

## **SOCIAL SKILLS AND EDUCATION ON DRUGS OF ABUSE FOR HEALTH PROFESSION STUDENTS**

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### **Abstract**

Telephone services for drug abuse intervention are effective to a widespread population. However, counselors demand extensive training. We describe the performance of health sciences undergraduate students at training in drug abuse and in motivational brief intervention as counselors in a call-center. Undergraduate students were presented with the Education Model in three phases: crash-course, on-site course and on-duty training. From 121 students, cognitive testing after the crash-course and after the on-site training showed differences between graduations. After the on-duty training, all students performed equally well in motivational interview skills, in patient protocol skills and professional attitude. In a smaller group, social skills were related to drug problems interventions. In conclusion, the training for undergraduates of health sciences courses enhanced professional skills and behaviors when addressing drug use problems from social and biological perspectives. Higher social skills are more related to better work skills necessary for counseling in a call-center for drug users and their families.

**Keywords:** adult education, drug abuse, drug dependence, health sciences professionals.

### **Introduction**

Telephone services for information and interventions for alcohol, tobacco and illicit drug abuse are an effective way of providing resources to a widespread population (Brown et al., 2007, Mensinger et al., 2007, Fernandes et al., 2010). In Brazil, VIVAVOZ is a nationwide toll-free telephone service to inform and emotionally support drug users and family members, based on scientific evidence. The service provides screening and brief interventions regarding drug use or family codependency. The call-center results from a partnership between the Brazilian government and Universidade Federal de Ciências da Saúde de Porto Alegre. The counselors performing telephone interventions at the call-center are undergraduates pursuing degrees in health professions. Graduate students act as immediate supervisors of the undergraduate counselors during their training in the call-center. The graduate students are professionals that had already received extensive education in brief intervention and drugs of abuse neuroscience, prior to starting to and during activities as counselors.

In general, health professionals are expected to screen and intervene in drug issues and to provide services to these patients and their families. Interdisciplinary activities with the participation of different health professionals may promote better care to drug dependent patients and social skills are important for interventions for difficult patients. However, little clinical exposure to addiction problems and a lack of focused teaching of addiction behavior are common in most health profession programs (Stimmel, 1998).

The objective of this paper is to describe the education model to train health sciences students as counselors in a drug abuse call-center, and their knowledge and skills performance at each training level. Additionally, we started investigations on the relation of social skills interference in training outcomes as counselors.

## **Material and Methods**

The Health Sciences Student Interdisciplinary Education Model for Drug Abuse Prevention and Treatment is based on three-stages where the educational approaches are collectively planned: a) repetition and reinforcement of main ideas, content and skills; b) group integration and linking of ideas during of the course; c) constant supervision; d) learner-focused training strategies; e) beginning skills teaching in small-group utilizing role-play of simulated or real cases; f) thorough practice sessions in the call-center under supervision; and g) continuous testing and feedback. These education methods were previously described (Barros et al., 2008).

In brief, the *first stage*, *Crash-Course* offers 40 h of training mainly in the fields of epidemiology and neurobiology of drug abuse. After, this course a written test performance was demanded by the university students, in which they should obtain grades greater than 50 % to be invited to receive additional training.

The *second stage* is the *on-site motivational interviewing and brief intervention training course*, with 20 hours of theoretical information and initial practices *on* the interview style to develop motivational interviewing skills in the call-center using standardized patient protocols (Stimmel, 1998). At this time, themes of brief intervention, transtheoretical model of stage of change and drug abuse and dependence diagnostic scales were debated. After this training the students were submitted to a motivational interview written test.

The *third stage* was the *on duty continuous feedback training*, with the students already at the call center practiced motivational brief intervention with a focus on the translation of scientific facts into everyday language to Brazilian clients through phone interviews. The evaluation was meant to verify if the students (counselors) could achieve competencies and

skills in drug abuse intervention and drug-related knowledge, while practicing in the call-center.

A subgroup of the counselors were also evaluated with the Social Skills Inventory - HIS (Del Prette & Del Prette, 2001). To systematically measure the motivational brief intervention skills in the call-center the Behavior Change Counseling Index (BECCI) was used after mathematical transformation to a 0-10 scale (Lane et al., 2005). A competencies checklist (ethics, professional attitude, personal interactions with staff members, verbal communication, problem resolution and completion of patient protocols) was developed and monthly applied by the supervisors. The counselor received continually feedback about their performance and reaching a score 80% or higher was the objective of the objective continuous training in the call-center (Fernandes et al., 2010). This training was the first contact for most undergraduate students with the subject of drugs.

### **Statistical Analysis**

Quantitative data analysis was conducted. Initially descriptive analysis using the testing scores were performed, followed by One-Way Analysis of Variance and post-hoc Tukey test were employed to examine to differences for each training phase and in respect to graduation course. Results from the Social Skills Inventory were used to rank the students and compare groups in respect to knowledge, work performance and motivational interviews skill with the Student's t Tests. Statistical significance was set at  $p < 0.05$ .

### **Results**

There were fifteen small groups of students receiving the educational Model in three phases, held from June 2005 to May 2011. There were from 70 to 80 college students enrolled in each one of the beginners' crash-courses offered. In total, 1161 university students from health sciences courses from different universities in the region enrolled and attended the *crash-courses*; 407 students completed the written test and had a score of 5 (out of 10) or more, and only 237 enrolled for the *on-site course* and were selected for the *on-duty training*. A group of the 121 students completed all program and evaluations, lasting around one year- 190 female (80%) students and 49 male students. The students were majoring in psychology (n=95); biology (n=37); medicine or nursing(n=26); biomedicine or pharmacy (n=27); social service (n=13); physical education or pedagogy (n=7); occupational therapy, physiotherapy or speech therapy (n=18); nutrition (n=16).

Of all 1161 university students enrolled in the *crash-courses*, around 35% finished the multiple choice written test (mean score  $8.0 \pm 1.0$ ). Among the group that passed the test, 58% students pursued the next training phase and enrolled in the second stage *on-site*

*motivational interviewing training* (mean score test of  $7.0 \pm 1.0$ ). Statistical difference was seen the post crash-course evaluation in respect to the graduation. Social service showed lower average than psychology, medicine or nursing and biomedicine or pharmacy. Physical education and pedagogy showed lower average than medicine or nursing. Even though the comparison of the evaluations of motivational interview knowledge testing after the on-site training showed differences between the courses ( $p < 0.002$ ), the post-hoc test did not detect the statistical difference, probably due to great variability between the individual in each major.

Overall, the mean time of training was around eight months, with 20 hours of activities per week. The students from the different graduation courses performed equally well when motivational interview skills were evaluated (BECCI scale -  $6.75 \pm 1.25$ ;  $p = 0.402$ ). The group majoring in occupational therapy, physiotherapy or speech therapy presented significantly lower scores for patient protocol skills than the majors in medicine or nursing, psychology and biomedicine or pharmacy ( $p < 0.001$ ). On the other hand, evaluation of professional attitude, during the on-duty training showed equal performance between graduations ( $p = 0.439$ ).

High HIS scores regarding relationship to strangers, like asking questions, public speaking, talking to unknown person, asking for a favor, differentiates the students as better in applying questionnaires to drug abusers and their families and registering completion of patient protocols ( $p < 0.05$ ).

## **Discussion**

There is need of more human resources trained to promptly recognize and efficiently treat patients with drug-related problems. It is also necessary to increase the number of health-care professionals that are motivated and capacitated to deal with substance abuse disorders using state-of-the-art techniques to convey evidence-based research results. The training for undergraduates attending a health profession course described here indicates that the proposed model can enhance health professional skills and behaviors when addressing drug use problems from a social and a biological point of view. We also present evidence that students with higher social skills will more easily achieve the educational outcomes.

Our results demonstrate that the educational model proposed for health sciences students at a drug call-center is useful to develop competence skills in neuroscience of drug dependence and using motivational brief intervention for individuals who abuse drugs and their family members, regardless the major the graduation students are pursuing. We propose that this model may be adapted and used in other countries in which there is need to include more education on drugs for future health care professionals. The main elements

for success of the model proposed included training based in context learning and using learner-centered teaching strategies in small group settings and collaborative interactions between teachers, supervisors and students. The complexity and diversity of activities and elements included in the training have also been seen to motivate interest in drug abuse knowledge and improve the number of future professionals who are qualified to work or research in the area, as already pointed out (Barros et al., 2008).

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### References

- Attkisson, C.C., Zwick R.(1982). The client satisfaction questionnaire. *Eval Program Plann.* 5, 233-237.
- Barros HM, Santos V, Mazoni C, Dantas DC, Ferigolo M. (2008). Neuroscience education for health profession undergraduates in a call-center for drug abuse prevention. *Drug Alcohol Depend.* Dec 1;98(3):270-4.
- Biener, L., Abrams, D.B. (1991). The Contemplation Ladder: validation of a measure of readiness to consider smoking cessation. *Health Psychol.*10(5), 360-365.
- HYPERLINK  
"http://www.ncbi.nlm.nih.gov/pubmed?term=%22Brown%20RL%22%5BAuthor%5D"  
[Brown RL](#) , HYPERLINK  
"http://www.ncbi.nlm.nih.gov/pubmed?term=%22Saunders%20LA%22%5BAuthor%5D"  
[Saunders LA](#) , HYPERLINK  
"http://www.ncbi.nlm.nih.gov/pubmed?term=%22Bobula%20JA%22%5BAuthor%5D"  
[Bobula JA](#) , HYPERLINK  
"http://www.ncbi.nlm.nih.gov/pubmed?term=%22Mundt%20MP%22%5BAuthor%5D"  
[Mundt MP](#) , HYPERLINK  
"http://www.ncbi.nlm.nih.gov/pubmed?term=%22Koch%20PE%22%5BAuthor%5D"  
[Koch PE](#) (2007). Randomized-controlled trial of a telephone and mail intervention for alcohol use disorders: three-month drinking outcomes. HYPERLINK  
"javascript:AL\_get(this,%20'jour',%20'Alcohol%20Clin%20Exp%20Res.');" \o  
"Alcoholism, clinical and experimental research." [Alcohol Clin Exp Res.](#) 31(8):1372-9.
- Del Prette, Z. A.P., Del Prette, A (2001). Inventário de habilidades sociais: manual de aplicação, apuração e interpretação. São Paulo: Casa do Psicólogo.
- Fagerström, K.O., Schneider, N.G. (1989). Measuring nicotine dependence: a review of the Fagerström Tolerance Questionnaire. *J Behav Med.* 12(2), 159-182.
- Fernandes, S., Ferigolo, M., Benchaya, M., Moreira,T.C., Pierozan, P., Mazoni, C., Barros, HMT (2010). Brief Motivational Intervention and telemedicine: A new perspective of treatment marijuana users. *Addictive Behavior.* 35, 750-755.
- Fleming, M.F., Murray, M. (1998). Medical Education Model for the Prevention and Treatment of Alcohol User Disorders. U.S. Department of Health and Human Services,

Public Health Service, National Institute of Health, National Institute on Alcohol Abuse and Alcoholism, Rockville, MD.

- Lane, C., Huws-Homas, M., Hood, K., Rollnick, S., Edwards, K., Robling, M.(2005). Measuring adaptations of motivational interviewing: the development and validation of the behavior change counseling index (BECCI). *Patient Educ Couns.* 56(2),166-173.
- Mensingher, J.L., Lynch, K.G., Tenhave, T.R., Mckay, J.R. (2007). Mediators of telephone-based continuing care for alcohol and cocaine dependence. *J Consult Clin Psychol*, 75(5):775-84.
- Mcconnaughy, E.A., Prochaska, J.O., Velicer, W.F. (1983). Stages of change in psychotherapy: measurement and samples profiles. *Psychotherapy*, 20, 368-375.
- Murray, M., Fleming, M.F. (1996). Prevention and treatment of alcohol-related problems: an international medical education model. *Acad Med.* 71,1204-1210.
- Stimmel B.(1998). *Utilizing Standardized Patient Protocols to Improve Clinical Skills in Identifying Tobacco, Alcohol and Other Drug Use*. Josiah Macy Jr. Foundation, New York.
- Substance Abuse and Mental Health Services Administration (SAMHSA) (1999). Office of Applied Studies:1998. National Household Survey on Drug Abuse. U.S. Department of Health and Human Services, Maryland.