teen years and early twenties, being male, having low socioeconomic status, and affiliating with drug-using peers as risk factors for substance use. Conversely, the ability to bounce back emotionally and familism (loyalty to the family and emotional and instrumental support among family members) have been identified as protective factors against substance use (see reviews of risk and protective factors by Arthur, Hawkins, Pollard, Catalano, & Baglioni, 2002; Cox, Burr, Blow, & Parra Cardona, 2011; Hawkins et al., 1992; Stone, Becker, Huber, & Catalano, 2012). Moreover, several studies have associated exposure to stress (Bonn-Miller, Vujanovic, Feldner, Bernstein, & Zvolensky, 2007; Siqueira, Diab, Bodian, & Rolnitzky, 2001) and community violence (Brady, 2006; Vermeiren, Schwab-Stone, Deboutte, Leckman, & Ruchkin, 2003) to marijuana use among adolescents and young adults.

Nevertheless, studies of risk and protective factors have been conducted primarily in the United States and other Western industrialized nations. Thus, it is unclear whether these factors similarly place emergent adults attending college at risk or protect them from marijuana use in Colombia, a South American country with much higher levels of social inequality, poverty, violence, and greater availability of drugs such as marijuana than industrialized countries in the Western hemisphere (World Bank, 2013). In Colombia,

carrying up to 22 grams of marijuana for “recreational purposes” is legal, although selling and purchasing marijuana is still penalized (Colombian Supreme Court, 2012).

## The Present Study

The objective of this study was to identify risk and protective factors associated with lifetime marijuana use among Colombian emergent adults attending college. We hypothesized that reports of lifetime marijuana use would be higher among older adolescents, younger adults, and male participants, but it would be lower among participants of higher socioeconomic status. Moreover, we hypothesized that perceived stress, exposure to community violence, and affiliation with marijuana-using peers would be risk factors for lifetime marijuana use, but the ability to bounce back (resilience) and familism would be protective factors.

## Participants

Data for these analyses came from *Proyecto Juventud* (Emergent Adults Project), a cross-sectional study of Colombian emergent adults that examines psychosocial risk and protective factors for substance use and risky sexual behavior. Data were collected from 474 emergent adults (64.8% female; age range = 16–29; *M* age = 20.31; age *SD* = 2.68) attending a comprehensive public university in Southern Colombia. Almost half of the students reported that their parents had not completed high school (48.2%); however, 29.5% of parents had obtained additional vocational training or college education. Most students were single (94.7%), did not have children (91.1%) and lived with their families (75.5%). Students younger than 18 years old were allowed to participate in the study only with one of their parents’ signed informed consent. All participants provided either signed assent (if they were younger than 18) or signed consent. The study was approved by the institutional review board of Universidad de Nariño (University of Nariño) in Colombia. The institutional review board of Oklahoma State University, in the United States, deemed the analysis of the data as non-human-subjects research.

## Measures

Participants reported on their gender and age, which was squared to create a quadratic term that would allow the testing of curvilinear age effects on lifetime marijuana use. The levels of education of each participant’s father and mother were averaged to create a single score, which was used as a proxy for family socioeconomic status. We chose to use parental education as the measure of socioeconomic status instead of *estrato social* (the social stratum index, range 1–6) used by the Colombian government, because the index is based on property location. People whose houses are located in areas designated as Stratum 1, 2, or 3 (low strata) receive subsidized public services, the ones in stratum 4 (middle stratum) pay the real cost of public services, and the ones in stratum 5 and 6 (high strata) pay above market-cost. Therefore, people’s willingness to pay for public services, not just ability to pay, might influence their choice of stratum. The Government created the social stratum index to classify real estate only, but in practice, it is used to determine

people’s socioeconomic status. Participants reported their social stratum as 1 (35.7%), 2 (40.2%), 3 (20.7%), 4 (3.0%), or 5 (0.4%).

Perceived stress was measured with the Perceived Stress Scale (11 items, Cronbach’s  $\alpha = .94$ ; Cohen, Kamarck, & Mermelstein, 1983), which assesses the extent to which general events in one’s life are perceived as stressful. Resilience, or the ability to bounce back, was assessed with the Brief Resilience Scale (4 items; Cronbach’s  $\alpha = .71$ ; Smith et al., 2008). Familism was measured with an adapted version of the Family Pride Scale (7 items; Cronbach’s  $\alpha = .88$ ; Olson, Russell, & Sprenkle, 1983). Exposure to community violence was assessed with 10 items adapted from a measure of crime victimization (Cruz, 1999) used in a multi-city study in Latin America and Spain. Peer marijuana use and self-reported lifetime marijuana use were measured with items adapted from Wave 3 of the National Longitudinal Study of Adolescent to Adult Health (ADD Health; Harris & Udry, 1994–2008). All statistical analyses were conducted using IBM SPSS version 22.0 (2013).

## Results

Overall, 31.5% of participants reported ever using marijuana, and male participants were more likely to report lifetime marijuana use (40.0% of males versus 26.9% of females,  $\chi^2 = 8.54, p = .003$ ). We fitted a logistic regression model in which all the covariates were entered simultaneously, including age and age squared. Results revealed a significant curvilinear relationship between age and marijuana use such that with each year increase in age the probability of lifetime use rose sharply (232%) among younger participants but dropped slightly (2.6%) among older participants. The following variables were positively associated with the probability of reporting lifetime marijuana use, while keeping the other variables in the model constant: being male (78.1%), parental education (17.1%), perceived stress (86%), and affiliation with marijuana-using peers (63.5%). In contrast, familism was associated with a decreased probability of reporting lifetime marijuana use (-38%). Resilience and community violence were not significantly associated with lifetime marijuana use (Table 1).

## Discussion

As hypothesized, being an older adolescent or a young adult, being male, reporting high levels of stress, and affiliation with marijuana-using peers were risk factors for lifetime marijuana use; furthermore, familism was a protective factor against marijuana use. Contrary to our hypothesis, a higher socioeconomic status was associated with a higher likelihood of ever having used marijuana. We did not find either that resilience was a protective factor or that exposure to community violence placed emergent adults at risk for marijuana use. The rates of lifetime marijuana use found among all participants (31.5%) and among male (40.0%) and female participants (26.9%) were almost identical to the ones reported in a larger study of Colombian college students (31.2%, 39.0%, and 24.2%, respectively; PRADICAN, 2013).

The curvilinear association between age and ever having used marijuana found in this study concurs with epidemiological studies indicating that marijuana use has been



Table 1. Psychosocial Correlates of Lifetime Marijuana Use among Colombian Emergent Adults.

Variables in the Model	<i>b</i>	SE <i>b</i>	Wald	<i>p</i> value	OR	95% CI
Age	1.198	.505	5.635	.018	3.315	1.232, 8.917
Age (Squared)	-0.026	.012	5.123	.024	0.974	0.952, 0.996
Gender (Male)	0.577	.235	6.015	.014	1.781	1.123, 2.824
Parental Education	0.158	.060	6.811	.009	1.171	1.040, 1.318
Perceived Stress	0.6213	.265	5.471	.019	1.860	1.106, 3.130
Resilience	-0.067	.230	0.084	.772	0.936	0.596, 1.468
Familism	-0.478	.196	5.970	.015	0.620	0.422, 0.910
Community Violence	0.130	.086	2.306	.129	1.139	0.963, 1.348
Marijuana-Using Peers	0.492	.134	13.506	.000	1.635	1.258, 2.126

*b* = Raw coefficient.

SE = Standard error of *b*.

OR = Odds ratio of lifetime marijuana use.

CI = 95% confidence interval for odds ratio.

increasing among young people in Colombia during the last few years (Colombian Government, 2013; PRADICAN, 2013). Our study suggests age and cohort effects, as Colombian college students in their late teens and early twenties were more likely to have tried marijuana than younger adolescents or adults in their late twenties. Given the rise in marijuana use reported in epidemiological studies in Colombia, it is likely that a significant percentage of younger adolescents in our sample eventually will try marijuana. Consistent with the same epidemiological studies, male participants were at a significantly higher risk for marijuana use. Gender difference in marijuana use in Colombia might be the result of long-standing although currently shifting gender socialization patterns that proscribe substance use among girls and women (Cox et al., 2011).

Consistent with studies in the United States, stress was a risk factor for lifetime marijuana use, which suggests that participants might be using marijuana as a means of emotional self-regulation (Bonn-Miller et al., 2007; Siqueira et al., 2001). This finding is salient, because exposure to stress due to community violence, social and economic marginalization, corruption, and low levels of interpersonal trust is pervasive in Colombia (LAPOP, 2012), which could be placing emergent adults at risk for marijuana use. We found, however, that crime victimization, a measure of exposure to community violence, was not associated with marijuana use. This lack of significance could have been the result of the global nature of the stress measure we used in the study. Future investigations should attempt to tease apart the unique contribution of specific types of stressors to marijuana use among Colombian emergent adults, including stressors common to college students.

The significant link between affiliation with marijuana-using peers and marijuana use has been well established in the United States (Arthur et al., 2002; Cox et al., 2011; Hawkins et al., 1992; Stone et al., 2012). Our study extends the literature by identifying such association among emergent adults in Colombia. Familism, a value characteristic of Latino cultures, also has been widely studied among Latino populations in the United States (Cox et al., 2011). Nonetheless, ours is the first known study to examine the protective effects of this value on substance use among adults 18–29 years old in Colombia. Previous studies have found

familism to protect Colombian adolescents against marijuana use (Brook, Brook, De La Rosa, Whiteman, & Montoya, 1999; Brook, Brook, Rosen, & Montoya, 2002).

The finding regarding a positive association between higher socioeconomic status, as suggested by level of parental education, and lifetime marijuana use concurs with an incipient body of literature in Latin America that has found a higher prevalence of substance use among students of higher socioeconomic status (e.g., Pratta & Santos, 2007; Sanchez et al., 2011). It is likely that higher family income provides emergent adults with disposable income that enables them to purchase marijuana. If this is the case, the trend is troubling because Latin American countries have been lifting vast segments of their populations out of poverty and expanding their middle classes (World Bank, 2013), which might be contributing to the increase in drug use identified in epidemiological studies in the region.

Finally, it is unclear why resilience or the ability to bounce back from negative events, and community violence, were not associated with marijuana use. It might be that in Colombia, the social support provided through close family ties and the emotional and instrumental support of family members (the behavioral aspects of familism) are more significant covariates of mental health outcomes and risky health behaviors than individual resilience. These same family assets might be offsetting the effects of community violence on marijuana use. As the body of literature identifying risk and protective factors for marijuana use among emergent adults in Colombia and other Latin American countries expands, it becomes crucial to test explanatory models that include mediators and moderators of risk and protective factors on marijuana use.

The results discussed here must be interpreted within the limitations of the study. The cross-sectional nature of this investigation does not allow for the inference of causal associations between covariates in the logistic regression model and lifetime marijuana use. The sample was limited to college students, which restricts the generalizability of the results to non-college students. Although most students in the study identified themselves as of low or very low socioeconomic status (76%), and thus comparable to a large portion of the general population of Colombian emergent adults, there could be significant differences between emergent adults in those socioeconomic statuses attending



college and those not attending. Nevertheless, this study contributes to the scant literature on psychosocial factors associated with marijuana use in Colombia, a growing trend in that country and various other Latin American nations that has important implications for the development and health of emergent adults in the region.

## Conclusion

Age, gender, parental education, perceived stress, familism, and affiliation with marijuana-using peers were significantly associated with lifetime marijuana use among Colombian emerging adults attending college. Specifically, being an older adolescent or a younger adult, being a male, having parents with higher levels of education, perceiving more stress, and affiliating with more marijuana-using peers placed emergent adults at a higher risk for lifetime marijuana use. In contrast, higher levels of familism were protective against lifetime marijuana use. Results suggest that interventions targeting adolescents and young adult males, and programs aimed at reducing stress, strengthening familism, and educating higher income families about the detrimental effects of marijuana use in adolescence and young adulthood may reduce marijuana use among Colombian emergent adults attending college.

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# The Effectiveness of Interventions in Special Education, Residential Youth Care and Juvenile Justice Centers in Preventing Adolescent Substance Use: A Systematic Review

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## Substance use among adolescents in risk settings

The use of tobacco, alcohol, cannabis and other illicit drugs among adolescents has been studied for years in many national and cross-national samples of students in regular education (Currie et al., 2012; Hibell et al., 2012). Far less common is the evaluation of substance use among groups of adolescents that are (in part) excluded from mainstream education, that is, youths in special education for adolescents with behavioral problems (SE, alternative high schools, continuation high schools; Denny, Clark, & Watson, 2004; Grunbaum, Lowry, & Kann, 2001; Kepper et al., 2009; Kepper, Monshouwer, Van Dorsselaer, & Vollebergh, 2011), in residential youth care (RYC, Bacovic, Marinkovic, Grujicic, & Maksimovic, 2006; Kepper et al., 2011; Pilowsky and Wu, 2006) and juvenile justice centers (JJC, Grigorenko, Edwards, & Chapman, 2014). Although some are outdated or based on small samples, all studies indicate that the prevalence of substance use among these adolescents is much higher than rates at regular education, with prevalence rates ranging from two to ten times higher. Furthermore, a recent study indicates that "a substantial proportion of adolescents initiates to use of substances (heavily) during their stay in residential care" (Monshouwer, Kepper,

van den Eijnden, Koning, & Vollebergh, 2014), highlighting the need for effective prevention programs within these settings.

Apart from the high prevalence rates of substance use among adolescents in special education, residential youth care and juvenile justice centers, fewer prevention programs seem to be available for these high-risk adolescents compared to their same-aged peers in regular education (Fegert et al., 2009; Van den Toorn et al., 2011; Wits et al., 2012). Consequently, Fegert et al. (2009) underline the need for effective preventive interventions for at-risk youth (selective prevention), and for adolescents who have a high risk of problematic substance use based on their current use (indicated prevention).

Although the abovementioned studies indicate the need and low availability of substance use prevention programs for several vulnerable juvenile groups (Fegert et al., 2009; Van den Toorn, Jonkman, Steketee, & Aussems, 2011; Wits, van de Mheen, Snoek, & van der Stel, 2012), a systematic evaluation of the effectiveness of the currently available interventions aimed to prevent problematic substance use among these groups is lacking.

Therefore, in the present study we give an overview of the existing evidence concerning the effectiveness of substance use prevention programs among adolescents in special education, residential youth care and juvenile justice centers.

## Identification of Studies

We identified studies from four electronic databases: the Cochrane Database of Systematic Reviews, Educational Research Information Center (ERIC), MEDLINE and PsycInfo (including Dissertation Abstracts). We included studies published between January 2000 and October 2013. In addition, references of included articles and earlier reviews and meta-analyses were used to search for further studies. A search strategy was designed to identify studies reporting on interventions aimed at preventing substance use among adolescents (aged 10-20) in special education (including alternative high school and continuation high schools), in residential youth care and youth in juvenile



justice centers. Pertinent (mesh) terms were adapted for use in the different databases by an information specialist. All Dutch and English full-text articles were included when reporting on 1) children, adolescents or students (aged 10-20), 2) interventions that focused on one of the three settings (JJC, RYC, SE), and 3) the effects of the intervention on substance use. Articles were excluded when interventions 1) aimed to treat substance misuse or addiction, or 2) the outcome was not actual substance use, e.g. intention to use.

All possibly relevant papers were selected according to a two-step procedure: where possible, the decision to exclude studies was based on the abstract. When articles could not be excluded on this basis, the decision for inclusion was based on the full paper.

## Data Extraction

Data extraction was carried out by the first author. Uncertainties were resolved through discussion with the last author. For each selected article, information was extracted about the characteristics of the publication, study quality, population, intervention, and outcomes.

## Results

We identified 733 articles from our database search. After reading abstracts and when necessary full texts (53), we included 11 articles. Most articles were excluded after reading the abstract as they were no-intervention studies, but were discussing the application of their results for prevention practice. Exclusion based on the full text was mainly because 1) the outcome was not substance use, but e.g. family reunification (Brook & McDonald, 2007) or motivational interviewing skills by staff in JJC's (Doran, Hohman, & Koutsenok, 2011), 2) the intervention was not carried out in one of the three abovementioned settings, but, e.g. among at-risk families (Adolescent Transition Program, Poulin et al., 2001); delinquent youth (Family Empowerment Intervention, Dembo et al., 2000; Familias Unidas, Prado et al., 2012); youth with behavioral problems (Utrecht Coping Power Program, Zonneville-Bender, Matthys, van de Wiel, & Lochman, 2007); youth (mainly) in mainstream education (Project Towards No Drug Abuse, Rohrbach, Gunning, Sun, & Sussman, 2010) and 3) the intervention did not focus on the prevention (universal, selective or indicated) of substance use, but treatment of substance dependence (MDFT, Liddle, Dakof, Henderson, & Rowe, 2011; MST, Henggeler, Clingempeel, Brondino, & Pickrel, 2002; Randall & Cunningham, 2003; Sundell et al., 2008). A number of additional articles were included after reference search of the included studies (Sun, Miyano, Rohrbach, Dent, & Sussman et al., 2007; Sussman et al., 1998; 2001; 2002; 2003; 2004; 2007; 2012; Valente et al., 2007). This resulted in a total number of 20 articles, describing 15 independent studies.

Ten independent studies, which were described in 15 articles, took place in special education schools (Clark et al., 2010; Grenard et al., 2007; Hopson & Steiker 2010; Lisha et al., 2012; Semer et al., 2005; Sussman et al., 1998; 2001; 2002; 2003; 2004; 2007; 2012; Sun et al., 2006; 2007; Valente et al., 2007); two studies were carried out in residential youth care (Morehouse & Tobler, 2000a; Smith et al., 2010); and three

studies took place in juvenile justice centers (Friedman et al., 2002; Jenson & Potter, 2003; Mouttapa et al., 2009).

## Special Education

The ten independent studies that took place in special education represented six different programs (Table 1). Eight of the studies had a randomized controlled trial (RCT) design (Clark et al., 2010; Grenard et al., 2007; Lisha et al., 2012; Sussman et al., 1998; 2001; 2002; 2003; 2004; 2007; 2012; Sun et al., 2006; 2007; Valente et al., 2007), and two had a quasi-experimental design (Hopson & Steiker 2010; Semer et al. 2005).

Three programs (Project-EX, Project SUCCESS, Project Towards No Drug Abuse (TND)) were studied with a sample large enough to analyze the effectiveness (all RCTs). Project-EX, a smoking cessation program, is studied in two RCTs. Both indicated the effectiveness of project-EX in decreasing tobacco use: i.e. higher quit rates (OR = 2.20,  $p < 0.05$ ) and lower prevalence of weekly (OR = 0.59,  $p = 0.04$ ) and monthly smoking (OR = 0.50,  $p = 0.003$ ) (follow-up: 1 year).

Project SUCCESS was examined through a single RCT and was found not effective in decreasing adolescent alcohol, cannabis and other illicit drug use.

Project TND has been studied in different versions (9/12 sessions, health educator/self-instruction/peer led, booster sessions) in multiple RCTs and mostly proven to be effective in decreasing illicit drug use other than cannabis. After addition of tobacco-, cannabis-, and self-control/violence prevention sessions (12-session version), TND was additionally effective in diminishing adolescent tobacco, alcohol and cannabis use (1 year follow-up). After 2 years, the effect of TND on smoking, cannabis and other illicit drugs remained (cannabis use decreased only among non-cannabis users at baseline). Effects of TND were only observed when led by a health educator (see Table 1 for effect-sizes.)

The other three programs (e.g. Keepin' it Real) are studied using small samples ( $N < 65$ ), with high attrition rates or without control groups, therefore no conclusions can be drawn on their effectiveness.

## Residential Youth Care

Only one study was found that investigated the effectiveness of an intervention aimed to prevent (problematic) substance use within residential youth care, Residential Students Assistance Program (RSAP) (Morehouse & Tobler, 2000a). RSAP was studied using a quasi-experimental design ( $N = 387$ ) and was found effective in decreasing adolescent alcohol and drug use, yet only among the group with a medium treatment dosage (5-11 hour) and not in the less intensive (1-5 hour) and higher dosage (12-30 hours) groups.

A second study examined the effectiveness of an alternative treatment for placement in a residential care setting, Multi-dimensional Treatment Foster Care (MTFC) (Smith et al., 2010). MTFC is studied in an RCT ( $N = 79$ ) on its effectiveness on substance use among 12- to 18-year-old boys. After 18 months, those in the MTFC condition used less tobacco, cannabis and other illicit drugs compared to the control group in residential youth care. No significant differences were found on alcohol (Table 2).



Table 1. Interventions aimed to prevent problematic substance use among adolescents attending special education schools.

Author, year, (design)	Study quality	No. of respondents	Population	Intervention type (setting)	Specific intervention	Results	Comments
Clark et al., 2010 (RCT)	Intention to treat analysis Follow-up time: 1 year Session attendance: 49.6% attended at least 4 prevention education sessions, 24.1% received any screening, 21.3% completed screening, 36% got individual counselling, and 17.2% received any group session.	N = 1742	Mean age: 17; 50% boys; 75% Caucasian	School and community (Alternative high school, focus on youth with behavioral problems, including delinquency)	Project Success (Schools Using Coordinated Community Efforts to Strengthen Students, based on residential student assistance program (RSAP)) Consists of prevention education series (6-8 weekly small group sessions on substance use). After individual screening for own and family substance use, those who need further attention received individual or group counselling, and when necessary referrals to community agencies.	Alcohol, marijuana, illegal drugs (excluding marijuana) and drinking to intoxication showed no significant effects, except for an effect favoring the control group for illegal drug use at the first post-test (time*intervention $r = .05, p < .05, d = .09$ ), but this effect did not persist one year later. Tobacco use (not targeted in the program) increased similarly in intervention and control group. In an earlier study (Morehouse & Tobler, 2000b, unpublished report) program exposure was higher (8.6% received education series only) and significant decreases in alcohol and other drug use were found for students who received the intervention vs. control students in schools assigned to the control condition (Loneck et al., 2010). MI is feasible in alternative high-schools.	Low program exposure was possibly due to the nature of alternative high schools where students' presence varies.
Grenard et al., 2007 (Pilot RCT)	Small N Follow-up time: 3 months Low response (31%)	N = 18	Mean age = 16.1 (SD = .9) 67% boys,	Motivational interviewing (Alternative high-schools)	One motivational interview vs. care as usual.		
Hopson & Steiker, 2010 (Quasi-experimental, pre-posttest design)	Small N Follow-up time: 6 weeks Schools were not randomly selected, but selected e.g. for their interest in implementing a substance abuse prevention program. Randomization at group or class level, only at two schools due to administrative constraints. Retention rate: 59%. Attrition mainly caused by relocation. % session attendance: not reported.	N = 41	Mean age: 16.4 (range: 14-19) 41% boys	School intervention (4 alternative high-schools)	Adaption of 'Keepin' it REAL (kIR) for alternative high schools. Based on four drug resistance strategies: refuse, explain, avoid and leave (REAL). Six weekly sessions (60-90 min) + focus groups after curriculum completion.	Significant reduction in alcohol use for younger adolescents (aged 14-16; $F(4, 60) = 6.10, p = .06, \eta^2 = .67$ ) but not for older adolescents (aged 17-19; $F(4, 12) = 1.19, p = .36$ ), nor for the total sample ( $F(2, 60) = .64, p = .53$ ). (Age differences may exist because the program promoted abstinence, while a non-abstinence-based approach may be more effective for older adolescents, according to focus group findings).	Suggestions for implementation and adaptation (for older age groups) are described.

(continued)



Table 1. (continued)

Author, year, (design)	Study quality	No. of respondents	Population	Intervention type (setting)	Specific intervention	Results	Comments
Sussman et al., 1998; Sun et al., 2006 (RCT)	Follow-up: Short (1 year), medium (2-3 years) and long-term (4-5 years) follow-up. Retention rate: 67% (1 yr follow-up) and 46% (4 or 5 years follow-up). Telephone surveys at follow-up. % session attendance: 67%.	N = 1578	Youth at alternative high schools Mean age: 18.8 (range: 14-19); 55% boys; 49.5% Hispanic, 31.6% White	School intervention (21 alternative high schools in South California)	Project Towards No Drug Abuse (TND) classroom only, classroom plus school-as-community (SAC) (Sussman et al., 1998), versus standard care. The classroom curriculum consists of nine sessions providing health motivation, social skills, decision-making material specifically targeting smoking, drinking, marijuana and hard drug use. The school as community (SAC) component included drug free events outside the classroom setting.	Short-term significant program effect for hard drugs ( $F = 3.85, p = 0.04$ ). No significant middle term effects. Significant long term effect for hard drugs ( $F = 4.71, p = 0.02$ ). The contrast between classroom versus classroom + SAC was not significant ( $p = 0.25$ ). No significant effects for cigarette, alcohol and marijuana use, except for short term effect on alcohol use among drinkers at baseline ( $t = 7.42, p < 0.01$ , relative reduction rate 7%).	
Sussman et al., 2002a; 2003 (RCT)	Follow-up time: 1 and 2 yr Retention rate at 1 and 2 yr follow-up: 69% and 55%, respectively. Telephone surveys at follow-up. % session attendance: not reported.	N = 1037	Youth at alternative high schools Mean age: 16.7 (range: 14-19); 54% boys; 45% White, 42% Latino.	School intervention (18 alternative high schools in Southern California)	Project Towards No Drug Abuse (TND) 12 session classroom only intervention (self-instruction or health educator led) versus standard care. 3 sessions on smoking cessation, marijuana prevention and self-control/ violence prevention were added to the abovementioned 9 session version of PTND.	Substance use at 1 yr follow-up in the self-instruction group did not significantly differ from standard care. Project TND led by an health educator resulted in relative reduction rates of 27% for smoking, 9% for alcohol use among baseline drinkers, 22% for marijuana use and 26% for hard drug use compared to standard care (Sussman et al., 2002a). Two years past baseline students in the self-instruction condition did not significantly reduce their use of tobacco, alcohol, marijuana or hard drugs compared to students receiving standard care ( $P > 0.05$ ), also no significant effects were found across gender or among baseline non-users or users. The health educator led	

(continued)

**Table 1. (continued)**

Author, year, (design)	Study quality	No. of respondents	Population	Intervention type (setting)	Specific intervention	Results	Comments
Sussman et al., 2012; Lisha et al., 2012 (RCT)	Follow-up time: 1 yr Retention rate: 70.8%. Telephone surveys at follow-up (60.5%). Session attendance: 67%. MI reached: 93% at least one. Of those 32% once, 37% twice, 24% 3 times.	N = 1676	Youth at alternative high schools Mean age: 16.8 (range: 14-21); 56.6% boys; 65% Hispanic	School intervention (24 alternative high schools in Southern California)	12 (45 min) session TND only, 12 session TND followed by 3 (20 min) motivational interviewing booster (in person or by telephone, TND + MI) versus standard care.	program resulted in a lower chance of tobacco use (OR = 0.50, $p = 0.02$ ), hard drugs (OR = 0.20, $p = 0.02$ ), but not for alcohol (OR = 0.87, $p = 0.24$ ) or marijuana use ( $p = 0.36$ ), except for male non-users at baseline (OR = 0.12, $p = 0.03$ , 2 tailed) (Sussman et al., 2003). Any TND versus control group: cigarette use was less frequent (IRR = 0.87, $p = .04$ ) alcohol use was less prevalent (OR = 0.68, $p = .01$ ) and less frequent (IRR = 0.91, $p < .05$ ), drunkenness on alcohol was less prevalent (OR = 0.67, $p = .04$ ) and hard drug use was less prevalent (OR = 0.68, $p = .04$ ) and less frequent (IRR = 0.87, $p = .03$ ). Prevalence of cigarette use (OR = 0.80, $p = .08$ ) and prevalence (OR = 0.84, $p = .19$ ) and frequency of marijuana use (IRR = 0.95, $p = .25$ ) did not significantly differ between TND and control group. No significant differences were found (on all measures) for TND + MI versus TND only. No significant differences were found for youth with or without substance use at baseline. TND: no significant effects on cigarettes, alcohol, marijuana, cocaine and composite index. TND-network: decrease in marijuana ( $b = -.64$ , $p < .05$ ), cocaine ( $b = -.37$ , $p < .05$ ), and composite use ( $b = -.37$ , $p < .01$ ). Interaction analyses with peer use, however, were significant for marijuana, cocaine and composite use, indicating that TND network increases peer influences, which	
Valente et al., 2007 (RCT)	Follow-up time: 1 yr Retention rate: 63.3%. Partly telephone surveys at follow-up. % session attendance: not reported.	N = 938	Youth at alternative high schools Mean age: 16.3 (SD: 1.36); 62% boys; 72% Hispanic	School intervention (14 alternative high schools in Southern California)	TND, TND Network (involvement of peer leaders and group activities with groups and leaders identified via social network characteristics), or standard care control.		

(continued)

Table 1. (continued)

Author, year, (design)	Study quality	No. of respondents	Population	Intervention type (setting)	Specific intervention	Results	Comments
Sussman et al., 2001; 2004 (RCT)	Follow-up 5 months after the program quit day (which is 3,7 months after the end of the clinic program). Retention rate at follow-up: 51%. 54% attended at least four sessions.	N = 335 (139 clinic only, 120 clinic + SAC, 76 control)	Youth at alternative high schools Mean age: 16.8 (range: 14-19); 64% boys, 47% Latino	School-based clinic intervention (8 alternative high schools)	Project-EX, a school based clinic tobacco cessation program (clinic only, clinic + School As Community (SAC), control). The clinic program involves novel activities (e.g. talk show enactments, games, and alternative medicine-type activities such as yoga and meditation). The School as Community (SAC) component is comparable to that in the TND program including extracurricular activities (Sun et al., 2006).	resulted in increased use for adolescents with drug-using friends. As quit rates did not differ across 'clinic only' and 'clinic + SAC' (OR = .48, $p > .05$ ), intervention conditions were combined and compared to the control condition. Project-EX youth had higher quit rates (30%) compared to control youth (16%). (OR = 2.20, $p < .05$ ; intent to treat, OR = 2.36, $p < .05$ , with correction for biochemical validation measurement). Youth in all conditions were less likely to quit when scoring in moderate or heavy addiction ranges on the Fagerstrom nicotine dependence scale ( $p < .001$ ).	Post-hoc analyses revealed mediation-effects of motivational components. (Sussman et al., 2004).
Sussman et al., 2007; Sun et al., 2007 (RCT)	Follow-up time: 1 yr Retention rate at 6 months: 78.9%. at 1 yr follow-up: 64.7%. % session attendance: not reported.	N = 1097	Youth at alternative high schools Mean age: 16.5 (range: 13-19); 62.7% boys; 71% Hispanic	School intervention (12 alternative high schools)	Project-Ex-4: an 8-session classroom based curriculum delivered in a six-week period on tobacco use cessation.	Youth in the project-EX condition had a lower prevalence of weekly smoking at 6 months (OR = 0.33, $p = .03$ ), and 1 yr follow-up (OR = 0.59, $p = .04$ ), and a lower prevalence of monthly smoking at 6 months (OR = 0.47, $p = .006$ ), and 1 yr follow-up (OR = 0.50, $p = .003$ ) compared to youth receiving standard care. 4 students (25%) reported that they quit smoking at the end of the program.	
Semer et al., 2005 (Pre-posttest, no control group)	Follow-up time: post-test assessment at the end of the program, no follow-up. Small N (64 students participated in the motivational program, 21 signed up for the cessation program, 16 participated in the cessation program, 8 completed all treatment sessions).	N = 64	Continuation high school students. Age range: 14-19; 69% boys, 77% White	School-based tobacco cessation program (A continuation high school in rural California)	A youth-oriented vanity and oral health-focused intervention designed to motivate tobacco users to join a six-week tobacco cessation program (one hour weekly).		



Table 2. Interventions aimed to prevent problematic substance use among adolescents living in residential care settings or an alternative treatment.

Author, year (design)	Study quality	No. of respondents	Population	Intervention type	Specific intervention	Results	Comments
Morehouse & Tobler, 2000a (Pre-post non-equivalent comparison group design)	<p>Follow-up time: 1 yr</p> <p>Inclusion criteria: being institutionalized for 30 days or more).</p> <p>Quasi-experimental: assignment to intervention not random (voluntarily or mandatory). Two comparison groups: in-house and out-of-house.</p> <p>Retention rate: 83%.</p> <p>Retention in intervention group: 79%. Intervention group was divided into low-dosage group (1-4 hours of intervention), medium dosage (5-11 hours, majority), large dosage (12-30 hours, small number).</p>	N = 387	<p>High-risk, multi-problem, inner-city youth.</p> <p>Age range: 13-18 years.</p> <p>87% boys Primarily African-American and Latino</p>	<p>Group + individual components (without family involvement) (Three residential facilities: three foster care for abused, neglected, orphaned, or troubled adolescents, a non-secure facility for adjudicated juvenile offenders, a treatment center for teens with severe psychiatric problems and a locked county correctional facility).</p>	<p>Residential student assistance program (RSAP) or; comprehensive student assistance in residential settings project. (Tobacco was not targeted by the intervention).</p>	<p>Alcohol and drug use in the last 30 days (sum score of number of different drugs used * #days/ week used).</p> <p>Process evaluation: among other findings: access to the adolescents unanimously agreed to be the most important ingredient for program success. Also support by the administration (evidenced by provision of meeting places, scheduling of group meetings non-overlapping with other activities, access to transportation for support meeting (e.g. AA).</p> <p>Low and high dosage groups have similar (small/no) effects, whereas the 5-11 hour group was effective in reducing the quantity-frequency of alcohol and drugs (total), especially among non-jailed adolescents, younger than 16. The small effect in the high-dosage group may be explained by their members being AOD abusers or children from AOD abusers (high-risk group), early intervention is recommended.</p>	<p>Presence of full-time counselors indicated as a predictor of less AOD expectancy.</p>

(continued)



Table 2. (continued)

Author, year (design)	Study quality	No. of respondents	Population	Intervention type	Specific intervention	Results	Comments
Smith et al., 2010 (RCT)	Follow-up time: 12 and 18 months. Age was controlled for in all analyses, as age range was broad. % retention and session attendance: not reported.	N = 79	12-18 year old boys (mean age = 14.9) with serious and chronic delinquency problems referred to intervention by the juvenile justice system. 92% Caucasian, 56% from single parent families, 70% had at least one parent who had been convicted of a crime.	Community/ family (Out of home placement by the juvenile drug court judge to MTFC (MTFC parents) or control (group care))	Multidimensional Treatment Foster Care (MTFC) aimed 1) to create opportunities for youths to live successfully in their communities while providing them with intensive supervision, support, and skill development; and 2) simultaneously prepare their biological parents (or aftercare parents) to provide effective parenting to facilitate a positive reunification with the family, an alternative to group home treatment or state training facilities. Control group was group care in residential facility (school within GC facility), mostly receiving group, individual and group therapy.	MTFC significantly reduced illicit drugs other than cannabis at 12 (beta = -.26, $p < .05$ ) and 18 month follow-up (beta = -.24, $p < .05$ ). Tobacco and marijuana use were significantly reduced only at 18 month follow-up (beta = -.34, $p < .01$ , and beta = -.30, $p < .01$ ). Reductions in alcohol use were not significant compared to the control group at both follow-up times.	Urinalysis were used in both treatment conditions, yet their implementation was not measured as part of the study, but may have influenced self-reports of substance use, as it may be considered as a component of supervision and monitoring.

Table 3. Interventions aimed to prevent problematic substance use among adolescents living in juvenile justice facilities.

Author, year	Study quality	No. of respondents	Population	Intervention type (setting)	Specific intervention	Results	Comments
Friedman et al., 2002 (RCT)	Follow-up time: 6 months after discharge to home and community, approximately 15 months after admission to the project. (n = 251). Retention rate: 84%. Only those who attended three or more sessions were scheduled for a post assessment. Average program attendance: 34.2 (of the 55) sessions.	N = 201	Court adjudicated boys. Age: 13-18 years (mean 15.5). 1.5-2 years below average in grade level. Low /low-middle class socioeconomic status.	School (Residential treatment center for adjudicated adolescents, locked)	LST, Prothrow-Stith Anti-Violence program, Values Clarification (V.C.) 55 classroom sessions, including 1) LST (20 sessions during a 4 week period): a cognitive-behavioral social learning model on the effects of different substances and how to cope with peer-pressure, self-expression, self-control, personal and social skills, and 2) Anti-Violence program for controlling tendencies toward violence and directing emotions and energy in an acceptable way (twenty 55 min sessions), and 3) Values Clarification on developing their own socially acceptable and desirable value system.	Greater reduction in drug use/abuse (t = -2.58, p < .05), selling of drugs (t = -1.99, p < .05), but not in alcohol use (t = -1.24, p > .05), or in illegal violent behavior or in school problems in intervention condition compared to control condition. Dosage and process analyses that LST was effective in reducing substance use/abuse and the selling of drugs and Prothrow-Stith Anti Violence program reduced their violent behavior. Subgroup of African-American adolescents reported less alcohol (p = .01) and less drug use (p = .01), yet more drug selling (p = .05) at follow-up compared to other races.	
Jenson & Potter, 2003 (Pre-posttest design, no control group)	Follow-up time: 3 and 6 months. Retention: 69%. % session attendance: not reported.	N = 107	Youth in detention with co-occurring mental health and substance abuse problems. Mean age: 15.6 (SD = 1.6), 77% boys, 79% Caucasian.	Cross-system collaboration between mental health and juvenile justice systems; some similarities with MST but considerably less intensive (juvenile facility)	All: participate in a psycho-educational group (knowledge about co-occurring mental health and substance abuse problems), medication evaluation by a child psychiatrist, meet with mental health case manager to plan post-detention treatment strategies. Individualized services. Mental health case managers worked closely with the juvenile justice detention staff members to design and implement post-detention treatment plans for youth and parents. Following release from detention mental and substance-related care was provided by one public mental health center. 43% received peer-based group therapy for mental health problems (during the 3 months following detention). 37% received substance abuse treatment and 35% received family therapy.	Significant decrease in marijuana, alcohol, hallucinogens and cocaine use frequency from pretest (6.7, 4.9, 2.5, 3.0) to 3 month (2.0, 1.9, 0.5, 0.3) and 6 month follow-up (2.2, 1.8, 0.5, 0.4). No interaction effects for the clusters of juveniles based on pretreatment levels of delinquency, mental health and substance abuse problem.	

(continued)



Table 3. (continued)

Author, year	Study quality	No. of respondents	Population	Intervention type (setting)	Specific intervention	Results	Comments
Moultapa et al., 2009 (Quasi-experimental, pre-post comparison group design)	Follow-up time: 2 months after discharge (3 months after program implementation was completed). % session attendance: not reported.	N = 48	Detained youth at 24h-secure correctional facilities. Mean age: 16.4 (SD = 1.1), 59.2% boys.	School (Youth from 2 all-male and 2 all-female probation camps in Los Angeles)	The Substance Use and HIV Prevention (SUHIP) combine Reconnecting Youth (RY) and Street Smart (SS). Two existing school programs adapted for use with adolescent detainees in a classroom and culturally adapted to the target population. RY is designed to extinguish substance use through the development of various life skills. SS is designed to reduce HIV risk behavior among high-risk youth. In contrast to the standard care program, the SUHIP curriculum incorporated interactive activities to enhance skills building, decision making, group bonding and practice of behaviors.	At baseline females reported higher rates of stimulants than males. Interaction analyses revealed significant reduction rates of stimulant use among females in the SUHIP condition more than the other groups ( $F(1,40) = 7.30$ , $p < .01$ ). Apart from drug-free self-efficacy, which improved only in the SUHIP group, no other outcomes were reported.	

## Juvenile Justice Centers

Three programs were found that have been examined on their effectiveness of substance use prevention in juvenile justice centers. One study had an RCT design (Friedman et al., 2002), and the other two a quasi-experimental design (Jenson & Potter, 2003; Mouttapa et al., 2009) (Table 3).

An RCT (N = 291) examining the effect of 55 lessons, including 20-lesson Life Skills Training (LST), showed a reduction in drug use six months after discharge, an effect that was attributed to LST. No effects were found on alcohol use (Friedman et al., 2002).

Placing mental health services within juvenile justice centers was found to result in a decrease in alcohol and drug use (3 to 6 months post baseline) in a quasi-experimental study (N = 107, Jenson & Potter, 2003).

Another quasi-experimental study (N = 48) showed a decline in stimulant use after participation in the Substance Use and HIV Prevention (SUHIP) intervention (aimed to prevent substance use and HIV-related risk behavior), yet only among girls (Mouttapa et al., 2009).

## Conclusion

Although substance use is much higher among adolescents in special education, residential youth care and juvenile justice centers, compared to their same-aged peers in regular education, there is no clear evidence on their effectiveness. That is, both the number of programs that have been carried out, and those that have been shown effective in RCTs is very small. Only eight randomized controlled trials were found examining the effect of substance use prevention in special education, indicating the effectiveness of PTND on smoking, cannabis and other illicit drugs, but not on alcohol use. There is no clear evidence on the effectiveness of substance use prevention within residential youth care, as only one quasi-experimental study has been performed in this setting. Likewise, no clear evidence exists for the effectiveness of substance use prevention in juvenile justice centers, as the evidence is based on three programs, including only one RCT. Further, all included programs were solely tested in the US. Therefore, we underline the need to develop prevention programs for these high-risk groups and to strengthen the evidence base with rigorous trials and more studies conducted in countries other than the US.

When developing prevention programs for these particular risk groups, it should be noted that different mechanisms may apply and another approach may be necessary to obtain effects among these groups of adolescents, compared to those in regular education. For instance, adolescents in these groups have 1) other motives to use substances (Laurent et al., 2012), 2) a lower and more varying IQ (Skara et al., 2005; McCrystal, 2008), 3) more affiliations with deviant peers (Burlison et al., 2006; Dishion et al., 1999, 2008; MacGowan and Wagner, 2005; Kepper et al., 2013), and 4) parents who are more often out of sight and more difficult to reach and involve, but may still be even more important among these groups (Kleinjan & Engels, 2014). Furthermore, an integrated approach of substance use and mental health care is emphasized in many studies (Jenson and Potter, 2003; Stathis et al., 2006).

In sum, among adolescents in special education, residential youth care and juvenile justice centers, only a small

number of studies have examined the success of substance use prevention and no clear evidence was found for their effectiveness, whereas their substance use is particularly worrisome. We underline the need to develop prevention programs for these high-risk groups and to strengthen the evidence base with rigorous trials and more studies conducted in countries other than the US.

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# Drug Use as Risk Factor for Victims of Sexual Exploitation: Preliminary Findings from a Brazilian Sample

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For several decades Brazil has been known as the “country of the carnival,” with its tropical climate and joyful people. In spite of the enormous economic and cultural transformation that the country has been undergoing, “country of the carnival” is still valid in describing the Brazilian cultural identity, which is directly and inextricably linked to issues of sexual experience (DeSouza, Baldwin, Koller, & Narvaz, 2004). This identity generates a series of distorted ideas about the sex trade in Brazil. The idealized image held by visitors obscures the exploitation and criminal practices associated with the prostitution of women and men, as well as children and adolescents (Cerqueira-Santos, Koller & Wilcox, 2008; Silva, 2009).

The sexual exploitation of children and adolescents (SECA) has been investigated as one of the most extreme forms of violation of human rights, with adverse consequences for the psychological adjustment of the victims and the families involved (Klatt, Cavner & Egan, 2014; ECPAT, 2006). Sexual violence arises hand-in-hand with the structural, social, interpersonal and psychological violence in Brazil, generated by the country’s socioeconomic and political structure. Sexual violence is therefore a matter of health and public safety.

Sexual exploitation is a form of sexual violence, which can include every action involving the body of a child or adolescent of either sex. Perpetrators seek sexual advantage or benefit based upon a relationship of commercial exploitation and power. The child’s or adolescent’s body is used in sexual activities to satisfy presumed needs or desires (ECPAT, 2006)

Regarding female children/youth specifically, the globalized sex market promotes hyper-erotization of the female body, strengthening the logic of submission and humiliation of the woman. This market involves owners of night-clubs, motels and brothels, as well as traders of products and drugs, who profit from the mercantilization of the child/youth body, in a relation of power and exploitation. The sex market also comprises photography and modeling agencies which entice adolescents of a medium socioeconomic level, and attract customers via publications or in person at parades. Adolescents caught up in this exploitation are pawns of social, cultural and

economic factors. Young people’s lives are deeply affected by this complex phenomenon. One salient factor is drug use. Recent studies show a strong association between sexual violence and drug use (Reid & Piquero, 2014; Reid, 2011). Drug use and drug habits can be facilitated or exploited by traffickers, who pressure drug-dependent individuals into prostitution by supplying drugs as a form of payment.

This is a descriptive exploratory study investigating dimensions of life among children and adolescents, such as: relationship with the family and school, social support, sexuality and drug use. We describe here the main findings of drug use among sexually exploited children and adolescents. Due to the difficulty of investigating this subject, this report gives special attention to the method used as a powerful model for studies on this topic in Brazil.

## Methods

### Participants

Participants were child and adolescent victims of sexual exploitation, who were affiliated with an institution of care. We accessed only participants who already had specific care, ensuring ethical standards in the study of at-risk populations who have traumatic memories. The final number of participants was 220 children and adolescents between 9 and 17 years of age.

### Sample

The sampling method used was inspired by the technique of Respondent-Driven Sampling (RDS). This method uses innovative technologies based on the principles of Markov theory, that can generate a good quality of information, allowing immediate use of the results, and is applicable to hidden populations. In those populations, we can assume two basic characteristics: (1) There is no sampling framework, so the size and boundaries of the population are unknown; (2) there is a big problem of privacy because participation can assume or involve illegal or stigmatized behavior, leading individuals to refuse to cooperate, or else to provide unreliable answers to protect their privacy.

Since there is no government data base recording the total number of child and adolescent victims of sexual exploitation in Brazil, it was not possible to calculate the total sample from which our informants were drawn. A standard criterion that followed the proportion of the increase of participants from each participant-key was

used. The study included samples in the five geographical regions of Brazil, with key participants in eight states.

As a first step, residential institutions in eight states were visited over a three-month period. In each institution, the research team identified a list of participants (called "seeds," i.e. first participants of the study) in an attempt to represent the diversity of information available. Investigators selected were technicians, educators and leaders with a strong social network and knowledge of each institution's participants. These researchers were responsible for the recruitment of the first respondent children. Data collection was performed at each institution through successive cycles of recruitment until we reached all potential participants.

### Data Collection

Each adult investigator conducted semi-structured interviews, trying to identify children and adolescents who could participate. Information was recorded about the largest number of children/adolescents possible in each institution for potential replacements in case of refusals or dropouts.

The investigators were informed about the inclusion criteria for the study (aged 10 to 19 years, victim of sexual exploitation, voluntary participation in the study). Structured and printed collection instruments were used.

### Instruments

With each child and adolescent participant, an interview was conducted following a questionnaire about demographics, family and school. Psychometric scales were used for psychological evaluation measures (Beck Depression Inventory for Children (CDI); Self-esteem scale of Rosenberg; Inventory of Life Satisfaction; Quality of Life; Social Support; Stressful Events Scale in Adolescence). Moreover, we asked questions about sexuality and, finally, drug use experiences (age at first use and frequency). They reported frequency of substance use measured on an ordinal scale (1 = not used; 2 = 1-2 times/6 months; 3 = 3-5 times/6 months; 4 = 1 time/month; 5 = 2-3 times/month; 6 = 1 time/week; 7 = 2-3 times/week; 8 = 4-5 times/week; 9 = every day).

### Results

From a total of 220 participants who self-identified as victims of sexual exploitation, almost 90% already had some experience with drugs. The mean age for first drug experimentation was 11.2 years old (SD 1.43), ranging from 9 to 15 years of age at first drug experience.

The most used drugs reported were "legal drugs" (alcohol 88% and cigarettes 62%, respectively). Among illicit drugs, marijuana was the most common (36%), followed by inhalants (32%) and medical drugs (23%). Crack cocaine accounted for about 9% of experiences. As reported in similar studies, 25% of participants reported marijuana was often the first illicit drug used. We found a strong negative association between age of first drug use and age of the entry into sexual exploitation. This data gave rise to the hypothesis that sexual exploitation can provide the financial support for buying drugs (examined later). "Curiosity" and the desire to "keep up with friends" were the main

reasons given for experimenting with drugs for the first time. Both responses confirm the influence of peers in initiating drug use.

Given the "craving" for drug use, the most cited behavior by the participants (36%) was "sex" in order to get money to allow them to have access to the drug. This information was subsequently confirmed with specific data on sexual exploitation, and corroborates other studies that suggest a correlation between drug abuse and sexual exploitation. It is noteworthy that the item "sex" is specifically related to genital sex. Adding the category of "oral sex," gives a total of 44% of sexual activities conducted in exchange for drugs.

Of those who have used illicit drugs, 77.3% reported that they tried to stop and about 65% still currently use such drugs. The main justification for stopping the use of drugs was a concern with health. Among those who have never used any drugs, the own decision-making, the "family" and the "fear of addiction" are the main reasons.

### Considerations

First, it is important to point out the high prevalence of substance use among child and adolescent victims of sexual exploitation. In addition, findings reported here align with other research regarding substance use and sexual victimization (see Messman-Moore, Coates, Gaffey, & Johnson, 2014). Alcohol use has been consistently linked to an escalation in risk for sexual victimization. Drug use and sexual exploitation have shown a strong association in Brazil. A double influence can be perceived in this relationship (1) sexual exploitation as a means of obtaining money for drug use (2) the use of drugs generating dependency and weakening the victims of exploitation. The vicious circle formed by these two elements renders children and adolescents vulnerable to the effects of alcohol and marijuana on decision-making. Negative consequences in other spheres of life, such as sexual health, school life, and future aspirations often ensue. In this evolving process, the data thus obtained has been applied in intervention programs in Brazil, and several reports in addition to this one are in preparation. This is an area of extreme difficulty for data collection and some limitations must be observed before any conclusions are drawn based on the variables collected.

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# Scope of Turkish Research on Human Development

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The goal of this review is to provide an overview of the historical development and the current state of human development research in Turkey. Given the brevity of space, this review is limited in depth and selective rather than inclusive in scope, focusing on representative contemporary work.

A number of historical accounts (Acar & Sahin, 1990; Bolak Boratav, 2004; LeCompte, 1980) document that psychology in Turkey began as an academic discipline in 1915 with the arrival of Georg Anshultz, a German professor who taught psychology as an experimental science at Istanbul University. This European origin and continuing Western influence on Turkish psychology resulted from reform movements in the Ottoman Empire in the late 19th century followed by secular reforms with the foundation of the Republic of Turkey in 1923. Other highly influential figures included European-trained Turkish psychologists and German professors in Turkey during World War II, who played a major role in establishing the first experimental psychology laboratory in 1937. The years between 1930 and 1960 have been characterized as a period when Turkish psychologists focused on experimental work and translations of major classics including the writings of William James, Sigmund Freud, Jean Piaget, and the Binet-Simon Test of Intelligence. Muzafer Sherif, a Turkish social psychologist who has had a profound influence on current theories about group dynamics, conducted research between 1936 and 1945 in Turkey before embarking on his academic career in the United States. Sherif's focus on social change due to industrialization and urbanization in Turkey has triggered scientific inquiry among developmental researchers into the psychological processes involved in modernization, including its effects on family structure and functioning, attitudes, values, and socialization.

Of particular importance is the Value of Children (VOC) study, conducted in 1975 to describe the value attributed to children by parents, motivations for childbearing, and parenting goals and practices in nine countries including Turkey (Kagitcibasi, 1982). The VOC study increased the visibility of Turkish developmental research internationally and provided a foundation for Kagitcibasi's (1985, 2007) theory of family change and self-development. This

theoretical model delineates family models in Western individualistic and non-Western collectivist societies, with particular attention to the variations within collectivist societies undergoing crucial sociodemographic changes. Rather than a transition from relational to individualistic goals, a "psychological interdependence" model has been proposed for urban, middle-class Turkish families. In this model, childrearing promotes both child autonomy and relatedness, thereby fostering an "autonomous-relational" self that draws not only on agency and assertiveness, but also on embeddedness in close relationships. On the other hand, a family model of interdependence characterizes rural and rural-origin, urban Turkish families with lower socioeconomic status (SES), where the utilitarian and emotional loyalty of children are highly valued; hence respect, dependence and obedience are expected (Kagitcibasi, 2007).

Indeed, studies show that the younger, urban Turkish generation values autonomy more than the previous one (Imamoglu & Aygun, 1999; Kagitcibasi & Ataca, 2005) and endorses characteristics of both individualism and collectivism (Uskul, Hynie, & Lalonde 2004). Growing research also suggests that middle-high and lower SES Turkish mothers endorse common socialization goals and values such as expecting children to maintain close, affective bonds with others and show self-controlled and respectful social conduct (Mayer, Trommsdorff, Kagitcibasi, & Misra, 2012; Ozdikmenli-Demir & Sayil, 2009). Despite many similarities, urban, middle-to-high SES Turkish mothers display more autonomy granting, show greater tolerance for children's emotional expression and have less punitive attitudes compared to their lower SES counterparts (Altan-Aytun, Yagmurlu, & Yavuz, 2013; Corapci, Aksan, & Yagmurlu, 2012; Fisek, 1991; Kagitcibasi & Ataca, 2005; Nacak, Yagmurlu, Durgel, & van de Vijver, 2011; Sunar, 2009).

Developmental research also focuses on the role of parental warmth as well as behavioral and psychological control in relation to child outcomes in early and middle childhood and adolescence. Following Baumrind's (1971) and Maccoby and Martin's (1983) definitions, authoritarian and authoritative parenting have been associated with Turkish children's and adolescents' developmental outcomes in ways similar to their Western counterparts (Kindap Tepe & Sayil, 2012; Sumer, Gundogdu Akturk, & Helvaci, 2010). However, in a departure from the pattern identified in European American families, maternal control and warmth emerge as positively and moderately correlated among Turkish mothers (Akcinar & Baydar, 2014; Erkman & Rohner, 2006). Consistent with a developmental contextual perspective (Bronfenbrenner & Morris, 2006), recent work considers direct and indirect effects of parenting in both additive and interactive models involving a combination of factors that include child temperament and contextual



factors (e.g., family influences, childcare chaos, neighborhood resources, immigrant culture) to delineate pathways to competence and psychopathology (Baydar, Akcinar, & Imer, 2012; Corapci, 2010; Durgel, van de Vijver, & Yagmurlu, 2013; Guner Cebioglu & Aksan, 2012; Harwood, Yalcinkaya, Citlak, & Leyendecker, 2006; Metin Orta, Corapci, Yagmurlu, & Aksan, 2013).

The core propositions of attachment theory have also been tested in current research. While the sensitivity-security assumption was supported (Sumer & Kagitcibasi, 2010; Yerlioglu, Corapci, & Aksan, 2011), maternal overprotection and guilt induction, often seen as maladaptive in individualistic cultures, did not have predictive power for attachment security in Turkey, a relatedness culture where these behaviors are normative (Sumer & Kagitcibasi, 2010). Regarding the competence proposition, attachment security predicted self-esteem among school-aged children (Sumer & Anafarta-Sendag, 2009) and adolescents (Bayraktar, Sayil, & Kumru, 2009). Additional research topics are adolescents' peer attachment quality in relation to their self-esteem and prosocial behaviors (Bayraktar et al., 2009; Kumru, Carlo, & Pope Edwards, 2004), and the nature of adolescents' friendship structure and processes (Degirmencioglu, Tolson, & Richard, 1998).

With recent increases in the incidence of bullying in schools and cyberbullying, another group of Turkish researchers has shifted attention to this acute issue. Accumulating documents show that approximately one-third of children are bullied in schools and suffer from emotional problems (Alikasifoglu et al., 2004; Burnukara & Ucanok, 2012; Strohmeier & Dogan, 2012). Evidence also suggests that children victimized in schools do not necessarily engage in cyberbullying (Burnukara & Ucanok, 2012). Finally, there is evidence that secure attachment and perceived maternal support buffer children and youth against peer bullying and victimization (Sirvanli Ozen & Aktan, 2010; Yaban Helin, Sayil, & Kindap Tepe, 2013).

Among contemporary topics in cognitive development, there is growing research focus on language, cognitive abilities such as executive functioning and young children's theory of mind competence as well as music perception. Within the language domain, studies demonstrated that the Turkish language differs from Indo-European languages by its structure (Aksu-Koc & Slobin, 1985; Kuntay & Slobin, 2001) and grammatical markings for evidentiality that indicate the speaker's source of information (Aksu-Koc, 1988). As a result, research on language acquisition focuses on Turkish children's language-specific and universal strategies, together with their implications for other cognitive skills. For example, better source memory competence has been found to be related to evidentiality marking (Aksu-Koc, Ogel-Balaban & Alp, 2009). Narrative studies constitute another line of research to discern Turkish children's use of linguistic forms in order to construct a coherent discourse (Kuntay & Senay, 2003), including the role of socialization agents such as teachers in the preschool context as facilitators of this competence (Kuntay, 2009).

In the last decade of research in Turkey, important progress has also been made in the development of a number of inventories to assess normative language development. Studies using these inventories have consistently documented SES differences in language and communication skills of infants and young children, similar to research

with Western samples (Aksu-Koc, 2005). One recent study with a large and nationally representative sample of Turkish families examined not only the role of economic risk but also maternal, family, and extrafamilial factors for language development (Baydar et al., 2014). Findings suggest that regardless of family risk, Turkish children's vocabulary level was associated with maternal vocabulary, cognitive stimulation, and the presence of learning materials at home. For economically disadvantaged children, maternal warmth and responsiveness predicted better vocabulary scores, but for those children who experienced the greatest adversity (economic risk and maternal depression), support from extended family and neighbors who engaged in child care emerged as a protective factor against poor verbal competence.

Currently, recognition of the importance of executive function (EF) skills for learning, school readiness, and regulatory behavior has surged. Studies have been conducted on EF in relation to age-related changes (Cinan, 2006; Yeniceri & Altan-Atalay, 2011) and theory of mind (Etel & Yagmurlu, 2014; Karakelle & Ertugrul, 2012). Finally, in the domain of perceptual development, Soley and Hannon's work (2010) represents an intriguing example of cross-cultural research on musical rhythm preference among 4- to 8-month-old US and Turkish infants. This study provides evidence that infants show culture-specific preferences not only in face and speech perception as documented in previous research, but also in the domain of music starting in the first year of life. These findings add to the literature on the role of differential cultural experiences in modulating infants' focus of attention towards the acquisition of culture-specific perceptual and cognitive skills.

### **Policy-related developmental research**

Developmental research with its potential to inform policy-makers and practitioners has been growing since the 1980s. This emphasis is crucial in Turkey, where one-third of the population is between the ages 0 and 18 years, and about 33% of them are at risk of child poverty (TURKSTAT, 2014). One landmark example is the Turkish Early Enrichment Project (Kagitcibasi, Sunar, & Bekman, 2001). This project, implemented between 1982 and 1986 for disadvantaged families in Istanbul, involved a home- and community-based mother empowerment program as well as an educational preschool intervention for children. Mothers in the intervention group were trained to engage in developmentally-facilitating parenting and to scaffold their children in educational activities. At the completion of the project, compared to control children whose mothers did not participate in the program, trained mothers' children scored higher on cognitive outcome measures. The trained mothers also displayed more developmentally-facilitating caregiving (e.g., responsiveness, cognitive stimulation, autonomy granting), endorsed higher educational expectations for their children, and evinced greater efficacy for themselves than did the control mothers. At 7- and 19-year follow-up evaluations, positive effects of the mother training were still sustained for the intervention group, as evidenced by lower school dropout rates, better academic performance in adolescence, higher rates of college attendance, and greater socioeconomic success such as employment and life satisfaction

in young adulthood (Kagıtcıbası et al., 2001; Kagıtcıbası, Sunar, Bekman, Baydar, & Cemalcılar, 2009). These findings had important implications for educational policy in Turkey, resulting in a large-scale nationwide implementation of the early enrichment program through the cooperation of two ministries and the Mother-Child Education Foundation, a non-governmental organization.

Turkish researchers continue to establish evidence-based prevention and intervention programs for institutionalized children (Kazak Berument, 2013), disadvantaged preschoolers (Bekman, Aksu-Koc, & Erguvanli-Taylan, 2012) and school-aged children (Gulgoz, 2009). Also notable are the efforts of several Turkish academicians (Muderrisoglu, Uyan Semerci, Yakut Cakar, Karatay, & Ekim Akkan, 2013) who have recently launched a project in collaboration with UNICEF to evaluate the critical indicators of child well-being, with a view to enhance the social policies of the Turkish Ministry of Development for healthy human development.

## Conclusion

In 1960, McKinney, a Fulbright lecturer in Turkey, described research in psychology in its early stages as lacking vitality and vigor. Limited resources and funding opportunities for psychological research during the 1970s and 1980s were also noted (LeCompte, 1980). Developmental research has shown a steady growth in the past three decades. Increasing funding opportunities and collaborative work of developmental researchers contributed to increased productivity and the development of larger scale studies. In conclusion, scientific inquiry into human development has matured to the point where several Turkish academicians vigorously pursue projects with national and international collaborations and gain more visibility in prestigious academic journals. Last but not least, an increasing priority is given to culturally-sensitive prevention and intervention projects that aim to enhance early childhood development by targeting the inequalities experienced among disadvantaged families.

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# Preconference Workshops of the 23<sup>rd</sup> Biennial Meeting of ISSBD

July 7, 2014 Shanghai, China

## SPECIAL REPORT



### ISSBD Preconference Workshops

ISSBD continues to offer multiple opportunities for its membership; as discussed during our last Biennial Meeting, in Shanghai, Early Career Scholars (i.e., participants who received a graduate research degree within the past seven years or who are in a graduate program leading to such a degree) were eligible to apply for travel grants funded by the Jacobs Foundation and ISSBD.

A committee was formed with Marcel van Aken as chair, and Suman Verma, Julie Bowker, Xinyin Chen,

Dan Li and Junsheng Liu as members. Suman Verma was in charge of the Travel Grant Committee for this preconference, which also included Anne Petersen, Toni Antonucci, Nancy Galambos, Robert Serpell and Ingrid Schoon as members. The activities in Shanghai were supported by the Conference Organizing Committee, especially Li Dan and Liu Junshen.

Through these joint efforts more than 100 early career scholars from around the world were granted travel support to attend the preconference workshops, including members who were involved in the ISSBD Fellowship





Programs (*Developing Country Fellowships* and *ISSBD-Jacobs Fellowships*).

On July 7, 2014, Shanghai Normal University (SHNU), together with the International Society for the Study of Behavioral Development (ISSBD), held the Pre-conference Workshop of the 23rd ISSBD Bi-annual Conference in the SHNU western conference center. As members of the ISSBD Bi-annual Conference Organizing Committee, Professor Li Dan and Professor Liu Junshen, of the psychology department of the College of Education, SHNU, participated in the organization of this pre-conference workshop. Related SHNU leaders and teachers from the International Affairs Office, the Department of Social Sciences Management and the College of Education offered great support to this large-scale academic activity. Before the dinner, Director General Wu Cheng, on behalf of the SHNU International Affairs Office, gave a warm speech to welcome the experts and scholars from all over the world.

This Pre-conference Workshop had invited five internationally recognized psychologists (Robert Coplan, Marc H. Bornstein, Hirokazu Yoshikawa, Robert Kail, Peter Smith) to preside over the five workshops on various themes, discussing the frontier topics of psychological research fields together with more than 130 young scholars from the United States, Australia, Cameroon, Nigeria, Brazil, and other countries.

For SHNU, it was a great honor to host the ISSBD Pre-conference workshop. This workshop offered an opportunity to the participating scholars and experts to have close interaction, and also created a relaxing and comfortable environment for academic exchange and built a platform for scholars and experts from all parts of the world to cooperate, as well as helping them become familiar with Shanghai before this meeting.

## Workshop Topics

### *Family Relations from a Cross-cultural Perspective*



The symposium with the theme “Family Relations from a Cross-cultural Perspective” was presented in Room 1, SHNU conference center by Professor Marc H. Bornstein, of the National Institute of Child Health and Human Development (NICHD), and was hosted by Teacher Wang Huaiyong, Psychology Department of the College of Education, SHNU.

The theme of Professor Bornstein’s lecture was “Parental Education and Culture.” He presented current research regarding child development and parental education; analyzing the similarities and differences in child development and parental education in different cultural backgrounds. Through discussion and co-analysis, the participating scholars considered effective parental education methods across cultures.

Professor Bornstein noted all children share some essential similarities, and that each child’s development was a combination of continuity and stability, even though children live under different cultural backgrounds, subject to varied parenting methods. Regardless of the varied experiences of developing of children, every child reflects its inborn “unique” part. Professor Bornstein also discussed the importance of parental co-parenting for child development. He noted that the preschool years are a critical period in a child’s development, and emphasized the need for parents to seize this critical period of child development, understand the characteristics of child development stages and optimize the child’s growth.

The meeting closed with a lively discussion between Professor Bornstein and the participating scholars. Every representative benefited from this meeting; not only did they learn about the diversity of child development and parental education methods in different cultures, but they gained a nearly inexhaustible motive force for future teaching and investigations into psychological development.

### *Writing and Publishing*



The symposium titled “Writing and Publishing” was presented in Room 2, SHNU conference center by Professor Robert Kail, of Purdue University, and hosted by Teacher Sun Hongyue, Psychology Department of the College of Education, SHNU.

Professor Kail discussed English writing skills and strategies to expedite the publishing of psychology papers. First, he asked, “What kind of paper will attract the reader’s attention?” “How do I avoid writing a paper that is too ordinary to interest readers?” Second, he discussed the structure of a psychology paper, including introduction, method, result and discussion with pointers on how to construct each section so that the paper will be accepted for publication. And what’s worth mentioning is that scholars from various countries participated online during the entire discussion; they were practicing while listening. By sharing, they found deficiencies in their writing and modified it. This method not only improved efficiency, but also promoted everyone’s enthusiasm for participation.





Regarding English writing, Professor Kail noted that a good psychology paper tells a wonderful story, using varied means to attract the readers' attention. The first step is to develop clearly organized writing, removing unwanted text information, because in this bustling society, people do not have the time to read irrelevant information. Second, start the paper with a good opening: "A good start is half the battle." Attract the readers' attention with a question or illustration from daily life instead of using dreary documentation at the beginning of the essay. Finally, he stressed the importance of the topic sentence in a paragraph and explained how to write a good sentence. For example, each sentence should begin with familiar information and end up with new information; this enables readers to read your article in a relaxed way.

For each part of the paper, Professor Kail gave a detailed exposition. For example, he said, in the introduction do not simply list previous studies, but show the readers that you are proposing new ideas and new perspectives based on past research. Explain how you got the research idea, and which part is innovative. Paragraphs should be clear and logically coherent. In the results and discussion, you can tell a story, indicating how your conclusions support your hypothesis, so the readers can easily understand your reasoning. Give a strong ending, so that readers will not have a feeling that reading your article was a waste of time, but that it is a channel to gain a lot of useful information.



At the end of the discussion, Professor Kail offered further tips to improve paper writing. For example, you can improve your English writing and expression skills by rewriting the articles you read. He noted that just reading the papers of others is not enough to improve your English writing skills; you also need to write extensively. With constant practice, you may become a master at writing research papers.

### **Maximizing the social impact of research**

The symposium on "Maximizing the social impact of research" was presented in the SHNU conference center by Professor Peter K. Smith of London University, and hosted by Teacher Hu Tianyi, Psychology Department of the College of Education, SHNU.

First, Professor Smith talked about writing and promoting press releases. A clear, brief press release can highlight



the key points of a study, such that scholars who are new to the field and even lay readers can understand what you are doing in your research. He said you need to use multiple channels of communication, and focused on the use of press conferences, television interviews or Skype to effectively maximize the social impact of studies. Typically, the process of

holding a press conference is strict, with specific requirements to be followed. Generally, the press release for a news conference is limited to one page in length. It is critical to compress the report on your research purpose and findings onto this one page. After explaining these basic concepts, Professor Smith and the scholars in attendance talked for 40 minutes, mainly about the outline to be used in writing a press release. Every part of the press release must be taken seriously. The headline needs to introduce a question or render a conclusion. The body should be simple and clear so that people can look through it quickly and avoid unnecessary detailed information. Before the meeting, scholars in attendance had prepared press releases on their studies. At this stage in the workshop, scholars had 40 minutes to communicate with each other about their own press releases, and to make appropriate modifications in accordance with the guidance they received. In order to train the scholars to face interviews, Professor Smith prepared a mock interview; he said, you need to make your main points known to others with the help of outlets such as radio, television, and SKYPE. In this session, scholars needed to bring one-on-one mock interviews to explain their research in a limited time. Professors and other scholars gave appropriate comments.



Second, Professor Smith gave some recommendations: a) to use social media to promote your work; b) to provide rich content and invite other scholars to work with you; and c) to use campus media to publicize and expand your research.

Third, Professor Smith re-stressed the importance of social media. He advised scholars to create networks displaying their work, making use of school media. In addition, scholars can use We-media, posting research-related content on a blog, micro-blogs and We-chat.



### Peer relations from a cross-cultural perspective



The symposium with the theme “Peer relations from a cross-cultural perspective” was presented in Room 5, SHNU conference center, by Professor Robert Coplan, of Carleton University, and hosted by Teacher Liu Junsheng, Psychology Department of the College of Education, SHNU.

First, Professor Robert Coplan invited scholars from various countries to introduce themselves. The scholars mentioned their current research studies and areas of interest, so that they had a better understanding of each other. Second, Professor Coplan discussed peer relations between children from a cross-cultural perspective. Interactions with playmates enable children to make a comparison between the outside world and themselves through everyday feedback, as described in expositions such as Bandura’s social learning theory and Vygotsky’s self-system theory. Peer relations in general help us to gain support and establish close relationships with others. Professor Coplan stressed the fact that peer interactions are horizontal relationships, whereas parent-child interactions are vertical relationships. He noted that the Bible says solitude is not good for humans. Peer groups serve many functions, such as conveying cultural values.



Despite some negative effects of peer relations, such as peer pressure and bad attitudes, peer relations also inspire children’s development of sociality and social cognitive ability, promoting perspective taking, conflict solving skills and the evolution of pro-social behavior. Nevertheless, he noted that negative peer relations can sometimes promote mental illness, including psychopathology.

Professor Coplan then introduced common research methods and their advantages and disadvantages in measuring peer relations, in particular peer nomination, mother or teacher nomination, the child’s self-report, and observation. The main advantage of peer nomination was that, because each child has more than one evaluator, the multiple peers can reveal a lot of inside information. The main drawback of peer nomination is that the children’s credibility can be doubtful. Child nomination also involves ethical issues; children who are nominated for negative traits may see an adverse impact on their peer relations. The main advantage of teacher and parent nomination is that it saves time and effort: both parties are familiar with the child, and no adverse effect on the child arises. However, the main drawback was that observers were mostly untrained; they had less expert knowledge about children; and parents and teachers may be too prone to offer reports with a subjective bias. The observation method has many advantages, such as high efficiency, easy access to detailed information, and targeted behavioral information. The disadvantage of observation is the expense involved, as well as environmental and time restrictions. Professor Coplan concluded that best practice is to use multi-methods to pursue co-measurement.

For the problem of a shy child, a social agent or friendly peer can be engaged to help the child to socialize.

Finally, Professor Coplan divided the participants into several groups to discuss the theme “Peer relations from a cross-cultural perspective.” They engaged in intensive discussions and made group presentations disclosing their initial assumptions; they learned from each other and benefited greatly under the guidance of Professor Robert Coplan.



### Methods in Research on Public Policy and Child Development

The symposium on “Methods in Research on Public Policy and Child Development” was presented in Room 101, SHNU Foreign Guesthouse, by Professor Hirokazu





Yoshikawa, of New York University, and hosted by Teacher He Huihua, Preschool Education Department of the College of Education, SHNU.

In the symposium, Professor Hirokazu first showed the time line of this symposium, then divided scholars from around the world into pairs, to discuss their country, role, organization, research field, favorite foods, etc. This reduced the discom-

fort among strangers and enhanced their understanding of each other.

In the first part of Prof. Hirokazu's lecture, he discussed national policies toward children, and highlighted the United Nations Convention on the rights and interests of the child. He compared the sustainable development goal of 2015-2030 and the millennium development goal of 2000-2015, distinguishing their respective principles and processes. Next he examined the following two problems: 1) the eradication of poverty while the global environment is getting worse; and 2) clarifying global development goals for children's early development. He explained the evaluation of child development, giving Pakistan's evaluation research on parenting intervention as an example. He also elucidated such topics as research design, hypotheses, and the development testing instruments. At the end of this section, he invited Carlos Nieto, Meredith O'Connor, Shipra Suneja and Namita Bhatt to introduce their own research.

Second, Professor Hirokazu spoke about translating research achievements into public policy. He started with several short videos of the Harvard University Research Center on child development and solicited comments from the attendees on inspirations obtained from the videos. He quoted several passages about child development stages and stressed the important role that the simplified model played in the process of passing research achievements on to the public. Additionally, he encouraged attendees to use plain language when explaining research results to the public. He presented the steps to create an effective simplified model: 1) identify the wrong framework; 2) use brainstorming, polls and feedback strategies to overcome misconceptions and identify a simplified model based on evidence. After a brief discussion of the simplified model of the railroad food supply system, he introduced the element analysis method, describing the difference between laboratory research theory and clinical research theory, and explained element analysis application in testing predictor variables of different effect sizes. This deepened the attendees' understanding of element analysis.

In the afternoon, Professor Hirokazu spoke about the role of evaluation. He described the design principles of experiments and quasi-experiments, and then explained the agent, the modulation effect of the experiment, and the steps to create an intermediary model. Each operational step was illustrated in detail and accompanied by charts that were clear and easy to understand. He introduced the exogenous and endogenous variables in a quasi-experiment, showing a breakpoint regression design, and presented the methods and results with a case study on the



Indian farmer as an example. After the explanation, Professor Hirokazu asked the attendees to discuss research with experimental and quasi-experimental designs, in order to deepen their understanding of the methods. Professor Hirokazu then illustrated the hybrid method of quality and quantity in policy evaluation research, stressed the shortcomings of using a quantitative evaluation alone. He pointed out that in the intervention process, asking five questions could effectively solve the "no effect, no agent" situation that appeared in using quantitative evaluation, and he also explained how to choose methods. He said that in the process of selection, the research design, data collection forms, and sample size all need to be taken into consideration. What's more, he invited some scholars to talk about the advantages of using the hybrid method, or about the problems they encountered in using quantitative or qualitative research.

The attendees benefited from Professor Hirokazu's detailed discussion of national policy, and the methods of studying child development. This symposium created opportunities for scholars from around the world to share and obtain the latest research dynamics, and scientific research methods. It provided a platform for exchange, cooperation, and the promotion of academic development.



This workshop was conducted in a free and relaxing interactive way. In addition to the discussions in the meetings, the tea break and dinner time also provided channels for scholars to get to know each other. This flexible communication method gave the worldwide scholars a different experience of knowing one another. The ISSBD

Pre-conference Workshop has become a bridge to help scholars to get familiar with each other and exchange academic experience.



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# Call for Proposals for Regional Workshops

ISSBD has a long-standing history of organizing regional workshops that help identify and discuss core issues with international and regional approaches and provide opportunities for learning, networking, and professional collaboration (see the list of regional workshops on ISSBD website: <http://www.issbd.org/ContentDisplay.aspx?src=regionalworkshops>). Such workshops facilitate collaborations by forming research groups and creating avenues for resource sharing. Regional

workshops play a significant role in capacity building of young scholars.

Proposals for organizing such workshops should be sent to Xinyin Chen, President, ISSBD ([xinyin@gse.upenn.edu](mailto:xinyin@gse.upenn.edu)), along with a preliminary budget. ISSBD provides financial assistance of up to \$ 40,000 for approved proposals. The guideline for workshop proposals can be found on ISSBD website: <http://www.issbd.org/ContentDisplay.aspx?src=regionalworkshops>



# Workshop on Cognitive and Socio-Emotional Development across the Lifespan

Geneva, 3-5 September 2015

On behalf of the International Society for the Study of Behavioural Development (ISSBD), a workshop is organized for early career scholars – up to 7 years after receiving the highest degree – interested in cognitive and socio-emotional development across the lifespan. This 3-day workshop will bring together experts in lifespan psychology and junior researchers working in lifespan development, child development or aging. The workshop includes both theoretical lectures and lab sessions, and is designed to be highly interactive. Introduction to new methods in lifespan research as well as updates of core conceptual questions in lifespan development will be given. Methodological issues will address topics such as analyses of change, short-term intraindividual variability, combining experimental and longitudinal designs, and measuring everyday behavior. Conceptual discussions will cover a large spectrum of cognitive and socio-emotional domains. Participants will also have the opportunity to present their own research in the form of a poster.

The workshop will host up to 40 participants. All costs (registration, lodging in university residence, meals) will be covered for the three days, except for the travel costs which participants have to secure themselves. Participants who are interested should send an application, including:

- A letter of intent to participate in the workshop
- An abstract for poster presentation\*
- A letter of support from a senior researcher/supervisor or Head of department confirming registration and/or progress in postgraduate studies (doctoral program) / Postdoc activities
- A short CV (including main publications)

\* Applications may be submitted in either English or in French.

Applications should be sent by May 31, 2015 on the workshop website: [www.unige.ch/fapse/ISSBDworkshop/](http://www.unige.ch/fapse/ISSBDworkshop/)

## Main dates

- Application deadline – May 31<sup>st</sup>, 2015
- Notification of acceptance – June 15<sup>th</sup>, 2015
- Workshop – September 3<sup>rd</sup>-5<sup>th</sup>, 2015
- Scientific writing workshop – September 2<sup>nd</sup> or 6<sup>th</sup>, 2015

## Speakers

- Anik de Ribaupierre – Group of Developmental and Differential Psychology, University of Geneva, Switzerland.
- Alexandra Freund – Department of Developmental Psychology: Adulthood, University of Zurich.
- Paolo Ghisletta – Methodology and Data Analysis Unit, University of Geneva, Switzerland
- Christopher Hertzog (discussant) – Adult Cognition Lab, Georgia Institute of Technology, Atlanta, USA.
- Jacques Juhel – Center for Research in Psychology, Cognition and Communication, University of Rennes, France.
- Daniela Jopp – Institute of Psychology, University of Lausanne, Switzerland.
- Matthias Kliegel – Cognitive Aging Lab, University of Geneva, Switzerland
- Nathalie Mella – Group of Developmental and Differential Psychology and Cognitive Aging Lab, University of Geneva, Switzerland.

The workshop will be preceded / followed by a one day training workshop on scientific writing, led by Robert Kail, Purdue University, who has a high expertise in scientific journal editorship (e.g., *Psychological Science*). This interactive workshop will include several lessons, each focusing on specific heuristics for scientific writing in psychology; participants will practice those heuristics actively. To accommodate a larger number of participants, two such days will be organized: September 2, and September 6. Please indicate in your application if you wish to attend and which date is impossible.

The number of participants is limited (40 for the main workshop; 30 for the scientific writing workshop). Applicants from French-speaking regions are especially encouraged to apply, and posters in French will be accepted.

## Organizers

- Anik de Ribaupierre – Group of Developmental and Differential Psychology, University of Geneva, Switzerland.
- Matthias Kliegel – Cognitive Aging Lab, University of Geneva, Switzerland
- Nathalie Mella, Group of Developmental and Differential Psychology and Cognitive Aging Lab, University of Geneva, Switzerland.



# 2015 Oswald-Külpe-Prize for the Experimental Study of Higher Mental Processes

Honoring the great tradition of the Würzburg School of Psychology and its founder Oswald Külpe, the University of Würzburg invites nominations for its Oswald-Külpe-Prize, which is conferred biennially in a special ceremony.

The purpose of the award is to recognize exceptional scientific contributions to the experimental study of higher mental processes. It will be presented in Würzburg on the 20th of November 2015. The Külpe-Prize includes a cash prize of € 4,000 and the recipient's expenses for traveling and accommodation. Previous laureates were Profs. Asher Koriat, University of Haifa (Israel), Richard E. Nisbett, University of Michigan (USA), Michael Tomasello, Max-Planck-Institute for Evolutionary Anthropology, Leipzig (Germany), Wolfgang Prinz, Max-Planck-Institute for Human Cognitive and Brain Sciences, Leipzig (Germany), and Anke Ehlers, University of Oxford (UK).

Eligible are scientists of all nationalities and without any age restrictions. The only criterion is the candidate's proven excellence in experimental research on higher mental processes. This may pertain to different areas of psychology.

Self-nominations are possible.

Nominations must be received by the 15th of July 2015. They should include

- a letter addressing the candidate's merits with respect to the criteria of the award;
- a current curriculum vitae and bibliography;
- the names of two distinguished colleagues who are willing to write letters of recommendation.

Materials should be sent to the chair of the psychology department:

Prof. Paul Pauli  
LS Psychologie I  
Universität Würzburg  
Marcusstr. 9-11  
97070 Würzburg  
Germany

For further information write to:  
[pauli@psychologie.uni-wuerzburg.de](mailto:pauli@psychologie.uni-wuerzburg.de)

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# News

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## News from the Early Career Representative

*Josafá da Cunha*

Federal University of Parana, Brazil

E-mail: josafas@ufpr.br

ISSBD is committed to meeting the needs of early career scholars who are interested in human development throughout the lifespan. They are broadly defined as scholars who are either working towards a PhD or whose terminal degree has been awarded in the last seven years. The initiatives promoted by ISSBD to promote the professional development of early career scholars include a number of activities. Early in my trajectory as a developmental scholar I was able to attend an ISSBD regional workshop, which was a career changing event!

It is thus a great honor to serve ISSBD representing early career scholars from around the world, and I am very thankful for this unique opportunity to help create and sustain opportunities that can influence the future of the field. As the fourth early career scholars representative on ISSBD, I hope to build on the initiatives developed by the representatives who served before me: Zena Melo, Jaap Denisen and Julie Bowker. They have

done outstanding work by advocating and promoting new opportunities for students and attracting new professionals to the Society.

While continuing the practices that have contributed to successful engagement of ISSBD Early Career Scholars, I will work to enhance the experience of students and new professionals. Fostering such engagement is a great responsibility, and I will dedicate special attention to teamwork building, which will enable the ECS representatives to accomplish more than single representatives to the council could. I will also devote efforts to further the networking opportunities available to emerging scholars across the year, especially during off-conference years. In addition to the communications sent through the listserv, we will invest in professional development opportunities, expand the resources available at the Early Career Scholars page on the ISSBD website, and pilot online capacity-building seminars.

In the next months you will continue to hear from me, and I would like to invite you to write me an email with your suggestions on how ISSBD can better meet your needs as an early career scholar. Please submit your idea or suggestion by email (josafas@ufpr.br).

I look forward to hearing from you!  
Josafá da Cunha



## MAJOR CONFERENCES OF INTEREST

### **June 20–24, 2015**

*European Society for Child and Adolescent Psychiatry (ESCAP) Congress*

Location: Madrid, Spain

Website: <http://www.escap2015.com/>

### **July 12–16, 2015**

*InterAmerican Congress of Psychology (SIP)*

Location: Lima, Peru

Website: <http://sip2015.org/>

### **September 2–5, 2015**

*Regional Conference of Psychology 2015 (IUPsyS-sponsored)*

Location: Armenia, Colombia

Website: <http://congresocolombianodepsicologia.com/en/introduction/welcome.html>

### **September 8–12, 2015**

*European Conference on Developmental Psychology*

Location: Braga, Portugal

Website: <http://ecdprbraga2015.com/>

### **October 14–16, 2015**

*7th Conference on Emerging Adulthood*

Location: Miami, USA

Website: <http://www.ssea.org/>

### **October 16–19, 2015**

*World Congress of the World Federation for Mental Health (WFMH2015)*

Location: Cairo, Egypt

Website: [www.wfmh2015.com](http://www.wfmh2015.com)

### **October 23–24, 2015**

*6th FPR-UCLA Interdisciplinary Conference A Critical Moment: Sex/Gender Research at the Intersection of Culture, Brain, and Behavior*

Location: Los Angeles, USA

Website: <http://www.thefprconference2015.org/>

### **November 8–13, 2015**

*2nd East African Regional Conference of Psychology (EARCP2015)*

Location: Nairobi, Africa

Website: [http://psyske.org/index.php?option=com\\_content&view=article&id=84&Itemid=93](http://psyske.org/index.php?option=com_content&view=article&id=84&Itemid=93)