Editorial

Understanding addiction – mediators and moderators of behaviour change processes: an introduction

GERHARD BÜHRINGER,^{1,2} HANS-ULRICH WITTCHEN³

1 Chair of Addiction Research, Institute of Clinical, Diagnostic and Differential Psychology, Technische Universität Dresden, Germany

2 IFT Institut fuer Therapieforschung Muenchen, Germany

3 Institute of Clinical, Diagnostic and Differential Psychology, Technische Universität Dresden, Germany

Abstract

We provide an introduction into a highly important research area for the improvement of preventive and therapeutic measures in the field of substance use disorders: a better understanding of core mediators and moderators of change processes, especially during critical phases like onset, progression, cessation and relapse. Based on a brief description of 12 papers on related projects we detail relevant research issues like the role of impaired cognitive control functions or the narrow “window of opportunity” for early interventions during adolescence. Copyright © 2008 John Wiley & Sons, Ltd.

Key words: addiction, change processes, allocation of interventions

We are pleased to have the opportunity to present in this journal a selection of 12 papers, providing an overview of an international conference in Dresden, Germany focussing on (1) a better understanding of core mediators and moderators of change processes in substance use disorders (SUDs), especially during critical phases like onset, progression, cessation and relapse, and (2) the utilization of these findings for a better allocation and effectiveness of interventions. Convened by the German Addiction Research Network Programme (GARN; www.psychologie.tu-dresden.de/bmbf/; 25 March 2008), and funded by the BMBF (Federal Ministry of Education and Research 2001–2008) the conference was organized by the Saxon-Bavarian Addiction Research Network ASAT (Allocating Substance Abuse Treatments to Patient Heterogeneity) which is especially dedicated to research on processes of change, the identification of patients problem profiles and the improved allocation of treatments and intervention in the care system. From the much wider scope of research topics of the German

Addiction Research Network Programme, the 12 papers in this issue were chosen, because they address various facets of the same scheme, namely how addiction research on mediators and moderators of substance disorders might be able to contribute to an improved understanding of natural and therapeutically induced change processes as well as improved allocation of interventions and care resources.

Based on a summary of research findings from the research network, Buehringer et al. (2008) presents a position paper on research needs in change processes highlighting the relevance and future research needs with regard to impaired cognitive control functions for a better understanding of individual risk differences for the development of SUDs as well as relapse after interventions. Within an epidemiological developmental framework Wittchen et al. present findings on early transitions processes from onset to regular use and SUDs, in a large community sample of adolescents and young adults. This paper demonstrates a predominantly rapid escalation of individual substance abuse patterns

and suggests the existence of rather narrow “windows of opportunity” for early interventions to prevent more severe forms of SUDs. McGue and Iacono (2008) present findings on the association of initiation of alcohol use and adult alcohol use disorders, interpret their data as being indicative for a general inherited liability to disinhibitory psychopathology. They stress the need for cross-cultural research to better understand the impact of different national alcohol use policy regulations for adolescents. Scherbaum and Specka (2008) analyse the present knowledge on the course of treated and untreated opiate addiction and conclude that the evidently complex interaction of formal interventions and environmental factors needs further clarification.

The majority of contributions cover treatment issues related to reduction, cessation and relapse. Babor et al. (2008) critically reflects on traditional research approaches, highlighting the limits of analyses of possible moderators of treatment outcome of patient-specific variables like socio-economic status or psychopathology and of mediators on intervention-specific aspects like the acquisition of drink refusal skills. He proposes as an alternative approach to expand the research to other, possibly more relevant environmental and health care-related factors within a public health perspective (Babor et al., 2008). Two short communications present different concepts of “treatment tailoring” like stepped care (Berner et al., 2008) or clustering patient (smoker) profiles (Collins et al., 2008). Freyer-Adam et al. and Grothues et al. analyse moderators of help-seeking rates (Freyer-Adam et al., 2008; Grothues et al., 2008). Schütz highlights the need for new human basic research paradigms, using functional magnetic resonance imaging (MRI) assessments, to better understand the – possibly person specific – relevance of either stressors, substance use associated cues or priming as triggers for relapses after treatment.

A final paper discusses key future research questions on mediators and moderators of change processes (Rehm, 2008) and related action, like (1) redefining SUDs, (2) better use of longitudinal and life-course studies, (3) improved analyses of behaviour change mechanisms and (4) better exploration of cross-cultural differences.

Altogether this special issue strives for shifting the sole emphasis in addiction research from large-scale black-box randomized clinical trials to the broader analyses of early innate or acquired vulnerability factors and proximal risk and protective factors and their mechanisms of interaction, in order to better understand and target person-specific patterns of onset, course and cessation of SUDs.

Acknowledgement

The first author's preparation of this manuscript was supported by a grant to the Chair of Addiction Research (grant no. 01EB0440) from the Federal Ministry of Education and Research (Bundesministerium für Bildung und Forschung, BMBF).

Declaration of interest statement

Dr. Bühringer states that he does not have a conflict of interest. Dr. Wittchen has a financial interest/arrangement or affiliation with one or more organizations that could be perceived as a real or apparent conflict of interest in the context of the subject of this presentation. He receives or has in the past three years received Research Support from: Eli Lilly and Company; Novartis; Pfizer; Schering-Plough. He is currently or in the past three years has been a Consult for: Eli Lilly; GlaxoSmithKline Pharmaceuticals; Hoffmann-La Roche Pharmaceuticals; Novartis; Pfizer; Wyeth. He receives or has in the past three years received Speaking Honoraria from: Novartis; Schering-Plough; Pfizer; Wyeth.

References

- Babor TF. Treatment for Persons with Substance Use Disorders: Mediators, Moderators, and the Need for a New Research Approach. *Int J Methods Psychiatr Res* 2008; 17: S45–S49.
- Babor TF, Stenius K, Romelsjö A. Alcohol and Drug Treatment Systems in Public Health Perspective: Mediators and Moderators of Population Effects. *Int J Methods Psychiatr Res* 2008; 17: S50–S59.
- Berner M, Brück R, Günzler C, Gann H, Frick K, Härter M, Batra A, Mann K. Finding the ideal place for a psychotherapeutic intervention in a stepped care approach – a brief overview of the literature and preliminary results from the project PREDICT. *Int J Methods Psychiatr Res* 2008; 17: S60–S64.
- Bühringer G, Goschke T, Gottlebe K, Kufeld C, Wittchen HU. Why people change? The role of cognitive-control processes in the onset and cessation of substance-abuse disorders. *Int J Methods Psychiatr Res* 2008; 17: S4–S15.
- Collins SE, Torchalla I, Schröter M, Buchkremer G, Batra A. Development and validation of a cluster-based classification system to facilitate treatment tailoring. *Int J Methods Psychiatr Res* 2008; 17: S65–S69.
- Freyer-Adam J, Coder B, Bischof G, Baumeister SE, Rumpf HJ, John U, Hapke U. Predicting Utilization of Formal and Informal Help among General Hospital Inpatients with Alcohol Use Disorders. *Int J Methods Psychiatr Res* 2008; 17: S70–S73.
- Grothues JM, Bischof G, Reinhardt S, Meyer C, John U, Rumpf HJ. Differences in help seeking rates after brief intervention for alcohol use disorders in general practice patients with and without comorbid anxiety or depressive disorders. *Int J Methods Psychiatr Res* 2008; 17: S74–S77.
- McGue M, Iacono WG. The Adolescent Origins of Substance Use Disorders. *Int J Methods Psychiatr Res* 2008; 17: S30–S38.

- Rehm J. Key future research questions on mediators and moderators of behaviour change processes for substance abuse. *Int J Methods Psychiatr Res* 2008; 17: S83–S87.
- Scherbaum M, Specka M. Factors influencing the course of opiate addiction. *Int J Methods Psychiatr Res* 2008; 17: S39–S44.
- Schütz C. Using neuroimaging to predict relapse to smoking: role of possible moderators and mediators. *Int J Methods Psychiatr Res* 2008; 17: S78–S82.

Correspondence: Professor Dr Gerhard Bühringer, Chair of Addiction Research, Institute of Clinical, Diagnostic and Differential Psychology, Chemnitzer Straße 46, 01187 Dresden, Germany.

Telephone +49 (0351) 463 39828

Fax +49 (0351) 463 39830

Email: buhringer@psychologie.tu-dresden.de