Prevalence and Co-Occurrence of Addictive Behaviors Among Russian and Spanish Youth: A Replication Study

Jennifer Tsai[1], Jimi Huh[1], Bulat Idrisov[2,3], Artur Galimov[1], Jose P. Espada[4], María T. Gonzálvez[4], and Steve Sussman[1]

Abstract

Recently, an addiction matrix measure was assessed among U.S. former alternative high school youth. This presentation seeks to examine the generalizability of findings using this measure among Russian and Spanish high school adolescents. Latent class analysis was used to explore addiction subgroups among adolescents in Russia (average age = 16.27; $n = 715$) and Spain (average age = 14.9; $n = 811$). Last 30-day prevalence of one or more of 11 addictions reviewed in the previous work was the primary focus (i.e., cigarettes, alcohol, hard drugs, eating, gambling, Internet, love, sex, exercise, work, and shopping) among Russian youth, and last-30 prevalence of one or more of 8 addictions among Spanish youth (the three drug use items had not been included in the questionnaire for these youths). Results confirmed a two-class model (addicted class and non-addicted class) among both Russian and Spanish adolescents. The mean number of addictions reported was 1.39 ($SD = 1.78$) addictions among Russian youth and 1.56 ($SD = 1.68$) addictions among Spanish youth.

[1]University of Southern California, Los Angeles, CA, USA
[2]Bashkir State Medical University, Ufa, Russian Federation
[3]Boston University Medical Center, Boston, MA, USA
[4]Miguel Hernandez University, Elche, Spain

Corresponding Author:
Jennifer Tsai, Department of Preventive Medicine, University of Southern California, 2001 N. Soto Street, 315-25, Los Angeles, CA 90089, USA.
Email: tsaijy@usc.edu

The prevalence of the sample that constituted the "addicted group" in Russia and Spain was 32.2% and 28.6%, respectively. The most prevalent addictions (i.e., love, Internet, exercise) were similar. These results are similar to the findings previously reported for U.S. sample. Latent class structures for addictive behaviors are similar across international adolescent populations. Our results highlight the need to address multiple addictions in health education programming.

Keywords
multiple addictions, prevalence, co-occurrence, latent class analysis, addiction groups

Introduction

The idea that a variety of behaviors can be addictive as demonstrated by common features (e.g., appetitive effects, satiation, preoccupation, loss control; Sussman & Sussman, 2011) has become known as "addiction syndrome" (Shaffer et al., 2004) or "multiple addictions" (Sussman, Lisha, & Griffiths, 2011). For two main reasons, few studies have examined multiple addictions utilizing extensive measures of each addiction. First, assessment through use of multiple inventories takes a great deal of time, which may not be practical, particularly in large survey samples administered to general populations. Therefore, often only a few addictions can be measured at the same time. Second, there is a great deal of redundancy in the measurement of various addictions, which share many common features (e.g., appetitive motives, preoccupation). Such redundancy is burdensome to measure.

Several previous studies have examined multiple addictions as a matrix measure (e.g., Alexander & Schweighofer, 1989; Christo et al., 2003; Cook, 1987; Greenberg, Lewis, & Dodd, 1999; Haylett, Stephenson, & Lefever, 2004; MacLaren & Best, 2010; Najavits, Lung, Froias, Paull, & Bailey, 2014; Sussman et al., 2014). Cook (1987) used a matrix measure to identify prevalence and co-occurrence of addictive behaviors among a sample of 604 U.S. college students and found that the matrix measure was able to capture a high prevalence of addictive behaviors. Studies by Alexander and Schweighofer (1989), Greenberg, Lewis, and Dodd (1999), and MacLaren and Best (2010) also used a matrix measure for multiple addictions and found prevalence rates for addictive behaviors to be comparable to, if not higher than, those found by Cook (1987). The matrix measure allows individuals to self-report whether they are addicted or not addicted with one item per type of addiction arranged in a matrix format. The matrix measure is advantageous because it is practical, economical, and has the ability to tap into several addictions.

Sussman et al. (2014) examined the use of a multiple addiction item matrix among former continuation high school youth in the United States. Their study

examined last 30-day and lifetime prevalence and co-occurrence of 11 addiction items (i.e., cigarettes, alcohol, hard drugs, shopping, gambling, Internet, love, sex, eating, work, and exercise) as highlighted in their previous work (Sussman et al., 2011). Among former alternative high school youth, last 30-day and lifetime prevalence of being addicted to one or more addictions was 61.5% and 29.2%, respectively; the co-occurrence of two or more of these addictions in the last 30 days and over the lifetime was 37.7% and 61.5%, respectively. This is the only study that we know of that examines the convergent validity of the matrix measure for multiple addictions; convergent validity was found for cigarette, alcohol, other drug, sex, Internet, and exercise addictions. In addition, using a latent class analysis (LCA) approach, their study found a two-class latent class structure—a generally "Non-addicted" group (67.2% of the sample) and a "Work hard, play hard"- addicted group that had the highest prevalence in love, sex, exercise, Internet, and work addictions. A follow-up study using the same sample found that the prevalence rates of these addictions and the identified two-class latent structure were stable across two time points (Sussman, Pokhrel, Sun, Rohrbach, & Spruijt-Metz, 2015).

Prevalence estimates of self-reported addictions among adolescents in Russia and Spain, respectively, are limited. A report published by the Russian Federation Ministry of Health showed that the rates of addictions among adolescents registered by drug abuse clinics were < 1% for alcohol addiction and other illicit drug addictions (Kirzhanova, Grigorova, Kirzhanov, & Sidoruk, 2015). Little to no research exists for prevalence of behavioral addictions among Russian youth. The few studies on behavioral addictions among Russian adolescents found that 4.6% were addicted to the Internet, but 29.3% were overusing the Internet (Malygin, Antonenko, Vovchenko, & Iskandirova, 2011) and approximately 0.05% were addicted to gambling (Malygin, Gankov, Khvostikov, & Malygin, 2009).

Most studies in the Spanish adolescent literature regarding addictions present prevalence of use rather than actual addiction rates. There are no studies, to our knowledge, that study the prevalence of substance use addiction among Spanish adolescents. For other behavioral items, studies have shown that in the general population, 3% are addicted to shopping (Tejeiro, Espada, Gonzálvez, Christiansen, & Gómez-Vallecillo, 2016), 4.6% are addicted to working (Tejeiro et al., 2016), 6% to 8% are addicted to sex (Tejeiro et al., 2016), 2% are addicted to gambling (Tejeiro et al., 2016), and 18% are addicted to exercise (Antolín, de la Gándara, & García, 2015). A study conducted by Odriozola, Labrador, and Iglesias (2009) showed that among a sample of 12 to 14 year olds, 9% reported severe addiction to new technologies. Another study by Pérez, Monje, and De León (2012) found that 1.5% of adolescents suffer pathological dependence on phones and tablets.

The present study is the first to examine the use of a matrix addiction measure in multiple international adolescent populations. The goal of the current study

was to examine the prevalence of self-reported addictions among Russian and Spanish youth and to validate the results of identified latent classes from the aforementioned study conducted by Sussman et al. (2014) using data from Russian and Spanish adolescent populations, respectively. This article also seeks to highlight areas of concern for health and addiction prevention programming. We hypothesized that trends for the prevalence and co-occurrence of addictions as well as results for the identified latent classes among Russian and Spanish youth will be similar to that of the previous U.S. study.

Methods

Russian Sample

A convenience sample of nine schools in Russia was used. A total of 716 students were surveyed, but one student was excluded because all of the addiction items were not answered. Thus, subjects from Russia were 715 adolescents attending any of the nine high schools located in three of the following Russian cities: Sterlitamak (six schools), Ufa (two schools), and Karagaevo (one school). These schools were selected as a convenience sample by city officials to represent a cross section of their cities. Tenth grade students were randomly selected within each school to reflect approximately 15% of the school population. Mean age of subjects was 16.27 years ($SD = 1.02$), 48.46% ($n = 347$) were male, 29.05% were Russian, 18.02% were Tatar, 16.48% were Bashkir, and 36.45% were mixed and/or other race.

Spanish Sample

A convenience sample of students from six schools in Spain was selected. Participants from Spain were 811 adolescents that participated in the 1-year follow-up survey as part of a school-based tobacco prevention or cessation program, Project Ex (see Gonzálvez, Espada, Orgilés, Soto, & Sussman, 2015). Six schools from three cities were recruited as a convenience sample to participate: Elche (four schools), Crevillent (one school), and San Vicente (one school). Mean age of subjects was 14.90 years ($SD = 0.92$), 50.93% were male, and 91% were of Spanish nationality. A mean of 12 ninth to twelfth grade classes was selected per school, with a range of 8 to 19 classes across the six high schools (64% retention of those recruited at baseline was achieved).

Measures

Addictions. Both studies used a multiresponse addictions matrix item measure to assess the prevalence and co-occurrence of addictions. For comparison reasons, the same addiction categories created in the Sussman et al. (2011) review was

replicated in our study where possible. The matrix item was nearly identical in Russia to the U.S. study; however, it was modified slightly in the Spanish sample.

Russia. For the Russian sample, the same measure header and addiction categories were used as the United States. The final measure header for the Russian questionnaire was

> Sometimes people have an 'addiction' to a certain drug or other object or activity. An addiction occurs when people experience the following: they do something over and over again to try to feel good, for excitement, or to stop feeling bad; they can't stop doing this even if they wanted to; bad things happen to them or to people they care about because of what they are doing.

Following the header, subjects were asked, ''Have you ever addicted to the following things?'' and

> Do you feel you are addicted to them now (in the last 30 days). Twenty-three response categories were provided and a twenty-fourth response category allowed participants to indicate any addiction they felt were not addressed in the previous categories by asking, "Any other addiction? Please identify:____.

The categories were the following: cigarette smoking, e-cigarettes, alcohol drinking, marijuana use, other drugs (such as cocaine, stimulants, hallucinogens, inhalants, XTC, opiates, valium, or others), caffeine (coffee or energy drinks such as Red Bull), eating (way too much food each day, binge eating), gambling, Internet browsing (surfing the web), Facebook, Vkontakte (the Russian equivalent to the American Facebook)/Twitter/Odnoklassniki (a large social network service for classmates and friends), YM or other online social networking, texting (cell phone, WhatsApp, ICQ), online or offline videogames (PS3, xbox, Wii, Warcraft, CS), online shopping, shopping at stores, love, sex, exercise, work, stealing, religion, self-mutilation (cutting, skin picking, hair pulling), driving a car, and gossip. Only the 11 categories examined in the Sussman et al. (2011, 2014) studies were analyzed here. Similarly, marijuana was combined with the other drugs category to form another or hard (illicit) drug addiction. Internet browsing and online social networking categories were combined to create an Internet addiction category. Shopping at stores and online shopping categories were combined to create a shopping addiction category.

Spain. While the Spain questionnaire used the multiple-response addictions matrix, some modifications were made to the header and number of addiction categories presented. That is, the Spain questionnaire had a briefer measure header than the Russia and U.S. questionnaires, and only behavioral addiction

categories were assessed. The matrix was part of a larger study in which the evaluation of certain substances, behaviors, or activities was a secondary research objective. Reasons for the shorter heading and the removal of substance use addiction items from the addictions matrix were to reduce response fatigue and increase compliance of participants. The final header for the Spain questionnaire was "Sometimes people have an 'addiction' to a certain drug or other object or activity. Have you ever been addicted to the following things? Do you feel you are addicted to them now (in the last 30 days)?" Categories included in the Spain questionnaire were the same as the Russia and U.S. multiple addictions matrix with the exception of deletion of the following categories: cigarette smoking, e-cigarettes, alcohol drinking, marijuana use, other drug use, and caffeine. The Internet addiction and shopping addiction categories were created the same way as in the Russia data set (and the previous U.S. data set) by combining categories. To compare Spain results to the Russia and U.S. results, only 8 categories that corresponded with the 11 categories analyzed in the Russia and the United States were examined (i.e., eating, Internet, gambling, love, sex, shopping, exercise, work).

Ethics

All study procedures were approved by the Bashkir State Medical University IRB in Russia and the IRB at Miguel Hernandez University in Spain. All subjects were informed that participation was voluntary and had the option of withdrawing from the study at any time without penalty.

Analyses and Results

The mean number of addictions ever and in the past 30 days were 1.78 ($SD = 2.04$) and 1.39 ($SD = 1.78$) addictions among Russian youth, respectively, and 2.31 ($SD = 1.97$) and 1.56 ($SD = 1.68$) addictions among Spanish youth, respectively. Lifetime prevalence of the 11 addictions in Russian youth from highest prevalence to lowest prevalence were the following: Internet (51%), exercise (28%), love (18%), eating (15%), shopping (12%), work (11%), sex (9%), gambling (8%), cigarettes (5%), alcohol (1%), and other drugs (<1%). Last 30-day prevalence of addictions in Russia youth from highest prevalence to lowest prevalence were the following: Internet (43%), exercise (23%), love (14%), eating (11%), work (9%), shopping (8%), sex (7%), gambling (6%), cigarettes (3%), alcohol (1%), and other drugs (1%). Among Spanish youth, ever (lifetime) prevalence of addictions from highest to lowest prevalence were the following: Internet (57%), exercise (38%), love (28%), eating (21%), shopping (19%), gambling (18%), sex (17%), and work (6%); and last 30-day prevalence of addictions from highest to lowest prevalence were the following: Internet (42%), exercise (27%), love (21%), shopping (14%), sex (13%),

Table 1. Lifetime and Last 30-Day Prevalence of Addictions in Russia and Spain Samples.

	Lifetime (%)		Last 30 days (%)	
	Russia	Spain	Russia	Spain
Internet	51	57	43	42
Exercise	28	38	23	27
Love	18	28	14	21
Eating	15	21	11	10
Shopping	12	19	8	14
Work	11	6	9	4
Sex	9	17	7	13
Gambling	8	18	6	10
Cigarettes	5	–	3	–
Alcohol	1	–	1	–
Other drugs	<1	–	1	–

eating (10%), gambling (10%), and work (4%). Lifetime co-occurrence of two or more addictions among Russian and Spanish youth were 40.14% and 54.76%, respectively. Co-occurrence of two of more addictions in the last 30 days were 31.84% and 38.94% among Russian and Spanish youth, respectively (see Table 1). All descriptive statistics were run in SAS Version 9.4 (2014–2015; SAS Institute, Cary, NC, USA).

Two separate latent class analyses were conducted to determine addiction group categorization based on students' responses to the 11 dichotomous (yes/no) last 30-day behaviors for the Russia and Spain samples, respectively. LCA is a method that identifies latent subgroups within a heterogeneous population (Collins & Lanza, 2010). By analyzing observed response patterns in cross-sectional data, LCA clusters groups of people into the smallest number of latent (unobserved) classes without compromising parsimony and interpretability of groups (Muthén & Muthén, 2000). Several model-fit indices were evaluated to assess optimal LCA groups, including Akaike information criterion (AIC), Bayesian information criterion (BIC), entropy, and Lo-Mendell Rubin (LMR) p values. Overall interpretability of each class was also considered to select the best fitting models. Lower AIC and BIC indicate better model fit. Higher entropy values indicate greater distinction between latent classes. The LMR likelihood ratio tests whether n versus $n-1$ classes are the more optimal latent class model of the data. A significant LMR p value ($p < .05$) indicates that a $n-1$ class is better than n class model. All LCA models were analyzed using the MPlus Version 6.0 software program (Muthén & Muthén, 1998/2011).

LCA of the 11 Addictions in Russia and 8 Addictions in Spain

Results of our analysis suggested a two-class solution for both the Russia and Spain samples. In the Russian sample, we failed to find a difference between the two-class and three-class models (LMR, $p = .120$). Other model-fit indices including AIC, BIC, and interpretability of each latent class also suggest the two-class solution is the best model.

While all fit indices did not converge in determining between a Class 2 and Class 3 model in the Spanish sample (e.g., according to LMR $p = .003$ for the three-class solution), consideration of the other model fit and misclassification indices (i.e., BIC) indicated the two-class solution was optimal. Indeed, Nylund, Tihomir, and Benght (2007) ran a series of Monte Carlo simulations and found that BIC consistently identifies the number of latent classes correctly and is more reliable than other information criteria (see Table 2).

Given the high reported prevalence on behavioral addiction items and relatively low reported prevalence on drug addiction items, we alternately labeled members of Latent Class 1 in Russian and Spain as a "Work hard, play hard" addicted group. The prevalence of membership in the "Work hard, play hard" addicted group for Russia and Spain were 32.2% ($N = 230$) and 28.6% ($N = 232$), respectively. In both Russia and Spain, members in this group reported higher prevalence of addictions on items in the addictions matrix compared with members in Latent Class 2, the generally "Non-addicted" group. Members of the "Work hard, play hard" addicted group in Russia reported highest prevalence on Internet use (83.5%), exercise (55.5%), and love (42.9%); similarly, in Spain, the highest prevalence was Internet use (78.1%), love (49.4%), and exercise (47.6%). Although drug-related items were not measured in the Spain data set, we found similar patterns of addictions across both populations.

Table 2. Indicators of Fit for Models (Last 30 Days) in Russia and Spain Samples.

	AIC		BIC		Sample adjusted BIC		Adjusted LMR p value		Entropy	
Class	Russia	Spain	Russia	Spain	Russia	Spain	Russia	Spain	Russia	Spain
1	4640.117	5503.123	4690.412	5540.709	4655.485	5515.305	–	–	–	–
2	**4060.969**	**5129.409**	**4166.132**	**5209.280**	**4093.101**	**5155.295**	**.000**	**.000**	**0.794**	**0.650**
3	4028.334	5101.952	4188.364	5224.107	4077.230	5141.541	.120	.003	0.800	0.607
4	–	5089.160	–	5253.600	–	5142.454	–	.163	–	0.682

Note. Boldface indicates values of selected model. AIC = Akaike information criterion; BIC = Bayesian information criterion; LMR = Lo-Mendell Rubin.

Given the low prevalence of addictions overall, members of Latent Class 2 were labeled as the generally ''Non-addicted'' group. Prevalence of membership in the ''Non-addicted'' group was much higher in both populations. Within the Russian ''Non-addicted'' group, addiction prevalence was highest for Idnternet use (24.3%). Prevalence within this group for all other addictions was less than 10%, with 0% prevalence for drug (cigarette smoking, alcohol, and other drugs) and eating addictions. Results were similar for the ''Non-addicted'' group in Spain, with the highest prevalence for Internet use (23.5%) and exercise (17.0%) and less than 10% prevalence on all other addictions (see Table 3).

Discussion

This is the first study to replicate results and methods previously conducted using the addictions item matrix using Russian and Spanish populations. The last 30-day prevalence of addictions for Russia and Spain adolescents reported in this study replicated results of the Sussman et al. (2014) study. Similar to U.S. results, highest addiction prevalences for Russia and Spain youth were to Internet, exercise, and love. The prevalence of these addictions in all three sample groups suggest that youth are identifying as suffering from behavioral addictions more than substance addictions. Furthermore, the co-occurrence of two or more addictions was greater than 30% in all three

Table 3. Results of Latent Class Analysis (LCA) Retaining Two Classes for Russia and Spain Samples.

	Russia Class 1: "Work hard, play hard" group (32.2%, n = 230)	Spain Class 1: "Work hard, play hard" group (28.6%, n = 232)	Russia Class 2: "Non-addicted" group (67.8%; n = 485)	Spain Class 2: "Non-addicted" group (71.39%; n = 579)
Cigarettes	0.093	–	0.000	–
Alcohol	0.022	–	0.000	–
Other drugs	0.013	–	0.000	–
Eating	0.336	0.217	0.000	0.045
Gambling	0.170	0.205	0.012	0.044
Internet	0.835	0.781	0.243	0.235
Shopping	0.236	0.360	0.010	0.024
Love	0.429	0.494	0.003	0.068
Sex	0.221	0.369	0.006	0.014
Exercise	0.554	0.476	0.072	0.170
Work	0.238	0.117	0.019	0.003

samples (Unite States, Russia, and Spain), suggesting identification with multiple addictions may be more prevalent among youth than previously thought. The same two-class solution found in U.S. former continuation high school youth was replicated using LCA in both the Russian and Spanish populations. In both studies, a generally "Non-addicted" group and what can be labeled as a "Work hard, play hard" addicted group with an invested interest in Internet, exercise, and love were suggested. This two-class structure found in all three sample populations may support the theory that a "generic" perspective of addictions may be appropriate in addiction prevention and treatment.

These results suggest that drug abuse prevention programming should seek to integrate behavioral and multiple addiction concepts in addition to "generic" perspectives of addiction within the curriculum. Although adolescents who fall in the "Work hard, play hard" addicted group exhibit higher prevalence of behavioral addictions (e.g., Internet use, sex, exercise), they may be more susceptible to substance use addictions as they grow older. That is, substance use addictions may take longer to manifest, may be recognized at older age, or may emerge as substitute addictions as adolescents become adults. Sussman et al. (2015) found that after a 1-year period, U.S. adolescents who fall within the addiction class tend to stay in the addiction class; however, there was apparent switching of addictive behaviors. Thus, while adolescents may report higher prevalence of behavioral addictions, shifts toward substance use addictions may become more evident at follow-up. The inclusion of multiple addictions and behavioral addictions in drug prevention programming may help adolescents navigate broader concepts related to addiction rather than targeted addictive behaviors, which may be more useful to substance addiction prevention as these adolescents age and transition into and out of addictive behavior(s).

Limitations

There are several limitations of this study. One limitation is differences in the presentation of the addiction item matrix within the surveys. Specifically, modifications were made in Spain that included a shorter measure header and exclusion of drug addiction categories. This may have caused biases in sample reporting and calls into question the comparability of our results. However, similar trends in addiction prevalence and latent class identification were found in the Spain sample as in the other samples for the behavioral addictions.

Other limitations include cultural and age differences between our study samples and that of Sussman et al. (2014). Cultural acceptability of certain addictions was not captured in any of the studies which might affect how students self-report addictive behavior. For example, one may speculate that higher prevalence of love addiction among Spanish youth compared with Russian and American youth may be associated with more cultural acceptability of this behavior than in Russian or American cultures. Additionally, social desirability

in responses may have influenced self-reports of addiction, which might account for higher prevalence rates for behavioral addictions compared with substance use addictions despite high prevalence of substance use. Future research might examine the association of cultural acceptability with relative prevalence of these various addictions.

Additionally, the mean ages of both the Russia and Spain samples were younger than the U.S. sample (16.27 and 14.90 vs. 19.80 years old, respectively). This age difference may pose biases or indicate different developmental preferences in how addiction items are selected. Younger individuals may begin to explore behaviors that may lead to future addictions, while older youth have had more time to experiment with different behaviors and form an addiction to a certain object or activity. In addition, the Russian and Spanish samples are from general youth populations, whereas the former alternative high school youth have a history of difficulty in completion of high school (see Sussman et al., 2014). It is interesting that the same two-class LCA solution generalized across all three samples given the cultural, age, and school performance differences among the samples.

Finally, the same limitations presented in previous studies regarding addiction item matrix studies and LCA analyses remain in this study. That is, self-reported addictions can be considered "self-perceived addictions" rather than actual addictions, and these claims were unable to be verified through convergent validity in our analyses. Also, LCA is an exploratory approach; that is, group labeling is driven by the data analyzed and group labeling is often inferred by the data analyst(s). Despite the limitations of self-reporting addictions, the inability to establish convergent validity among our samples, and LCA, a similar two-class solution among all populations analyzed was seen, which may indicate that youth perceive and report these addictions consistently and a true two-class latent structure may exist among adolescents. Further research is needed to determine whether self perceived addictions are accurate representations of actual addictions using convergent validity and to confirm the existence of a true two-class latent class structure using LCA.

Conclusion

The present study contributes to a body of knowledge on prevalence, co-occurrence, and generalizability of multiple addictions latent-class structure, using an addiction matrix measure, as applied to Russian and Spanish adolescents. As with previous studies, findings of this study highlight the high prevalence and co-occurrence of addictions among youth, particularly behavioral addictions. Multiple addictive behaviors may be reasonably tapped using an addiction matrix item measure. Future health education programs should seek to address both substance, behavioral, and multiple addictions for more comprehensive health prevention among adolescents.

Declaration of Conflicting Interests

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Author Biographies

Jennifer Tsai, MPH, is a doctoral student in the Preventive Medicine, Health Behavior Research Program at the University of Southern California. Her research focuses on behavioral addictions, namely problematic Internet use and Internet addiction. Other areas of interest include substance use and risky sexual behavior prevention interventions among adolescents and translational science. She received her of Masters in Public Health from the Keck School of Medicine, University of Southern California.

Jimi Huh, PhD, is assistant professor of Research of Preventive Medicine at University of Southern California. Her expertise is in applying novel study designs and advanced quantitative analytic techniques to maximize information from prevention/intervention research data. Her research focuses on unpacking ''variationsrdquo; in people's health behaviors that tend to reoccur at great frequencies (e.g., smoking) and require moderation (e.g., sun protective behaviors). Such variations represent the inherent heterogeneity in and the dynamics of human behavior at various levels of observations. In particular, her research has focused on three main types of variation: heterogeneous subgroups, unpacking random effects and residuals, and micro-level, health behavior process. She uses novel modeling strategies and techniques to understand micro-level processes that underlie variation in people's responses to behavior-change interventions and the unfolding of their health behaviors over time, with special emphasis on multilevel modeling, mixed effects location scale model, mixture growth curve modeling, and latent class/transition analysis. Her recent projects include examining ecological contexts of smoking using Ecological Momentary Assessment (EMA) through mobile technologies to better understand the real-time, multi-level contexts of health behaviors including cigarette use and obesity-related outcomes.

Bulat Idrisov is a National Institute on Drug Abuse (NIDA) International Program INVEST Drug Abuse Research Fellow at Boston University Medical Center. Dr. Idrisov completed his medical training in pediatrics and internal medicine in Russia and received a Fulbright Scholarship to complete his Master of Science in Global Health Policy and Management at Brandies University in the Heller School where he focused on global health systems and healthcare policy. His current research is centered on HIV, substance use and healthcare systems.

Artur Galimov is a doctoral student in the Health Behavior Research PhD program at the Keck School of Medicine of USC. Dr. Galimov earned his MD degree majoring in pediatrics from Bashkir State Medical University (Ufa, Russia). His research interests mainly focused on addiction sciences and HIV, specifically on tobacco and drug use etiology, risk factors, prevention and cessation.

Jose P. Espada, PhD, is full professor of Clinical and Health Psychology at Miguel Hernandez University, Spain. He graduated from the University of Murcia in 1996 and received his doctorate in 2003. He is the head of the research group Analysis, Intervention and Applied Therapy to Children and Adolescents.

His recent research projects focus on the evaluation of health promotion programs among adolescents.

María T. Gonzálvez, PhD, is assistant professor at Miguel Hernandez University in Spain. She graduated in 2011 with extraordinary award. She is a member of the research group Analysis, Intervention and Applied Therapy to Children and Adolescents. She works as clinical psychologist at the Psychological Services on campus. Her research focuses on the analysis of risk factors in substance abuse and the treatment of addictions.

Steve Sussman, PhD, FAAHB, FAPA (PhD, UIC, 1984) is professor of preventive medicine, psychology, and social work at University of Southern California. He studies addictions etiology, prevention, and cessation, and translation research. He has 500+ publications. His EBPs include Projects TNT TND, and EX. He is the Editor of *Evaluation & the Health Professions* (SAGE Publications). His newest text is: *Substance and Behavioral Addictions: Concepts, Causes, and Cures* (Cambridge, 2017).