

The psychological perspective on mental health and mental disorder research: introduction to the ROAMER work package 5 consensus document

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Key words

ROAMER, mental health, psychological functions, behaviour

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Abstract

This paper provides an overview of the theoretical framework of the Psychological Sciences' reviews and describes how improved psychological research can foster our understanding of mental health and mental disorders in a complementary way to biomedical research. Core definitions of the field and of psychological interventions and treatment in particular are provided. The work group's consensus regarding strength and weaknesses of European Union (EU) research in critical areas is summarized, highlighting the potential of a broader comprehensive "Behaviour Science programme" in forthcoming programmatic EU funding programmes. Copyright © 2013 John Wiley & Sons, Ltd.

Introduction

Undoubtedly, there is increasing convergence between biomedical and psychological research on mental health and mental disorders. Both fields study the same or similar phenomena with similar approaches and methods. Thus, it is not surprising that appraisals of strength and weaknesses in both fields will often come to the same

conclusions (Schumann *et al.*, 2013). Despite this continued trend of growing convergence and synergy, there are important, though sometimes subtle differences due to different traditions, theories, principles, and methods that justify a separate presentation and discussion of biomedical and psychological perspectives, highlighting specific needs and priorities that would have been neglected in a joint

presentation. Consistent with this appraisal the work group (ROAMER work package 5, WP5) felt it would be helpful to define the field and arrive at consensus about its scope and definitions.

The contribution of the Psychological Sciences

Psychology can broadly be defined as an academic and applied discipline that involves the scientific study of basic psychological functions like perception, cognition, attention, emotion, motivation, as well as complex psychological processes such as decision-making, volition and behaviour control, including its neural and biological underpinnings, personality, behaviour and interpersonal relationships. Psychology covers normal mental functions and behaviours and addresses the question when, why and how they can become dysfunctional. Thus, psychology covers mental health and abnormal functions and behaviours, like in mental disorders with the goal of understanding individuals, groups and social systems. Psychology has been described as a “hub science” (Cacioppo, 2007) with psychological findings linking to research and perspectives from the social sciences, natural sciences, medicine, and the humanities, such as philosophy. During the last centuries, the field of psychology has undergone several theoretical paradigm shifts (i.e. structuralism, functionalism, psychoanalysis, behaviourism, cognitivism) and is currently typically structured in subfields of which Biological, Experimental, Developmental and Clinical Psychology have become closest to the biomedical field (Haslam and Lusher, 2011). But, depending on the theoretical orientation, methods and psychological fields of interest, psychological institutions and psychological research can be grouped under social sciences, the natural sciences or the biomedical sciences, etc. In fact, terms like behavioural neuroscience or cognitive-affective neuroscience are used almost synonymously and have given rise to denote the field as Psychological Sciences. Corollaries pertaining to the Psychological Sciences include:

- As compared to the biomedical field, the Psychological Sciences emphasize more explicitly a comprehensive interactional bio-psycho-social approach to understand and predict a broad construct of “*behaviour*” that refers to *neurobiological, cognitive, affective and social-behavioural units of analyses* – and should not be misunderstood as denoting simply open motor behaviour.
- To this end, the relative role of biological, psychological and particularly social-environmental variables and their dynamic interplay in promoting normal and abnormal behaviour is examined within a “dimensional” rather a “categorical” approach (diagnostic approach).

- Consistent with a broad construct of behaviour, Psychological Science research uses a range of specific experimental and empirical methods (qualitative and quantitative, subjective and objective) and paradigms in human and animal research to observe causal and correlational relationships between psychosocial, environmental, psychological and biological variables.
- Psychological Sciences emphasize environmental variables and a developmental perspective by appreciating the highly dynamic interplay over time, for example in psychological constructs of vulnerability – stress models as well as interactional constructs like resilience and coping to understand behaviour change and its determinants.
- Based on such models, constructs and methods of the science of psychology has also provided a set of unique methods and techniques for psychological interventions (i.e. psychotherapy) with the goal of preventing, treating and rehabilitating dysfunctional behaviour and mental disorders.

Within the context of this appraisal, we define psychological treatments and interventions as clinically relevant, empirically supported interventions of any type that are based on knowledge and expertise of the Psychological Sciences by using psychological methods and means (as opposed to drugs as in psychiatry), typically by communication and/or behavioural exercises (Wittchen and Hoyer, 2011).

This definition includes a large group of methods and approaches, developed to address the needs of patients and groups of patients with mental disorders or mental health problems, as well as their networks of support (e.g. partner and family) and covering prevention, treatment and rehabilitation in all ages. Psychological treatments and interventions might range from highly sophisticated psychotherapy, delivered by specialized psychotherapists, to the application of specific behavioural techniques as part of a broader treatment plan (e.g. psychoeducation or motivational interviewing) by any health provider, including web-based and e-health applications, whenever the criteria of the earlier definition are met and efficacy and/or effectiveness is established by randomized clinical trials or equivalent designs (van der Feltz-Cornelis and Adèr, 2000).

Because dysfunctional behaviour (also denoted in the literature as abnormal or clinically relevant behaviour) has large and pervasive effects on health outcomes, there is a broad consensus in the scientific community that there is a continued strong need to improve research with the goal to provide a better understanding of (a) the mechanisms underlying adaptive and dysfunctional behaviour, (b) the mechanisms of behaviour change with regard to (c) normal-adaptive healthy as well as (d) dysfunctional and clinically

significant behaviours as in mental disorders. Towards this goal the work group sees the strong need to adopt a comprehensive “Science of Behaviour” programme, in order to make substantial progress in research of mental health, mental disorders also reflected in substantial improvements in public health as well as savings in healthcare costs (NIH, 2009).

It should be noted that we did not work specifically on substance use disorders because of the existence of another European research programme dealing exclusively with this topic (<http://www.alicerap.eu>).

Core issues and topics from a Psychological Science perspective

The subsequent papers are position papers by members of the “roadmap for mental health research in Europe” – initiative (ROAMER) work package 5 (Haro *et al.*, 2014). They address selected and interrelated core areas that are considered to be of particular relevance for an improved future research agenda on mental health. Based on their expertise they were invited as part of the ROAMER discussion process to jointly contribute to a birds-eye view on important issues in mental health and mental disorder research from a Psychological Science perspective. The choice of topics was selective, though based on prior discussions and consensus of the ROAMER expert work group on “Psychological Research and Treatments”.¹ Their accounts should not be regarded as state-of-the-art reviews. Rather, the aim is to highlight the unique contributions of psychology by these position papers, complementing the contributions of the biomedical field, avoiding replication.

In the first contribution (Wittchen *et al.*, 2014) several fundamental barriers to progress in the area of basic and applied research on behaviour and behaviour change are addressed. A general lack of understanding the basic mechanisms of behaviour, behaviour change as well as moderators and mediators of behaviour in the context of interventions is concluded, highlighting the strong need of respective intensified research. Common “health risk behaviours” are taken as examples to specify what type of research is needed to identify mechanisms and determinants of behaviour initiation, maintenance and behaviour change as well as the critical trajectories between them to provide ultimately also a better understanding of the causes and the treatment of

mental disorders. The paper also addresses the question to what degree mechanisms relevant for specific disorders or health risk behaviours are the same, or different across disorders and conditions, and to what degree individual variation (genetic, or individual capacities such as “self-regulation”), stress and emotion play a role. This discussion is linked to the specific context of psychotherapy research, providing examples how this perspective helps to identify core ingredients and mechanisms of behaviour change.

The position paper by Goschke (2014) emphasizes the work group’s consensus that only improved research of basic and more complex normal and dysfunctional psychological functions and processes, including their neural underpinnings and social contexts, will ultimately allow us to improve our understanding of normative and non-normative behaviours (i.e. mental disorders), their developmental pathways and processes. This paper describes in greater detail how we might advance in this direction by focusing on “Functions and dysfunctions of cognitive control and decision-making as transdiagnostic core mechanisms in mental disorders”.

Emmelkamp *et al.* (2014) specifically address various domains of clinical research and “state of the art” psychotherapy research in particular. They focus largely on the currently best established, though imperfect, first-line treatment for many disorders and how to advance research on components, mechanism and effectiveness research. Four topical domains are highlighted in particular that are characterized by partly different research needs. Namely: (a) psychological models and paradigms of mental disorders from a cognitive perspective, (b) methodological issues of improved psychotherapy research, (c) the special needs in psychotherapy of children and adolescents, and (d) the incorporation of e-health innovations.

The final paper (Fava *et al.*, 2014) provides a methodological framework for improved research on comorbidity and discusses perspectives on the future clinical research agenda within this context.

Conclusions on strengths and weaknesses

Overall, the position papers on psychological perspectives converge on several strengths of the European research field: i.e. a substantial body of expertise and knowledge in both basic and clinical research, strong and increasingly more intimate collaborative ties to the biomedical field, and a broader coverage of mental health issues as opposed to mental disorder research in the biomedical field (Wittchen *et al.*, 2014; Goschke *et al.*, 2014; Emmelkamp *et al.*, 2014; Fava *et al.*, 2014).

At the same time, they also converge on several major general weaknesses, characteristic not only for Europe but worldwide, namely: (a) the fragmentation of research activities in

¹ Core experts of the ROAMER work package on Psychological Research and Treatments are Drs Arnoud Arntz, Francesc Colom, Pim Cuijpers, Tim Dalgleish, Daniel David, Giovanni A. Fava, Arne Holte, Uwe Koch-Gromus, Ilse Kryspin-Exner, Wolfgang Lutz, and Hans-Ulrich Wittchen. They were supported by dozens of advisors and consultants.

Table 1. Goals and needs for future research in Psychological Science

Goals	Challenges (advances needed to meet these goals)
Improved basic research aiming towards a better understanding of the basic mechanisms of behaviour initiation and maintenance	Analyses of basic psychological functions (i.e. attention) and processes (i.e. learning) and – even more pronounced – of cognitive factors of higher order (decision-making, memory, impulsivity, motivation, etc.), including their neurobiological underpinnings.
Examining how psychological factors affect health-related behaviour	(i) Research how such psychological factors and mechanisms influence health-related behaviours, their initiation, maintenance as well as “spontaneous natural” change, particularly with regard to determinants for their critical trajectories. (ii) Such research is seen as high priority for improved basic understanding of mental health and mental disorders and normal versus dysfunctional behaviour respectively.
Development over the lifespan	(i) Research that examines such domains over the lifespan and specifies how vulnerabilities and stress influence critical developmental trajectories to poor health and specific mental disorders in particular. (ii) There is a strong need of improved developmentally sensitive models of mental health over the whole lifespan but in particular in childhood and adolescence as the core high risk period for onset of mental disorders.
Moderators and mediators involved in behaviour change (treatment)	(i) Particularly pronounced research gaps exist with regard to the mechanisms, moderators and mediators involved in behaviour change within the specific context of psychological interventions and cognitive behavioural therapy (CBT) specifically. (ii) This involves core questions like: What are the neural and neurobiological changes associated with CBT induced change? What are active ingredients and mechanisms of effective and efficacious psychotherapy?
Improved translation of basic and applied psychological research into application and practice	There is a considerable science-practice gap on various core levels of research: (i) Improved aetiopathogenetic research that incorporates systematically social-environmental context and determinants as well as the neural underpinnings, based on models of mental health development and mental disorders. (ii) Improved diagnostic assessment procedures targeting the core aetiopathogenic processes, rather than simply targeting psychopathological features as specified in existing though imperfect diagnostic classificatory rules. (iii) Improved clinical intervention research to better understand why cognitive-behavioural treatments by identifying the core active ingredients, core mechanisms. (iv) Improved targeted intervention modules for preventive and treatment purposes. (v) Improved models and approaches of dissemination and translation to routine care.

many areas, (b) the lack of coordination and synergy in European research in this field, and (c) the lack of coordinated long-term programmes with regard to a broader “Science of Behaviour” perspective as the fundamental framework.

On the structural level the work group highlights that there are remarkable gaps in our knowledge regarding the situation of research on psychological treatments and interventions in Europe. In fact – and despite some coordinated EU-efforts in this domain – it is impossible to determine the degree to which psychological treatments are applied in the EU countries, where and what kind of

research and service delivery programmes are in place and how they are integrated into the wider network of mental health care infrastructure. As a result, Europe lacks even the most basic prerequisites for an evidence-based mental health research policy in this field.

In terms of specific gaps and needs for future research the authors point out marked deficits and provide suggestions on advances needed to meet these research needs. A short summary of these suggestions is given in Table 1. In sum, the position papers emphasize to varying degrees that a combined approach, appreciating traditional diagnostic

classificatory models as well as a facet-oriented, dimensional multi-level domain approach by functions and elements of behaviour might be the best way forward. Overall, there seems to be consensus that the field would profit significantly from a concerted programme of the “Science of Behaviour Change”.

Acknowledgements

This work was supported by the European Commission’s Seventh Framework Programme Project ROAMER (FP7-HEALTH-2011/No 282586).

This paper has been prepared by the authors in the context of the ROAMER project (work package 5, led by Hans-Ulrich Wittchen). The statements and the position of the paper are made by the authors, based on the work group discussions and thus they reflect an intermediate outcome of the work group. They should not be considered as an official statement of the ROAMER project or as a final outcome or conclusion of the overall programme.

The position papers were generated as part of the activities of a group of leading European experts on psychological research and intervention, in order to provide an assessment of the state-of-the-art of research in different domains, identifying major advances and promising methods and pointing out gaps and problems which ought to be addressed in future research (see Appendix). A similar critical appraisal

with partly similar conclusions is concurrently provided elsewhere (Schumann *et al.*, 2013) by the ROAMER work group “Biomedical research”. Experts in both work groups have been selected for their academic excellence and for their competence in the different units of analysis needed to comprehensively characterize particular symptom domains. Their contributions do not aim to be systematic reviews of the field but rather provide a well-informed opinion of the authors involved. They also do not represent official statements of the ROAMER consortium, but are meant to inform the discussion on psychological research and intervention in mental disorders among interested stakeholders, including researchers, clinicians and funding bodies. Recommendations made in this issue will undergo a discussion and selection process within the ROAMER consortium, and contribute to a final roadmap, which integrates all aspects of mental health research. We thus hope to provide an informed and comprehensive overview of the current state of psychological research in mental health, as well as the challenges and advances ahead of us.

Declaration of interest statement

The authors have no competing interests.

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Appendix

Table A1. ROAMER work package 5 authors and experts (in alphabetical order by last name)

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Table A1. (Continued)

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Table A1. (Continued)

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