



www.ehps.net/ehp **The European
Health Psychologist**

Bulletin of the European Health Psychology Society

217 Konstadina Griva & Teresa Corbett

Be more and do more – multitasking in daily life and multitasking in health

219 Zlatina Kostova

The acceptance process and the ephemeral character of Rheumatoid Arthritis

224 Jenny Mc Sharry

Challenges in managing multiple conditions: The patient experience of multimorbidity

229 Konstadina Griva, Vanessa Yin Woan Lee, & Augustine Wee Cheng Kang

Double the trouble – the challenges around managing Diabetes and End Stage Renal Disease

234 Teresa Corbett & Mary Ivers

Health Psychology and life after cancer: Recognizing the need for continued support

240 Hayley McBain et al.

Diabetes self-management in people with severe mental illness

249 Dima et al.

The opportunities Item Response Theory (IRT) offers to health psychologists: Methods in Health Psychology Symposium IV

260 Marijn Stok, Laura König, Johanna Nurmi, & Andre Matthias Müller

Create workshop 2014: Leveraging Mobile Technology and Social Media in Behavioral Research





www.ehps.net/ehp **The European
Health Psychologist**

Bulletin of the European Health Psychology Society

263 Barbara Mullan

Annual Report - Australia

265 Olivier Luminet

Annual Report - Belgium

267 Anna Alexandrova-Karamanova

Annual Report - Bulgaria

269 Theano Kalavana & Maria
Karekla

Annual Report - Cyprus

271 Renata Hacklová

Annual Report - Czech Republic

274 Nina Rottmann

Annual Report - Denmark

275 Nelli Hankonen

Annual Report - Finland

276 Kristine Martinsone

Annual Report - Latvia

281 Antanas Gostautas

Annual Report - Lithuania

283 Catrinel Craciun

Annual Report - Romania

285 Angel Chater

Annual Report - United Kingdom

287 Maria Karekla & Yael Benyamini

Principles of Behaviour Change in Health and Illness
What to expect from the upcoming EHPS conference



Be more and do more – multitasking in daily life and multitasking in health

Konstadina Griva
editor

Teresa Corbett
co-editor

We are all accustomed or well-versed in taking on a multitude of roles in pursuit of our valued life goals. This modern approach to living can lead to many great rewards as well as many daily hassles and nuisances; for some of us at times, even misery! It is a challenge to meet demands associated with each of these roles and we all may find ourselves falling short at times or failing to do a great job at our various tasks. Multitasking in everyday life is the norm and for most of us this is -to a great extent- a life choice. Interestingly, resources and policies (e.g. flexi working times) have been set in place to facilitate and empower us to continue with this way of living.

In the domain of health, multitasking and dealing with many competing demands is also the norm. Given the demanding and busy nature of coping with chronic illness, in this special issue we sought to focus on aspects of chronic illness that extend beyond medical treatment. We wanted to convey a more holistic conceptualization of chronic illness that fits with the aims and scope of the discipline of Health Psychology. Our articles in this issue aim to reflect the complex nature of chronic illness across the illness trajectory, with papers about symptom management and acceptance (Kostova, 2014), multimorbidity and the struggles associated with it (Griva, Lee and Kang, 2014; Mc Sharry, 2014; McBain et al 2014) and the issues associated with continuity of care (Corbett and Ivers, 2014). Illness - in particular chronic illness- does not simply exist within the walls of the hospital, but rather extends into the community and everyday life of those who live with it.

People with chronic illness (and often with multi-morbid chronic illnesses) are called to negotiate their life roles whilst managing and regulating multiple coexisting conditions and related treatments. Difficulties in acceptance and coping strategies can severely impact the quality of life of these patients, leading to poorer outcomes. The clusters of coexisting illness are numerous: long-term conditions with vascular complications, coupled with conditions associated with degenerative ageing processes (i.e. dementia or arthritic conditions) to be further aggravated by mental health conditions that typically accompany ill health. These issues impose heavy and complicated workloads of demands that may outweigh both capacity and/or other resources of the individual, and the systems where individual lives. It is of note that, while the vast majority of health care service users today have multiple and complex health care needs, health care systems and services are not well designed for patients with long term chronic and co-morbid illnesses.

Care fragmentation plagues our systems. Health Psychology research has similarly been dominated by single disease focus. However, this is now changing, with a surge of recent work on multi-morbidity and quality of life in chronic illness. This issue is brought together to outline perspectives on chronic illness. The papers highlight the challenges for patients of living with long-term, complex and intertwined conditions and the challenges these present for health psychology research.

We hope you enjoy this issue!

References

- Corbett, T., & Ivers, M. (2014). Health Psychology and life after cancer: Recognizing the need for continued support. *The European Health Psychologist, 16*(6), 234-239.
- Griva, K., Lee, V. Y. W., & Kang, A. (2014). Double the trouble – the challenges around managing Diabetes and End Stage Renal Disease. *The European Health Psychologist, 16*(6), 229-233.
- Kostova, Z. (2014). The acceptance process and the ephemeral character of Rheumatoid Arthritis. *The European Health Psychologist, 16*(6), 219-223.
- McBain, H., Mulligan, K., Haddad, M., Flood, C., Jones, J., Chapman, J., ... Simpson, A. (2014). Diabetes self-management in people with severe mental illness. *The European Health Psychologist, 16*(6), 240-248.
- Mc Sharry, J. (2014). Challenges in managing multiple conditions: The patient experience of multimorbidity. *The European Health Psychologist, 16*(6), 224-228.



Konstadina Griva
Department of Psychology, National
University of Singapore, Singapore
psygk@nus.edu.sg



Teresa Corbett
School of Psychology, National
University of Ireland, Galway, Ireland
t.corbett2@nuigalway.ie

The acceptance process and the ephemeral character of Rheumatoid Arthritis

Zlatina Kostova

Università della Svizzera italiana

Background

Rheumatoid Arthritis (RA) is a chronic, disabling disease characterized by progressive joint destruction and persistent pain. Approximately 1.5m people in Switzerland suffer from some type of rheumatic disease and 300,000 suffer from a severe chronic form of arthritis, needing constant care. RA affects people during the most active period of their lives (30-50 years), and its unpredictable and painful course often involves serious secondary consequences such as depression, reduction of social activities, job loss, and financial decline (Verbrugge & Juarez, 2008). In particular, the invisible and unpredictable course of RA is likely to have powerful psychological impact, evoking a variety of negative thoughts and emotions (McCracken, 2005). Patients with RA are negotiating life in a state of uncertainty, dealing with variable and unpredictable symptoms of pain and discomfort that may suddenly appear exacerbate or lower during remission. This variable course of disease experience can negatively affect the way patients *accept* the disease. Disease acceptance is associated with improved quality of life and lower levels of pain and depression. This qualitative study conducted at the University of Lugano in the Italian speaking part of Switzerland sought out to explore how patients with RA achieve acceptance and the likely impact of disease course onto patients' experience.

In the qualitative study of LaChapelle, Lavoie and Bourdreau (2008) among women with fibromyalgia and arthritis, acceptance was defined as "an overall attitude toward the pain experience involving acknowledgement of the chronicity of the condition

and a willingness to engage in valued activities despite pain" (p. 14). We can thus consider acceptance as a process whereby patients begin to make choices that maximize their quality of life. It has been shown that acceptance is not a single decision, event or belief but a process with distinct stages, each involving different realizations (McCracken, 1998). Dissecting those stages is key to understanding how patients succeed in dealing with the implications of a disease like RA. There are many studies highlighting key themes and demonstrating the importance of acceptance for health outcomes (Gullacksen & Lidbeck, 2004; Schaul, 1995). Yet they say more about the nature and consequences of acceptance than about how patients actually achieve it. There remains only limited information about the factors that impact the acceptance process, such as the ephemeral nature of the disease and the difficult diagnosis for example.

The unpredictable and invisible character of the pain typical for RA makes the achievement of acceptance a difficult process. Patients are living in a state of uncertainty, without knowing the short and the long term progression of the disease, dealing with the fear and the frustration of the unknown future. Moreover, the kind of chronic pain patients suffer is invisible and this can make it very difficult for the significant others around them to understand patients experience. In a previous study on the role of the social support over the acceptance process it has been shown that RA patients often complain about the lack of understanding from their social environment due to the fact that pain is socially invisible and difficult to be comprehended by those who are not affected (Kostova, Caiata-Zufferey, & Schulz, 2014). As a consequence, chronic pain

patients feel misunderstood and sometimes even accused of using the illness as an alibi to escape from work and other responsibilities. This lack of comprehension due to the variable character of RA is a factor hindering acceptance, making the fight against pain even more difficult.

In this study, then, we expand the field of *RA-acceptance* research providing evidence on (i) the main stages RA patients pass through in learning how to live with their disease, and (ii) the strategies they adopt to accommodate the disease into their lives, considering the overall impact of the co morbid symptoms of RA.

Methods

We conducted a qualitative study based on 20 semi-structured interviews with RA patients from the Italian speaking part of Switzerland. After having introduced the aim and the modalities of the research, we asked a general question: "Would you please describe for me your experience with arthritis, starting from the first symptoms?" Using follow-up questions and probes, we explored the impact of the disease on the main domains of life such as family, work, and social life, identifying the conditions under which patients moved through the process of acceptance, and then exploring their view of that concept. Our substantive selection criteria were: i) having had an RA diagnosis for at least three years (allowing enough time for patients to undergo a process of acceptance); ii) age over 35 (for the same reason, given that RA may hit as early as age 30; and iii) the absence of any other chronic diseases.

A grounded theory approach was used, with data collection and analysis carried out in cycles. The constant comparative method (Strauss & Corbin, 1990) was used to code interviews, link and group the identified codes into larger categories, and define more abstract concepts.

Results

We distinguished five main stages through which patients passed in reaching the point of learning how to live with the disease: *naming the illness; realizing the illness; resisting the illness; 'hitting the bottom'; and integrating the illness*. These passages emerged inductively in that, while the patients did not necessarily report their experiences in chronological order, the similarity of experiences across interviews allowed us to define common patterns. Before discussing each stage, we should acknowledge that any such model or structure is inevitably a simplification of complexity, a smoothing of rough edges in the data. The unpredictable character of the pain and the nature of RA, with symptoms liable to recur at any point, means that patients never reach an 'end point' at which they are safe from the pain and hence the psychological challenges that it poses. As such, acceptance always remains a process rather than an outcome.

I. *Naming the illness*

The acceptance process was initiated by patients' discovery of the cause of their pain. This was rarely straightforward. While a few interviewees obtained a correct diagnosis within the six months usually specified for 'early diagnosis', most waited substantially longer. A major reason of the late diagnosis was not only medical, but also due to the unclear and unstable symptoms. That brought to the neglect of symptoms by both patients and doctors again due to the unstable and varying episodes of pain. Patients ignored their initial symptoms, attributing them to external factors such as "age", "humidity", or their "work", and thus delaying the start of any acceptance process. Where patients did recognize and take symptoms seriously, they complained that GPs did not do the same but instead tended to downplay patients' sufferings. Most patients felt accused of exaggerating their symptoms:

they felt “ridiculed”, disrespected, and that their credibility had been questioned.

The meaning of the diagnosis stage itself depended to some extent on the length of time that it took to obtain diagnosis: The longer that patients spent waiting – indeed, often fighting – for a diagnosis, the more they perceived it as a relief; those who had spent relatively little time awaiting a diagnosis reacted to it initially with shock, as it was a source rather than a resolution of *uncertainty*.

II. *Realizing the illness*

The second important phase of acceptance was patients’ realization that their condition is chronic and – especially for those with a more severe grade of disability – places tight constraints on their freedom in managing their lives. Patients faced the potential erosion of their roles as mothers, or partners, or as workers – all domains central to people’s identities and in which they express their most basic values. The result was a major rupture in patients’ previous *normality*, depriving them of freedom and independence. This ‘realizing’ stage can be seen in terms of patients developing different representations of their illness. The way sufferers perceived their disease in the post-diagnosis stage was founded on two interpretations of the illness: as an unjust punishment and as a stigma.

III. *Resisting the illness*

Facing the losses and realizing that life is not as before, some patients – especially those with a more severe grade of disability but also those who had waited longest for diagnosis – were resistant to accept the imposed limitations, and some even held out hopes that the illness may disappear. Common resistance reactions were denial, self-isolation, and struggles (usually futile) to live as before. All of these reactions were sometimes encouraged by the ephemeral character of RA symptoms, but hopes

became exposed as unrealistic once the symptoms returned. Attempts to fight or repress uncontrollable and unchangeable events such as pain reinforced patients’ feelings of uselessness and were impeding the whole acceptance process.

IV. *Hitting the bottom*

For most of our patients, however, there was a climactic moment when they realized that previous resistance reactions were unworkable. Reaching back for their previous life rather than accepting the reality of their illness made patients into victims of the disease, which in turn induced reactions of resignation, passiveness, self-pity and anger. These feelings tended to culminate in a moment of *hitting the bottom* which was an important turning point in the acceptance process. Realizing that their fights were not only unwinnable but were also endangering their valued roles and activities served as a major trigger for patients to change strategy in dealing with the illness, moving to the final stage of integration.

V. *Integrating the illness*

“Hitting the bottom”, and the realization there is no alternative to living with the disease, was often a turning point for the patients to review and change their behaviour. They then started to develop personal strategies, which allowed them to manage the implications of the disease and to integrate it in their lives. At length, they understood that they should find a way to live with the disease, making it part of themselves and establishing a new concept of self and life. We identified three types of integration strategies: practical, identity-based, and affective. The *practical* strategies were about the need to change everyday habits and routines in order to respect new limits. Examples are doing some stretching in the morning, using some tools at home as ergo-tools for cleaning, driving and cooking. Identity strategies consisted in attributing a personal

value to the illness, making it part of a reconstructed personal narrative. The affective ones were related in perceiving the disease in a *positive way*, either by humanizing it and considering it as a “friend”, or giving it a name.

Thanks to patients’ accounts we also evidenced the way they perceived the word *acceptance*. Two main points became clear considering patients’ view of the right acceptance strategy. On one hand, patients were supposed to *grieve for the past* that had been destroyed by the condition. On the other hand, they had to *keep a connection* with that past if they wanted to continue to pursue their longstanding goals and cherished values. In that sense, there were two potentially conflicting types of acceptance: accepting losses and limitations, but not accepting to be a passive victim of those limitations. Patients had to realize that they had lost their pre-pain way of living, but at the same time they had to preserve their identity, finding new ways of managing their important activities.

Discussion

This paper provides a deeper understanding of the phases that RA patients have to go through in order to accept and accommodate their illness in their selves and their lives, placing emphasis on the invisible and ephemeral character of the disease that often can be a barrier for the acceptance process. We placed importance also on the diagnosis as a factor shaping acceptance and our findings go beyond the existing literature by showing that the timing of diagnosis not only affects *when* the acceptance process begins; it also affects whether, how, and how easily acceptance proceeds. The timing of diagnosis is also difficult to control given the nature and symptoms of RA. Yet there is scope for health policy and health professionals to reduce waiting period for diagnosis highlighted in our study. We also examined patients’ representations of the illness and of its acceptance. As in previous studies, we found these

representations to be multifaceted and to have considerable impact over patients’ capacity to cope with the disease (Heijmans, 1999; Heijmans & Ridder, 1998). In particular, we observed representations changing as patients passed – albeit slowly and often unsteadily – through the acceptance process. During the early post-diagnosis period, patients were more likely to perceive the illness in a negative way as a “stigma”, “punishment” or “abnormality”. In contrast, by the stage of integrating the illness, patients found more positive representations of the illness: as a “friend”, a “strong point” and, in particular, as a source of personal growth. The literature documents similar change among patients after trauma and adversity as in chronic diseases. Post-traumatic growth is positively correlated with acceptance and negatively correlated with subsequent distress (Linley & Joseph, 2004).

There are important clinical implications in understanding how RA patients come to accept and deal with their pain and its consequences. It provides health professionals with insights into the kind of support needed to help sufferers down the difficult path towards acceptance. Understanding the losses and difficulties that patients face in establishing a new way to live within the restrictions of the disease is an important part of the treatment process and of the doctor-patient relationship. Furthermore, a deeper understanding of the meaning that patients ascribe to acceptance gives insights for the implementation of new communication strategies for health professionals.

References

- Gullacksen, A. C., & Lidbeck, J. (2004). The life adjustment process in chronic pain: psychosocial assessment and clinical implications. *Pain Research & Management, 9*(3), 145-153.
- Heijmans, M. (1999). The role of patients’ illness representations in coping and functioning with

Addison's disease. *British Journal of Health Psychology*, 4(2), 137-149.

doi:10.1348/135910799168533

Heijmans, M., & de Ridder, D. (1998). Assessing illness representations of chronic illness: Explorations of their disease-specific nature. *Journal of Behavioral Medicine*, 21(5), 485-503.

doi:10.1023/A:1018788427100

Kostova, Z., Caiata-Zufferey, M., & Schulz, P. J. (2014). The role of social support on the acceptance process among RA patients. *Psychology & Health*, 29(11), 1283-1302.

doi:10.1080/08870446.2014.925895

La Chapelle, L. D., Lavoie, S., & Boudreau, A. (2008). The meaning and process of pain acceptance. Perceptions of women living with arthritis and fibromyalgia. *Pain Research & Management*, 13(3), 201-210.

Linley, P. A., & Joseph, S. (2004). Positive change following trauma and adversity: A review. *Journal of Traumatic Stress*, 17(1), 11-21.

doi:10.1023/B:JOTS.0000014671.27856.7

McCracken, L. M. (1998). Learning to live with the pain: Acceptance of pain predicts adjustment in persons with chronic pain. *Pain*, 74(1), 21-27.

doi:10.1016/S0304-3959(97)00146-2

McCracken, L. M. (2005). Social context and acceptance of chronic pain: The role of solicitous and punishing responses. *Pain*, 113(1-2), 155-159.

doi:10.1016/j.pain.2004.10.004

Schaul, M. P. (1995). From early twinges to mastery: The process of adjustment in living with rheumatoid arthritis. *Arthritis & Rheumatism*, 8(4), 290-297. doi:10.1002/art.1790080414

Strauss, A., & Corbin, J. (1990). *Basics of qualitative research: Grounded theory procedures and techniques*. Newbury Park, CA: Sage.

Verbrugge, L. M., & Juarez, L. (2008). Arthritis disability and heart disease disability. *Arthritis Rheum*, 59(10), 1445-1457. doi:10.1002/art.24107



Zlatina Kostova

Institute of Communication and Health, ICH

Faculty of Communication Sciences

Università della Svizzera italiana,

USI, Lugano, Switzerland

zlatina.kostova@usi.ch

Challenges in managing multiple conditions: The patient experience of multimorbidity

Jenny Mc Sharry

*National University of
Ireland, Galway*

Comorbidity,
multimorbidity,
polypathology...

a range of terms have been
used clinically and in the

research literature as variations of a core concept, the co-occurrence of multiple conditions in an individual (Valderas, Starfield, Sibbald, Salisbury, & Roland, 2009). A review of the literature almost 20 years ago which asked "Comorbidity or multimorbidity: What's in a name?" suggested that no generally accepted terms exist and that the definitions used are ambiguous (van den Akker, Buntinx, & Knottnerus, 1996). This remains true at least to an extent today, although in recent years the term multimorbidity has been recommended to describe the co-existence of two or more chronic conditions, where one is not necessarily more central than the others (Boyd & Fortin, 2010).

Despite differences in terminology and measurement, a number of overall findings from the multimorbidity literature are clear. Firstly, across studies conducted in different parts of the world, co-existing illness is becoming increasingly prevalent, particularly in older populations and lower socioeconomic groups. Accordingly, multimorbidity has been described as the most common chronic condition as a quarter of all patients, and more than half of patients with one chronic condition, actually have two or more (Barnett et al., 2012; Tinetti, Fried, & Boyd, 2012). Secondly, although the prevalence of multimorbidity does increase with age, it is not solely a phenomenon of old age, with the absolute number of people living with multimorbidity higher in those younger than 65 years of age (Barnett et al., 2012). Finally, multimorbidity is associated with a range of

adverse outcomes for patients including increased mortality and healthcare costs, decreased functional status and reduced quality of life (Fortin et al., 2004; France et al., 2012).

But what does it really mean to live with multimorbidity? Take as an example a 78-year old woman with type 2 diabetes, osteoarthritis, chronic obstructive pulmonary disease, depression and a previous history of myocardial infarction (Hughes, McMurdo, & Guthrie, 2013). For this patient to adhere to treatment guidelines for each of her conditions, she would need to take a minimum of 11 medications daily, with the potential for 10 supplementary medications to be prescribed depending on disease progression and severity. She would be advised to undertake nine self-care activities every day and to make additional lifestyle changes as recommended. Each year she would be scheduled to attend up to six GP appointments, ten physical health appointments and to receive psychosocial support for depression. She would be required to navigate confusing and conflicting recommendations for different conditions and would be susceptible to the harmful effects of interactions between medications. Regardless of the exact terms used by the research community, this is the reality of living with multiple chronic conditions.

The above treatment regime, developed through the application of existing single condition UK National Institute of Health and Clinical Excellence (NICE) guidelines to a hypothetical patient with multimorbidity, highlights the failure of existing guidelines to cater for complex real life situations. Although multimorbidity is increasingly prevalent, a single condition focus in both research and clinical care remains and limits our ability to think about and care for the whole person. The development of clinical

care guidelines and patient-centred interventions first requires an understanding of challenges associated with the management of multimorbidity from a patient perspective. The below quotes, taken from qualitative studies conducted with patients with multimorbidity, highlight a number of potential difficulties in the management of multiple conditions.

“Well you seem to concentrate on getting one thing better and don't think about the other things... I'd get in a terrible muddle if I thought about everything at the same time.”

(Mc Sharry, Bishop, Kendrick, & Moss-Morris, 2013)

For all of us, the management of our health competes for attention with work commitments, social interactions, and the business of everyday life. In multimorbidity, these difficulties are exacerbated by increased treatment burden and reduced self-management capabilities, particularly in the case of highly symptomatic conditions. The struggle to appropriately allocate resources can be immense and result in the prioritisation of certain conditions to the neglect of others.

Focusing on one condition at a time can help patients to feel more in control of their health and reduce the sense of everyday management burden. Condition prioritisation is a dynamic process and changes in condition severity and symptomology, interactions with healthcare and life events can all impact on patients' on-going self-management decisions (Morris, Sanders, Kennedy, & Rogers, 2011). The prioritisation of conditions, and the use of time during consultations, can be an area of disagreement and tension between patients and their healthcare providers. For patients, current impact on life and everyday functioning may be of most importance. For clinicians, longer term outcomes and the reduction of future risk may be the preferred focus of the

consultation.

“I'm on so many tablets I rattle.”

(Mc Sharry, Bishop, Moss-Morris, & Kendrick, 2013)

Multi-medication issues are a common challenge described by patients with multimorbidity. Many chronic conditions require medications to both alleviate symptoms and to prevent future complications and as the number of conditions increases so does the number of prescribed medications. The imagery of rattling is a vivid representation of the experience of taking large numbers of tablets, and the burden associated with multiple medications is echoed across the qualitative research literature. For patients, taking medicine as prescribed acts as a constant reminder of the presence of conditions and can impact on daily routines. Greater numbers of prescribed medications increases the potential for the development of side-effects and for harmful interactions to occur between medications. Long-term multiple medication use can also be the source of unease, with the regular intake of tablets being seen as both inconvenient and unnatural by some patients.

Multi-medication issues can lead to both unintentional and intentional non-adherence as previously described in the single condition literature (Horne, 2006). Non-intentional non-adherence occurs when a patient does not implement their medication regime as prescribed due to forgetfulness or poor comprehension of the drug regime. Multimorbidity can lead to uncertainty over the purpose and dosage instructions of each medication leading to an increased risk of not taking medications as prescribed. Intentional non-adherence describes patients' conscious decisions to not take medications as prescribed, and in multimorbidity can occur when patients decide to stop or reduce intake of particular

medications in an attempt to limit overall medication burden.

“On an island of sickness, left to cope alone.”

(Williams, 2004)

This quote, from a study exploring multimorbid patients' perceptions of quality of care, is a stark reminder of how healthcare can fail to meet the needs of the most vulnerable populations. Numerous editorials and articles in recent years have highlighted how the current fragmentation of care by illness type does not reflect the complexity of multimorbidity and may undermine physicians' attempts to treat patients who are in most need of care (e.g. Haggerty, 2012; Hughes et al., 2013). Limited integration across the healthcare system can result in patients seeing a range of different providers and juggling multiple appointments at inconvenient times. Time-limited consultations may be insufficient for the discussion of multiple concerns, leaving patients feeling uncertain, uncared for or isolated. Healthcare providers also struggle within the constraints of existing systems and cite multiple barriers to the provision of optimal care for patients with multimorbidity (Sinnott, Mc Hugh, Browne, & Bradley, 2013).

“Not everybody is alike. And not all diseases are alike.”

(Bayliss, Edwards, Steiner, & Main, 2008)

This final quote highlights the difficulties inherent in developing interventions and clinical care guidelines for people with multiple conditions. Multimorbidity is a broad term, not a well-defined medical diagnosis, and covers a wide spectrum of

experience from a patient effectively managing two conditions with ease to a patient struggling to cope with a number of highly symptomatic conditions. There is no such thing as a typical multimorbid patient and different disease combinations may result in very different types of experiences. Clusters of conditions with similar management strategies (e.g. concordant conditions such as hypertension, coronary heart disease, and diabetes) may be easier for both patients and healthcare professionals to manage than discordant conditions. The combination of physical and mental health conditions can be particularly challenging; a World Health Organisation study across 60 countries found chronic physical disease with depression to be associated with lower self-reported health than depression alone, physical chronic illness alone, or any combination of physical diseases without depression (Moussavi et al., 2007).

In addition, even patients with the same conditions and similar illness trajectories, who might be expected to face similar challenges, can have very different experiences. The challenges outlined in this article, while very salient to some patients, may not apply to others. There is no one size fits all solution to multimorbidity and continued work in understanding multiple conditions from a patient perspective is required to inform health care interactions and optimal self-management. The vast majority of chronic illness management happens outside of the healthcare system and patients are the true experts on the reality of living with multiple conditions. A consideration of the patient perspective, both in research and in healthcare interactions, is an important first step in addressing the challenges of multimorbidity.

References

- Barnett, K., Mercer, S. W., Norbury, M., Watt, G., Wyke, S., & Guthrie, B. (2012). Epidemiology of multimorbidity and implications for health care, research, and medical education: a cross-sectional study. *The Lancet*, *380*(9836), 37-43. doi:10.1016/s0140-6736(12)60240-2
- Bayliss, E. A., Edwards, A. E., Steiner, J. F., & Main, D. S. (2008). Processes of care desired by elderly patients with multimorbidities. *Family Practice*, *25*(4), 287-293. doi:10.1093/fampra/cmn040
- Boyd, C. M., & Fortin, M. (2010). Future of multimorbidity research: how should understanding of multimorbidity inform health system design. *Public Health Review*, *32*(2), 451-474. Retrieved from <http://www.publichealthreviews.eu>
- Fortin, M., Lapointe, L., Hudon, C., Vanasse, A., Ntetu, A. L., & Maltais, D. (2004). Multimorbidity and quality of life in primary care: a systematic review. *Health and Quality of Life Outcomes*, *2*(1), 51. doi:10.1186/1477-7525-2-51
- France, E. F., Wyke, S., Gunn, J. M., Mair, F. S., McLean, G., & Mercer, S. W. (2012). Multimorbidity in primary care: a systematic review of prospective cohort studies. *British Journal of General Practice*, *62*(597), e297-e307. doi:10.3399/bjgp12x636146
- Haggerty, J. L. (2012). Ordering the chaos for patients with multimorbidity. *BMJ*, *345*(7876), e5915. doi:10.1136/bmj.e5915
- Horne, R. (2006). Compliance, adherence, and concordance: implications for asthma treatment. *Chest*, *130*(1 Suppl.), 65S-72S. doi:10.1378/chest.130.1_suppl.65s
- Hughes, L. D., McMurdo, M. E. T., & Guthrie, B. (2013). Guidelines for people not for diseases: the challenges of applying UK clinical guidelines to people with multimorbidity. *Age and Ageing*, *42*(1), 62-69. doi:10.1093/ageing/afs100
- Mc Sharry, J., Bishop, F. L., Kendrick, T., & Moss-Morris, R. (2013, July). *Diabetes management in the context of multiple illnesses: A qualitative analysis*. Paper presented at the 27th Conference of the European Health Psychology Society, Bordeaux, France.
- Mc Sharry, J., Bishop, F. L., Moss-Morris, R., & Kendrick, T. (2013). 'The chicken and egg thing': Cognitive representations and self-management of multimorbidity in people with diabetes and depression. *Psychology & Health*, *28*(1), 103-119. doi:10.1080/08870446.2012.716438
- Morris, R. L., Sanders, C., Kennedy, A. P., & Rogers, A. (2011). Shifting priorities in multimorbidity: a longitudinal qualitative study of patient's prioritization of multiple conditions. *Chronic Illness*, *7*(2), 147-161. doi:10.1177/1742395310393365
- Moussavi, S., Chatterji, S., Verdes, E., Tandon, A., Patel, V., & Ustun, B. (2007). Depression, chronic diseases, and decrements in health: results from the World Health Surveys. *The Lancet*, *370*(9590), 851-858. doi:10.1016/s0140-6736(07)61415-9
- Sinnott, C., Mc Hugh, S., Browne, J., & Bradley, C. (2013). GPs' perspectives on the management of patients with multimorbidity: systematic review and synthesis of qualitative research. *BMJ Open*, *3*(9), e003610. doi:10.1136/bmjopen-2013-003610
- Tinetti, M. E., Fried, T. R., & Boyd, C. M. (2012). Designing health care for the most common chronic condition—multimorbidity. *JAMA*, *307*(23), 2493-2494. doi:10.1001/jama.2012.5265
- Valderas, J. M., Starfield, B., Sibbald, B., Salisbury, C., & Roland, M. (2009). Defining comorbidity: implications for understanding health and health services. *The Annals of Family Medicine*, *7*(4), 357-363. doi:10.1370/afm.983
- van den Akker, M., Buntinx, F., & Knottnerus, J. A. (1996). Comorbidity or multimorbidity: what's in a name? A review of literature. *European Journal of General Practice*, *2*(2), 65-70. doi:10.3109/13814789609162146
- Williams, A. (2004). Patients with comorbidities: perceptions of acute care services. *Journal of Advanced Nursing*, *46*(1), 13-22. doi:10.1111/j.1365-2648.2003.02961.x



Jenny Mc Sharry
Health Behaviour Change Research
Group, School of Psychology, National
University of Ireland, Galway, Ireland
jenny.mcsharry@nuigalway.ie

Double the trouble – the challenges around managing Diabetes and End Stage Renal Disease

Konstadina Griva

National University of Singapore

Vanessa Yin Woan Lee

National University of Singapore

Augustine Wee Cheng Kang

National University of Singapore

The prevalence of diabetes mellitus (DM) is very high worldwide. According to the World Health Organization in 2013 the worldwide prevalence of DM was in excess of 300 million (World Health Organization, 2013).

Diabetic nephropathy is a major vascular complication of DM

occurring in 20-40% of DM patients worldwide (American Diabetes Association, 2013; Hallan et al., 2006). If DM is not treated early and adequately, many diabetic patients may reach end-stage renal disease (ESRD) secondary to advanced irreversible diabetic nephropathy. The number of patients who have diabetes and ESRD and are being admitted to renal replacement treatments (RRT) is increasing dramatically, to the point that within many countries in the past few years, diabetes has or will soon become the most frequent single cause of ESRD (United States Renal Data System, 2013; Singapore Renal Registry, 2013). Although diabetes patients with ESRD are usually considered for renal transplantation and have been shown to do very well following a combined kidney pancreas transplant, high comorbidity may limit their possibilities for transplants and consign most patients onto dialysis.

Diabetic ESRD patients represent the segment most at risk for poor clinical outcomes. Although the prognosis of patients who have diabetes and are receiving RRT has greatly improved, survival and rehabilitation rates continue to be significantly worse than those of nondiabetic patients, mainly because of

pre-existing severely compromised cardiovascular conditions. More than 50% of diabetic dialysis patients die within 2 years of commencing dialysis (Broumand, 2007; United States Renal Data System, 2009). The main reason for such a high mortality rate is that the cardiovascular conditions of patients with diabetes are already severely impaired when they start RRT / dialysis, as demonstrated by the high prevalence of coronary heart disease, stroke, peripheral occlusive disease, and amputations (Eggers, Gohdes, & Pugh, 1999; Schömig, Ritz, Standl, & Allenberg, 2000; Stack & Bloembergen, 2001). Patients with diabetic nephropathy have the largest number of co-morbid conditions within the ESRD population (Lok, Oliver, Rothwell, & Hux, 2004). These conditions are mainly vascular in nature. More often than not patients with diabetic nephropathy organ damage is not limited to the kidney but also involves other organs resulting in retinopathy, neuropathy and cardiovascular complications.

ESRD and diabetes negatively affect not only life expectancy but also health-related quality of life (HRQoL) (Rubin & Peyrot, 1999) and thus patients with diabetes on haemodialysis tend to have very low HRQoL. Data from the Dialysis Outcomes and Practice Patterns Study (DOPPS - an international database to document dialysis practices and outcomes across over 20 countries) indicated that low levels of physical function or low self-rated physical HRQoL are predictive of future risk of death in patients with diabetes on haemodialysis (Hayashino et al., 2009).

Overall, the coexistence of diabetes, and ESRD leads to synergistic adverse effects: mortality is higher mainly due to cardiovascular complications, quality of life is worse and the burden on healthcare services is increased (McCullough, Bakris, Owen Jr,

Klassen, & Califf, 2004; Tong & Stevenson, 2007).

Despite the growth of this population, few studies have explored patient outcomes in multi-morbid patients in general (Bayliss, Steiner, Fernald, Crane, & Main, 2003; Mishra, Gioia, Childress, Barnet, & Webster, 2011) and in this diabetic ESRD group in particular (Williams et al., 2005; Williams, Manias, & Walker, 2008). Past work has focused on either ESRD or diabetes and documented substantial rates on non-adherence and emotional distress (Evans et al., 1999; Ruggiero et al., 1997). Evidence on how patients integrate and apply treatment recommendations for both diabetes and ESRD and patterns of adherence for the combined diabetic and renal regimes is still largely lacking.

Coexisting diabetes and ESRD place significant and rather complex self-demands on patients. Dialysis regimens are understandably significant sources of stress as they entail intrusive and time-consuming treatment schedules, dependency on others, reliance on technology for survival, unpleasant side-effects and complications. The treatment for DM ESRD involves a complex and demanding behavioural regimen above and beyond dialysis therapy. This includes continual nutritional management (e.g. restriction of dietary intake of phosphate and potassium-rich foods, and reduced salt and fluid intake), blood glucose control, foot care, multiple medications to facilitate management of blood pressure, anemia, and other problems related to extrarenal comorbidity, and recommendations related to exercise. The competing treatment demands of the two conditions can potentially result in poor management and misregulation as when treatment demands for one condition conflict with or impede management of the other, or when patients prioritize one condition over another (Bower et al., 2012; Morris, Sanders, Kennedy, & Rogers, 2011). A case in point is diet. A diabetic diet entails consumption of a healthy and balanced diet, which is very much in line with general guidelines about healthy eating. On the other hand, the renal diet is more complicated and restrictive, including avoidance of certain fruits and

vegetables high in potassium and restriction of fluid intake. Controlling fluid intake may be particularly challenging for diabetes patients who often experience excessive thirst as a result of their diabetes (Davenport & Willicombe, 2009; Sung et al., 2006).

Reconciling these complex and to some extent incompatible recommendations can be a real challenge for patients and caregivers alike. Ongoing support and tailored nutritional advice hence may be needed to facilitate readjustment of dietary behaviours once diabetes patients get established on renal replacement therapy.

There are several issues to take into consideration – motivation and ability may be lowered. The cognitive impairments of ESRD and diabetes (Griva et al., 2004; Luchsinger et al., 2007) may for instance, compromise patients' ability to acquire, understand, and retain the new dietary information. Furthermore, DM ESRD patients are diagnosed in late adulthood when health behaviours are firmly established and thereby harder to change. Another important consideration is that DM patients on dialysis are by definition a select group of patients with 'poor' record with regards to adherence and self-management. These are patients who have a history of poor self-management decisions, self-care behaviours and metabolic control given the development of diabetic nephropathy and need for dialysis. Low morale or hopelessness may be experienced which can undermine patients' motivation and confidence in effecting control and managing their conditions. Such feelings may further exacerbate the emotional consequences for multimorbidity and further increase the risk for mental health disorders (Barnett et al., 2012).

Depression is a common disorder, which is often co-morbid with long-term conditions such as ESRD and diabetes (Anderson, Freedland, Clouse, & Lustman, 2001; Kimmel, 2002; Kimmel & Peterson, 2005). The coexistence of depression, diabetes and ESRD may lead to underregulation of conditions (i.e. where depression lowers patient self-efficacy to

undertake self-management) or misregulation (i.e. where improvements in depression lead to changes in diet which in turn have a negative effect on disease management) (Piette, Richardson, & Valenstein, 2004).

To sum up, the coexistence of diabetes and ESRD, as well as multimorbidity in general presents both a challenge and opportunity for clinicians and researchers alike.

Until now the focus in both research and practice was on studying or managing single diseases. There is a need to bolster a patient-centered instead of the current single disease-focused approach, to broaden the focus on spectrum of multimorbidity and prevent fragmentation in the management by various specialists. This is the case for Health Psychology research work and psychological interventions (Smith, Soubhi, Fortin, Hudon, & O'Dowd, 2012). First, the study of large patient samples is a prerequisite to understand complex connections and interrelated impact of multiple chronic diseases such as ESRD and diabetes and identify the needs and outcomes more pertinent for these patients. Intervention programmes should ideally be tailored to these needs and move beyond the management of poly-pharmacy towards integration of the important lifestyle aspects of treatment for the coexisting conditions (Banning, 2009; Mishra et al., 2011; Williams, Manias, & Walker, 2009).

References

- American Diabetes Association. (2013). Standards of medical care in diabetes-2013. *Diabetes care*, 36(Suppl 1), S11-S66. doi:10.2337/dc13-S011
- Anderson, R. J., Freedland, K. E., Clouse, R. E., & Lustman, P. J. (2001). The prevalence of comorbid depression in adults with diabetes a meta-analysis. *Diabetes care*, 24(6), 1069-1078. doi:10.2337/diacare.24.6.1069
- Banning, M. (2009). A review of interventions used to improve adherence to medication in older people. *International journal of nursing studies*, 46(11), 1505-1515. doi:10.1016/j.ijnurstu.2009.03.011
- Barnett, K., Mercer, S. W., Norbury, M., Watt, G., Wyke, S., & Guthrie, B. (2012). Epidemiology of multimorbidity and implications for health care, research, and medical education: a cross-sectional study. *The Lancet*, 380(9836), 37-43. doi:10.1016/S0140-6736(12)60240-2
- Bayliss, E. A., Steiner, J. F., Fernald, D. H., Crane, L. A., & Main, D. S. (2003). Descriptions of barriers to self-care by persons with comorbid chronic diseases. *The Annals of Family Medicine*, 1(1), 15-21. doi:10.1370/afm.4
- Bower, P., Harkness, E., Macdonald, W., Coventry, P., Bundy, C., & Moss-Morris, R. (2012). Illness representations in patients with multimorbid long-term conditions: Qualitative study. *Psychology & health*, 27(10), 1211-1226. doi:10.1080/08870446.2012.662973
- Broumand, B. (2007). Diabetes: changing the fate of diabetics in the dialysis unit. *Blood purification*, 25(1), 39-47. doi:10.1159/000096396
- Davenport, A., & Willicombe, M. K. (2009). Does diabetes mellitus predispose to increased fluid overload in peritoneal dialysis patients? *Nephron Clinical Practice*, 114(1), c60-c66. doi:10.1159/000245070
- Eggers, P. W., Gohdes, D., & Pugh, J. (1999). Nontraumatic lower extremity amputations in the Medicare end-stage renal disease population. *Kidney international*, 56(4), 1524-1533. doi:10.1046/j.1523-1755.1999.00668.x
- Evans, J. M. M., Newton, R. W., Ruta, D. A., MacDonald, T. M., Stevenson, R. J., & Morris, A. D. (1999). Frequency of blood glucose monitoring in relation to glycaemic control: observational study with diabetes database. *British Medical Journal*, 319, 83-86. doi:10.1136/bmj.319.7202.83
- Griva, K., Hansraj, S., Thompson, D., Jayasena, D., Davenport, A., Harrison, M., & Newman, S. P. (2004). Neuropsychological performance after kidney transplantation: a comparison between transplant types and in relation to dialysis and

- normative data. *Nephrology Dialysis Transplantation*, 19(7), 1866-1874. doi:10.1093/ndt/gfh141
- Hallan, S. I., Coresh, J., Astor, B. C., Asberg, A., Powe, N. R., Romundstad, S., ... & Holmen, J. (2006). International comparison of the relationship of chronic kidney disease prevalence and ESRD risk. *Journal of the American Society of Nephrology*, 17(8), 2275-2284. doi:10.1681/ASN.2005121273
- Hayashino, Y., Fukuhara, S., Akiba, T., Akizawa, T., Asano, Y., Saito, S., & Kurokawa, K. (2009). Low health-related quality of life is associated with all-cause mortality in patients with diabetes on haemodialysis: the Japan Dialysis Outcomes and Practice Pattern Study. *Diabetic Medicine*, 26(9), 921-927. doi:10.1111/j.1464-5491.2009.02800.x
- Kimmel, P. L. (2002). Depression in patients with chronic renal disease: what we know and what we need to know. *Journal of psychosomatic research*, 53(4), 951-956. doi:10.1001/archneur.64.4.570
- Kimmel, P. L., & Peterson, R. A. (2005). Depression in end-stage renal disease patients treated with hemodialysis: tools, correlates, outcomes, and needs. *Seminars in dialysis* 18(2), 91-97. doi:10.1111/j.1525-139X.2005.18209.x
- Lok, C. E., Oliver, M. J., Rothwell, D. M., & Hux, J. E. (2004). The growing volume of diabetes-related dialysis: a population based study. *Nephrology Dialysis Transplantation*, 19(12), 3098-3103. doi:10.1093/ndt/gfh540
- Luchsinger, J. A., Reitz, C., Patel, B., Tang, M. X., Manly, J. J., & Mayeux, R. (2007). Relation of diabetes to mild cognitive impairment. *Archives of neurology*, 64(4), 570-575. doi:10.1001/archneur.64.4.570
- McCullough, P. A., Bakris, G. L., Owen Jr, W. F., Klassen, P. S., & Califf, R. M. (2004). Slowing the progression of diabetic nephropathy and its cardiovascular consequences. *American Heart Journal*, 148(2), 243-251. doi:10.1016/j.ahj.2004.03.042
- Mishra, S. I., Gioia, D., Childress, S., Barnet, B., & Webster, R. L. (2011). Adherence to medication regimens among low-income patients with multiple comorbid chronic conditions. *Health & Social Work*, 36(4), 249-258. doi:10.1093/hsw/36.4.249
- Morris, R. L., Sanders, C., Kennedy, A. P., & Rogers, A. (2011). Shifting priorities in multimorbidity: a longitudinal qualitative study of patient's prioritization of multiple conditions. *Chronic Illness*, 7(2), 147-161. doi:10.1177/1742395310393365
- Piette, J. D., Richardson, C., & Valenstein, M. (2004). Addressing the needs of patients with multiple chronic illnesses: the case of diabetes and depression. *American Journal of Managed Care*, 10(2, Part 2), 152-162.
- Rubin, R. R., & Peyrot, M. (1999). Quality of life and diabetes. *Diabetes/Metabolism Research and Reviews*, 15(3), 205-218. doi:10.1002/(SICI)1520-7560(199905/06)15:3<205::AID-DMRR29>3.0.CO;2-O
- Ruggiero, L., Glasgow, R. E., Dryfoos, J. M., Rossi, J. S., Prochaska, J. O., Orleans, C. T., ... Johnson, S. (1997). Diabetes self-management: Self-reported recommendations and patterns in a large population. *Diabetes Care*, 20(4), 568-576. doi:10.2337/diacare.20.4.568
- Schömig, M., Ritz, E., Standl, E., & Allenberg, J. (2000). The diabetic foot in the dialyzed patient. *Journal of the American Society of Nephrology*, 11(6), 1153-1159.
- Sung, J. M., Kuo, S. C., Guo, H. R., Chuang, S. F., Lee, S. Y., & Huang, J. J. (2006). The role of oral dryness in interdialytic weight gain by diabetic and non-diabetic haemodialysis patients. *Nephrology Dialysis Transplantation*, 21(9), 2521-2528. doi:10.1093/ndt/gfl236
- Singapore Renal Registry (2013). *Annual Registry Report 1999-2012*. National Registry of Diseases Office. Retrieved from <https://www.nrdo.gov.sg/uploadedFiles/NRDO/Publications/Renal%20Report%201999%20till%202012%20preliminary.pdf>
- Smith, S. M., Soubhi, H., Fortin, M., Hudon, C., & O'Dowd, T. (2012). Managing patients with multimorbidity: Systematic review of interventions in primary care and community settings. *BMJ*,

- 345(e5205. doi:10.1136/bmj.e5205
- Stack, A. G., & Bloembergen, W. E. (2001). Prevalence and clinical correlates of coronary artery disease among new dialysis patients in the United States: a cross-sectional study. *Journal of the American Society of Nephrology*, 12(7), 1516-1523.
- Tong, B., & Stevenson, C. (2007). *Comorbidity of Cardiovascular Disease, Diabetes and Chronic Kidney Disease in Australia. Cardiovascular Disease Series no. 28. Cat. No. CVD 37*. Australian Institute of Health & Welfare, Canberra.
- U.S. Renal Data System (2009). *Annual Data Report: Atlas of Chronic Kidney Disease and End-Stage Renal Disease in the United States National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Diseases*. Bethesda, MD: USRDS.
- U.S. Renal Data System (2013). *Annual Data Report: Atlas of Chronic Kidney Disease and End-Stage Renal Disease in the United States, National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Diseases*. Bethesda, MD: USRDS.
- Williams, B., Crinson, I., Pagliari, C., Shaw, A., Durrant, R., & De Lusignan, S. (2005). Patient perspectives on multiple medications versus combined pills: a qualitative study. *The Quarterly Journal of Medicine*, 98(12), 885-893. doi:10.1093/qjmed/hci139
- Williams, A., Manias, E., & Walker, R. (2008). Interventions to improve medication adherence in people with multiple chronic conditions: a systematic review. *Journal of Advanced Nursing*, 63(2), 132-143. doi:10.1111/j.1365-2648.2008.04656.x
- Williams, A. F., Manias, E., & Walker, R. (2009). The role of irrational thought in medicine adherence: people with diabetic kidney disease. *Journal of Advanced Nursing*, 65(10), 2108-2117. doi:10.1111/j.1365-2648.2009.05077.x
- World Health Organization (2013). *10 facts about diabetes*. Retrieved from <http://www.who.int/features/factfiles/diabetes/facts/en/>



Konstadina Griva
Department of Psychology, National University of Singapore, Singapore
psygk@nus.edu.sg



Vanessa Yin Woan Lee
Department of Psychology, National University of Singapore, Singapore
psylywv@nus.edu.sg



Augustine Wee Cheng Kang
Department of Psychology, National University of Singapore, Singapore
augustkang@gmail.com

Health Psychology and life after cancer: Recognizing the need for continued support

Teresa Corbett

*National University of
Ireland, Galway*

Mary Ivers

*University College Dublin,
Ireland*

Increased longevity and the success of medical treatments for all manner of physical illness mean that more and more people are living with chronic conditions. Looking at the

World Health Organisation's (WHO) website relating to cancer (<http://www.who.int/cancer/en/>) we see that great care is taken to provide information on cancer as a disease, on national cancer control programmes, prevention, early detection, treatment and palliative care. Research and clinical practice in oncology has focused on prevention, detection and the improvement of cancer treatments. However, there is something missing from this representation of the cancer trajectory. There is little attention given to life after treatment has ended, that period when the patient moves into what is termed 'long-term survivorship'. There is a growing interest within Health Psychology in the quality of life of those whose lives have been prolonged by early detection and successful treatment of cancer and indeed, health psychologists have much to offer in this domain.

The NCCS and the NCI use a wide definition of survivorship stating that it begins at the point of diagnosis and includes "anyone touched by cancer" (National Coalition for Cancer Survivorship, 2012). The American Society for Clinical Oncology (ASCO) characterises survivorship into different phases from new diagnosis and treatment (acute survivorship) to early post-treatment (extended survivorship) and beyond (permanent survivorship) (IOM, 2006). In this article, we focus on the period of extended survivorship and the transition into permanent survivorship.

The need to give attention to cancer survivorship was acknowledged by the National Coalition for Cancer Survivorship (NCCS) and the National Cancer Institute (NCI) when they established the Office of Cancer Survivorship in 1996. In 2004, the US Centres for Disease Control and Prevention (CDC) and the Lance Armstrong foundation (LAF) launched a National Action Plan for Cancer Survivorship. That plan highlighted a number of common myths about cancer survivorship, including the belief that "the need for care of survivors ends once treatment is complete" (CDC & LAF, 2004, p.7).

Due to earlier detection and more effective therapies, the majority of those diagnosed can now expect to live long term after diagnosis (Rowland & Bellizzi, 2014). According to De Angelis et al. (2014) the number of adults surviving for at least 5 years after diagnosis has increased for all European regions with some cancers having over 80% survival rates.

Unfortunately, surviving cancer does not necessarily mean that life returns to 'normal'. Lives are forever changed by the diagnosis of this disease and by its treatment. While most survivors do have a good quality of life after their treatment is over, there is accumulating evidence that about 20% of long-term survivors who are disease free are living with negative physical and psychological side effects caused both by the disease and its treatment (Aziz, 2007; Bloom et al., 2007; Ganz, 2007; Ivers et al., 2009). Some leading survivorship experts have even suggested that up to 75% of survivors will experience some health-related consequence of their treatment (Aziz & Rowland, 2003).

Individuals are at increased risk for long-term morbidity and premature mortality. This may be related directly to the cancer itself, to pre-existing co

morbidities, surgery or exposure to a variety of therapies including radiotherapy, chemotherapy and hormone therapies. Long-term effects include physical effects, such as fatigue and pain, psychological effects such as fear of recurrence, anxiety and depression (Ivers et al., 2009; Rowland, 2007; Stanton et al., 2006). People can experience a number of other psychosocial problems including impaired body image and sexual dysfunction, loss of fertility, social and vocational stigmatisation and discrimination and financial difficulties (Daly 2003; Ivers et al., 2009). As a result of their illness, people may find it difficult to slot back into their previous social roles and fatigue, pain or other symptoms may lead to a reduced capacity to work leading to financial strain. Not only are there long-term and late-emerging effects of cancer and its treatment, but cancer survivors are at increased risk for developing a range of other health issues including secondary cancers, cardiovascular disease, osteoporosis and other chronic illnesses (Aziz, 2007; IOM, 2006).

It is important to note that many individuals gain positive meaning from their experience with cancer. Such individuals often report more meaningful interpersonal relationships, a deeper appreciation for life, increased personal strength and spirituality, changes in their life priorities and goals, and they give greater attention to positive health-promoting behaviours (Stanton, 2006).

When a cancer survivor appears to be well and returns to the usual activities of life, assumptions are made that the cancer experience is over. Individuals have reported feeling that they need to 'justify' or explain any negative symptoms they may have, suggesting that those around them often fail to realise that the effects of cancer can often extend beyond the treatment phase. Kaiser (2008) highlights the common perception of the cancer 'survivor' as a person who demonstrates exceptional health and strength in the face of adversity. Within the narrative of survivorship, cancer is 'beaten' or 'conquered', and often linked to the use of terms such as 'fighting spirit'. Pertl et al. (2012) suggest that survivorship

discourses can place idealistic expectations and pressure on patients to live up to these ideals. Those who fail to get better within a socially prescribed time frame may not be understood by others, even being considered hypochondriacs who refuse to move on (Sinding & Gray, 2005). This can leave patients alone to exist in a medical limbo between sickness and health (Pertl et al., 2012). For those who struggle to cope with lingering physical issues after cancer, it can be difficult to communicate the extent of the symptoms. These individuals often voice frustration that their symptoms are not recognised or are delegitimized by others. For people who have lived through cancer, there is often a lack of awareness about whether they should consider their symptoms an ongoing side effect of a cured disease or as an independent medical condition (Pertl et al., 2012).

Leaving the often "safe cocoon" of cancer treatment to transition into survivorship can be a difficult time for individuals. Suddenly there are less frequent interactions with healthcare providers and less contact with others who are also experiencing cancer. In a qualitative study by Ivers et al. (2009) survivors described feelings of being "set adrift" after treatment ended. People sometimes experience high levels of stress and anxiety after treatment when the busyness of dealing with the trauma of diagnosis and treatment is over and the reality of the life threatening experience begins to hit home. Stress and anxiety are often associated with a fear of cancer recurrence (Lee-Jones et al., 1997). If there are lingering physical symptoms this fear can be exacerbated. The difficulties associated with this period are aggravated by the sense of being 'lost in transition' (IOM, 2006) with limited resources to provide support.

It is clear that those who survive cancer are likely to require continued medical and psychological care subsequent to their cancer-related care (McCabe et al., 2013). Much of the traditional follow up care is focused on monitoring disease status to avoid and detect recurrence of the disease. However, there is a need for attention to be paid not just to cancer

recurrence, but to focus on the health concerns of cancer survivors, health promotion and symptom management of common long-term and late effects (Siegel et al., 2012). Patients may not be equipped with the necessary skills or information about how to appropriately deal with any persistent problems.

The IOM report (2006) states that the period that follows primary treatment for cancer is "uncharted territory in terms of evidence-based guidance for providers of survivorship care" (p. 60). Consequently, there are very few services and resources that are specifically designed for post-treatment cancer survivors. There are a number of inpatient rehabilitation programmes in Europe, the US and Canada, most of which focus on the immediate post-treatment phase and concentrate primarily on recovery of musculoskeletal function and distress management. Efforts have been made to establish evidence-based clinical practice guidelines, assessment tools, and screening instruments to identify and manage late effects of cancer and its treatment. For example, the American Society for Clinical Oncology first established a Cancer Survivorship Task Force in 2004 to address the growing issues related to cancer survivorship and a partnership between the UK NHS and MacMillan Cancer Support developed the National Cancer Survivorship Initiative in 2008 (for further information see: <http://www.ncsi.org.uk/>). Gao and Dison (2013) propose that it is the responsibility of oncologists, cancer clinics, and cancer centres to provide expertise and assistance for issues following a cancer diagnosis and they advocate the implementation of survivorship care plans.

The IOM report (2006) recommended the development of cancer care plans noting that patients should be able to access any available resources for follow-up of specific issues that may arise, including local, national, and Web-based resources to assist in the transition from treatment to follow-up (Hewitt et al., 2005). The EU's 2009 Partnership for Action against Cancer aimed to have integrated care plans in place by 2013 in all member countries (Gorgojo,

Harris, & Garcia-Lopez, 2012). A few have achieved this aim but much needs to be done (Grassi & Watson, 2012). A recent international examination of national cancer programmes and cancer care plans coordinated by the International Psych-Oncology Society (IPOS) reported very little integration of psychosocial care into such programmes (Grassi & Watson, 2012). The development of evidence-based, comprehensive cancer survivorship programmes and survivorship care plans is absolutely necessary given the increasing numbers of cancer survivors (Hudson et al., 2009).

Not only are there few post-treatment services but there is still a serious lack of information available to survivors and to health service providers about the post-treatment period (Ivers et al., 2009). Khan et al. (2011) found that although a subset of cancer survivors did report specific emotional and physical needs, many cancer survivors did not look to their GP for their long-term cancer-related care yet participants expressed a need for psychological services and information on possible long-term effects. A recent study by Susanibar et al. (2014) found that less than 30% of medical residents had any formal training in cancer survivorship care.

As well as the development of cancer care plans, the provision of information to cancer survivors and their families and the training of health professionals, there is a need for preventive interventions that focus on cancer survivors' lifestyle behaviours to support maximum recovery and quality of life (Ganz, 2007). Enhancing quality of life requires not just attending to symptoms and functional issues but also to reducing risky health behaviours such as smoking, poor diet and low levels of physical activity and to reduce stress and distress associated with the whole experience of having cancer. As the number of survivors of cancer continues to increase, identification of the best methods for promoting the well being of long-term survivors is essential (Stanton et al., 2006). Health psychologists' skills in health promotion and intervention development may be valued in such contexts.

One example of how Health Psychology can be

applied to this area was the CANSURVIVOR Project conducted by Ivers et al. (2009) in Ireland. The findings of this research indicated that many cancer survivors have a range of needs, which may only emerge in the late-survivorship phase after completion of treatment. Most of the participants in the study had recovered very well after cancer treatment, however over 25% had significant difficulties with quality of life issues and on-going symptoms. In particular, issues relating to physical, emotional and social functioning were cited. A third of the group had anxiety levels above the normal range. In terms of health-behaviours, 51% were overweight, with many having reduced their physical activity levels since the time of their diagnosis. The majority of these survivors also had a poor diet. The authors identified a need for a specific post treatment service and the provision of information about what happens 'after cancer', including post-treatment effects as well as specific support in relation to stress management and anxiety reduction, lifestyle changes, diet and physical activity.

The findings of this study led to the implementation of a multidisciplinary pilot intervention programme including a dietician, psychologist and physiotherapist. The overall aim of the intervention was to improve the quality of life of cancer patients who had completed their treatment. The intervention focused on assisting survivors in terms of anxiety reduction, promoting a lifestyle behaviour changes, and improving activity levels, fitness strength and diet. The researchers reported significant increases in quality of life (physical and emotional functioning) and a reduction in symptom difficulties. This is just one example of the contribution that health psychologists can make to the growing area of cancer survivorship.

Health psychologists can help individuals to work through the psychological and emotional challenges associated with illnesses such as cancer (applied health psychology) or guide the development of services more sensitive to survivors needs (e.g. through consultancy). As patients work towards

resuming life roles and activities that may have been suspended during active treatment, health psychologists can help cancer survivors to enhance symptom awareness and can facilitate adaptive coping behaviours. These skills can be used to promote healthy lifestyles after cancer treatment, while also using their knowledge and skills to work with those within the healthcare system. With the accumulation of evidence base on impact of survivorship and effects of various interventions, it is hoped that the difficulties associated with life after cancer will be recognised and acted upon by health providers and health service planners/policy makers. This can guide consultations and boost a sense of validation for patients and above all, that approaches to alleviate these difficulties will be developed.

Key supports that health psychologists have skills to deliver for cancer survivors include: 1) the development of information resources about life after cancer and potential late and long-term effects, 2) educating health professionals about survivorship, 3) developing interventions to help reduce anxiety, 4) developing interventions to support health behaviour change and, 5) advocating for comprehensive survivorship care plans in our health services.

In conclusion, the quality of long-term follow-up care for cancer survivors has implications for their future physical and mental health, their overall quality of life and their health service needs into the future. At the very least, survivors should be prepared for the possibility of experiencing common late effects of their cancer and its treatment and advised about lifestyle behaviours that enhance quality of life (Ivers et al., 2009). Ganz (2007) points out that it is necessary for health service providers to become knowledgeable about the longer-term impact of cancer at a physical and psychosocial level so that they can help survivors to maximize their quality of life and that health services are utilized most effectively and efficiently. Health psychology as a discipline has knowledge and skills to support such endeavours. We, as health psychologists, have a role to play in recognising the needs of cancer survivors

and contributing to the development of support resources and interventions to reduce the impact of cancer and its treatment and enhance survivors' quality of life.

References

- Aziz, N. M., & Rowland, J. H. (2003). Trends and advances in cancer survivorship research: challenge and opportunity. *Seminars in Radiation Oncology*, *13*(3), 248-266. doi:10.1016/S1053-4296(03)00024-9
- Aziz, N. M. (2007). Cancer survivorship research: state of knowledge, challenges and opportunities. *Acta Oncologica*, *46*(4), 417-432. doi:10.1080/02841860701367878
- Aziz, N. M. (2007). Late effects of cancer treatments. In P. A. Ganz (Ed.), *Cancer survivorship today and tomorrow* (pp. 54-76). New York: Springer. doi:10.1007/978-0-387-68265-5_6
- Bloom, J. R., Petersen, D. M., & Kang, S. H. (2007). Multi-dimensional quality of life among long-term (5+ years) adult cancer survivors. *Psycho-Oncology*, *16*(8), 691-706. doi:10.1002/pon.1208
- Centers for Disease Control and Prevention and the Lance Armstrong Foundation (2004). *A national action plan for cancer survivorship: Advancing public health strategies*. Atlanta, GA: Centers for Disease Control and Prevention. Retrieved from <http://www.cdc.gov/cancer/survivorship/pdf/plan.pdf>
- De Angelis, R., Sant, M., Coleman, M. P., Francisci, S., Baili, P., Pierannunzio, D., ... & Capocaccia, R. (2014). Cancer survival in Europe 1999-2007 by country and age: Results of EURO-CARE-5 - A population-based study. *The Lancet Oncology*, *15*(1), 23-34. doi:10.1016/S1470-2045(13)70546-1
- Dillon, E., & Kelly, J. (2003). The status of cancer fatigue on the island of Ireland: AIFC professional and interim patient surveys. *The Oncologist*, *8*(S1), 22-26. doi:10.1634/theoncologist.8-suppl_1-22
- Ganz, P. A. (2007). Cancer survivors: A physician's perspective. In P. A. Ganz (Ed.), *Cancer survivorship today and tomorrow* (pp. 1-7). New York: Springer. doi:10.1007/978-0-387-68265-5_1
- Gao, J., & Dizon, D. S. (2013). Preparing for survivorship: Quality of life in breast cancer survivors. *The Journal of Sexual Medicine*, *10*(S1), 16-20. doi:10.1111/jsm.12029
- Gorgojo, L., Harris, M., Garcia-Lopez, E., & Core Working Group. (2012). *National cancer control programmes: Analysis of primary data from questionnaires*. European Partnership for Action Against Cancer (EPAAC). Retrieved from http://www.epaac.eu/from_heidi_wiki/Final_Report_on_National_Cancer_Control_Programmes.pdf
- Grassi, L., & Watson, M. (2012). Psychosocial care in cancer: An overview of psychosocial programmes and national cancer plans of countries within the International Federation of Psycho-Oncology Societies. *Psycho-Oncology*, *21*(10), 1027-1033. doi:10.1002/pon.3154
- Hewitt, M., Greenfield, S., & Stovall, E. (Eds.). (2005). *From cancer patient to cancer survivor: Lost in transition*. Washington, DC: National Academies Press.
- Hudson, S. V., Chubak, J., Coups, E. J., Blake-Gumbs, L., Jacobsen, P. B., Neugut, A. I., & Buist, D. S. (2009). Identifying key questions to advance research and practice in cancer survivorship follow-up care: A report from the ASPO Survivorship Interest Group. *Cancer Epidemiology Biomarkers & Prevention*, *18*(7), 2152-2154. doi:10.1158/1055-9965.EPI-18-7-ASP001
- Ivers, M. E., Dooley, B. A., & Bates, U. (2009). *Development, implementation and evaluation of a multidisciplinary cancer rehabilitation programme: The CANSURVIVOR Project: meeting post-treatment cancer survivors' needs*. Dublin: HSE. Retrieved from: <http://hdl.handle.net/10197/2888>.
- Kaiser, K. (2008). The meaning of the survivor identity for women with breast cancer. *Social Science & Medicine*, *67*(1), 79-87. doi:10.1016/j.socscimed.2008.03.036.
- Khan, N. F., Evans, J., & Rose, P. W. (2011). A qualitative study of unmet needs and interactions

- with primary care among cancer survivors. *British Journal of Cancer*, 105(Sup 1), S46-S51. doi:10.1038/bjc.2011.422
- McCabe, M. S., Bhatia, S., Oeffinger, K. C., Reaman, G. H., Tyne, C., Wollins, D. S., & Hudson, M. M. (2013). American Society of Clinical Oncology statement: Achieving high-quality cancer survivorship care. *Journal of Clinical Oncology*, 31(5), 631-640. doi:10.1200/JCO.2012.46.6854
- National Coalition of Cancer Survivorship (NCCS). *Policy priorities*. Retrieved from <http://www.canceradvocacy.org/cancer-policy/policy-priorities>
- National Coalition for Cancer Survivorship (NCCS). *Official website of the National Coalition for Cancer Survivorship*. Retrieved from <http://www.canceradvocacy.org/about-us/>
- Pertl, M. M., Quigley, J., & Hevey, D. (2014). 'I'm not complaining because I'm alive': Barriers to the emergence of a discourse of cancer-related fatigue. *Psychology & Health*, 29(2), 141-161. doi:10.1080/08870446.2013.839792
- Rowland, J. H., & Bellizzi, K. M. (2014). Cancer survivorship issues: Life after treatment and implications for an aging population. *Journal of Clinical Oncology*, 32(24), 2662-2668. doi:10.1200/JCO.2014.55.8361
- Siegel, R., DeSantis, C., Virgo, K., Stein, K., Mariotto, A., Smith, T., ... & Ward, E. (2012). Cancer treatment and survivorship statistics. *A Cancer Journal for Clinicians*, 62(4), 220-241. doi:10.3322/caac.21235
- Stanton, A. L., Bower, J. E., & Low, C. A. (2006). Posttraumatic growth after cancer. In L. G., Calhoun, & R. G. Tedeschi, *Handbook of posttraumatic growth: Research & practice* (pp.138-175). NY: Lawrence Erlbaum Associates.
- Susanibar, S., Thrush, C. R., Khatri, N., & Hutchins, L. F. (2014). Cancer survivorship training: A pilot study examining the educational gap in primary care medicine residency programs. *Journal of Cancer Survivorship*, 8(4), 565-70. doi:10.1007/s11764-014-0366-2.
- Tritter, J. Q., & Calnan, M. (2002). Cancer as a chronic illness? Reconsidering categorization and exploring experience. *European Journal of Cancer Care*, 11(3), 161-165. doi:10.1046/j.1365-2354.2002.00345.x



Teresa Corbett
School of Psychology, National
University of Ireland, Galway, Ireland
t.corbett2@nuigalway.ie



Mary Ivers
School of Psychology, University
College Dublin, Ireland
mary.ivers@ucd.ie

Diabetes self-management in people with severe mental illness

Hayley McBain*City University London**Community Health Newham, East London NHS Foundation Trust***Kathleen Mulligan***City University London**Community Health Newham, East London NHS Foundation Trust***Mark Haddad***City University London**East London NHS Foundation Trust***Chris Flood***City University London**East London NHS Foundation Trust***Julia Jones***City University London***Jacqui Chapman***Community Health Newham, East London NHS Foundation Trust***Noeleen Hilton***Community Health Newham, East London NHS Foundation Trust***Alan Simpson***City University London**East London NHS Foundation Trust*

diabetes is the commonest type of diabetes and accounts for around 90% of cases. This condition typically develops during adulthood, usually in people over the age of 40 years, but younger onset is becoming increasingly common. The disease is characterised by poorly regulated blood glucose levels, which may arise from defects in insulin secretion (insulin deficiency), or in its action (insulin resistance), or both. Therefore, the aim of treatment is to manage blood glucose levels to alleviate short-term symptoms and prevent or delay the development of long-term complications. Raised glucose in the blood, known as hyperglycaemia, can initially be controlled by lifestyle management such as changes to diet and exercise, but given the progressive nature of type 2 diabetes it is likely that most individuals will ultimately require pharmacological intervention as well. This may initially be with oral hypoglycaemic drugs to increase the production or uptake of insulin and, if the disease remains uncontrolled, insulin therapy.

People with a severe mental illness (SMI), such as schizophrenia and bipolar disorder, are a vulnerable population who commonly experience health inequalities (Thornicroft, 2011); they have poorer physical health and die on average 10-15 years younger than people without SMI (Chang et al., 2011). Prominent amongst these physical health problems is an almost two-fold risk of developing diabetes compared with the general population (Osborn et al., 2008). This increased risk has been attributed to the effects of anti-psychotic medications, pathophysiology of SMI and lifestyle factors, such as poor diet, obesity and physical inactivity (Osborn et al., 2008; De Hert M. et al., 2009); and high rates of smoking (Lawrence, Mitrou,

Background

Diabetes is a common and a serious global health problem, currently affecting an estimated 8.3% of adults - 382 million people worldwide, and taking up 11% of international health expenditure (International Diabetes Federation, 2013). Type 2

& Zubrick, 2009). In people diagnosed with diabetes, those with SMI have been found to have higher mortality (Vinogradova, Coupland, Hippisley-Cox, Whyte, & Penny, 2010) and a greater risk of needing to go to hospital for hypoglycaemia or hyperglycaemia (Becker & Hux, 2011) than people without SMI.

Evidence varies regarding the equity of diabetes care between people with and without SMI. For example, Goldberg et al. (2007) reported that people with SMI are less likely to receive all of the six recommended diabetes health checks than those without SMI. However, two studies in the UK found that much of diabetes management in primary care is similar for those with and without SMI (Mathur, Hull, Boomla, & Robson, 2012; Whyte, Penny, Phelan, Hippisley-Cox, & Majeed, 2007). The study authors did, however, acknowledge that these findings were based on people registered at a GP practice, and those not registered (which could include some with SMI) could be those experiencing poorer care and worse outcomes. The existence of significant health inequalities is nonetheless evident. Mathur et al. (2012) in research conducted in East London, our local population, found that those with SMI and diabetes were more likely to smoke, be obese and less likely to have had retinopathy screening than those without SMI. In addition, less than half of the population with SMI met the glycaemic control target of HbA1c <7.5%.

The World Health Organization (WHO) (2013a) has recognised the important role of mental disorder in contributing to the global burden of non-communicable diseases such as diabetes and has highlighted the need for equitable access to effective programmes and health care interventions for people with mental illness. The WHO mental health action plan for 2013-2020 (WHO, 2013b) states that developing good-quality mental health services requires the use of evidence-based protocols and practices. The plan suggests that health workers must not only deliver interventions that aim to improve mental health, but also attend to the physical health

needs of people with a mental disorder, and vice versa for diabetes health workers. The European Psychiatric Association (EPA), supported by the European Association for the Study of Diabetes (EASD) and the European Society of Cardiology (ESC) has also issued a position statement on cardiovascular disease and diabetes in people with SMI, identifying the need to improve care for this population (De Hert M. et al., 2009).

Diabetes self-management

In common with other long-term conditions, a crucial part of diabetes care involves the person changing their behaviour and adjusting to the consequences of living with the disease. There is widespread acknowledgement that the management of long-term conditions requires a particular focus on the support and facilitation of self-management approaches within a collaborative patient-clinician relationship. Considering the importance of lifestyle in the management of type 2 diabetes, it is essential that patients possess the necessary skills to manage their condition. In the UK NICE guidelines for type 2 diabetes (National Institute for Health and Clinical Excellence, 2008) recommend that structured education is integrated into routine care and should be offered to all patients. In addition, the NHS report for the commissioning of mental health and diabetes services in the UK (NHS Diabetes, 2011) clearly states that people with SMI who develop diabetes should have access to appropriate diabetes care.

Despite evidence to suggest that diabetes self-management programs have a positive impact on clinical, lifestyle and psychosocial outcomes in the general population (Deakin, McShane, Cade, & Williams, 2005; Pal et al., 2013; Steed, Cooke, & Newman, 2003; Steinsbekk, Rygg, Lisulo, Rise, & Fretheim, 2012; Thorpe et al., 2013), an examination of recent systematic reviews suggests that many trials either exclude those with SMI or do always not specify their inclusion criteria in relation to SMI. In

those that do not exclude on the basis of mental illness, there tends to be no examination of whether a diagnosis of SMI has an impact on the effectiveness of such interventions. Goldberg et al. (2007) found that in the US people with SMI were less likely to receive diabetes education than people without SMI. There is however a lack of data on the proportion of people with diabetes and SMI who are referred for structured diabetes education in Europe. Research does however suggest that in primary care health education is not a common feature of consultations with people with SMI (Reilly et al., 2012), and it is therefore possible that many service users are not given the opportunity to attend such programmes, even if they were effective in this population.

For people with a SMI, physical health may be a low priority (Buhagiar, Parsonage, & Osborn, 2011), motivation to change may be limited, and instability of psychiatric symptoms may present additional challenges for successful diabetes self-management (El-Mallakh, 2006; Ogawa, Miyamoto, & Kawakami, 2011). It cannot therefore be assumed that the findings reported in existing primary research studies or systematic reviews of diabetes self-management interventions will generalise to those with SMI. A systematic review of diabetes self-management interventions for those with schizophrenia or schizoaffective disorder found that approaches delivered in both inpatient and outpatient settings can be effective in managing type 2 diabetes, particularly those that address diet and exercise behaviour, but concluded that intervention packages need to be tailored to the unique challenges associated with decreased cognition and motivation, limited resources, as well as the loss of energy and the weight gain associated with the use of antipsychotics (Cimo, Stergiopoulos, Cheng, Bonato, & Dewa, 2012).

In order to help address these disparities in care we are currently undertaking a programme of work in order to develop effective self-management education and support for people with type 2 diabetes and SMI. Although there is an expanding evidence base to help

inform interventions to improve diabetes management in the general population (Deakin et al., 2005; Pal et al., 2013; Steed et al., 2003; Steinsbekk et al., 2012; Thorpe et al., 2013), there has to date been limited consideration of diabetes care and self-management among people with SMI. Therefore, we are leading on a number of research studies that aim to identify how, when and where to intervene with this population in order to improve outcomes.

Complex interventions

An extensive literature exists on the range of potential approaches to changing behaviour (National Institute for Health and Care Excellence, 2014; National Institute for Health and Care Excellence, 2007), as well as consideration of the 'active ingredients' of such approaches (Michie et al., 2013). NICE guidelines for behaviour change state that "All interventions need to be developed and evaluated in stages, using an established approach such as the Medical Research Council's (MRC) framework for the development and evaluation of complex interventions" (National Institute for Health and Care Excellence, 2007).

The programme of work we are undertaking is following the MRC guidance (Craig et al., 2008) in order to develop an appropriate, theoretically underpinned, model of care for this population. The MRC guidance recommends a structured approach to the development, evaluation and implementation of complex interventions (see Figure 1) and stresses the importance of undertaking each stage thoroughly; the research we are currently undertaking is within the development stage of this framework and is working towards a larger programme of work to assess feasibility, evaluate the intervention and, understand and aid implementation.

The MRC guidelines recommend that interventions are developed based on a good theoretical understanding of how the intervention is likely to bring about the desired change(s) in behaviour. It is

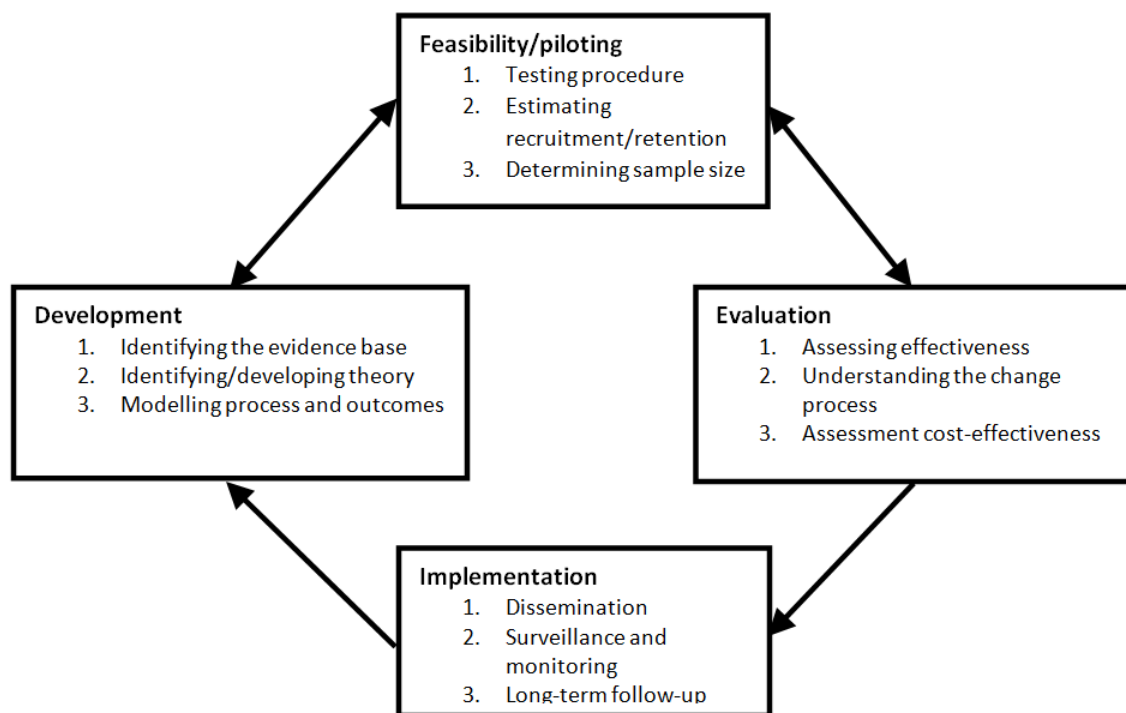


Figure 1: Development, evaluation and implementation of complex interventions (Craig et al., 2008)

therefore necessary to first understand from a theoretical perspective the factors that can act as barriers or facilitators to performing diabetes-related behaviours and model these in order to identify the psychological factors that are amenable to change and can therefore be targeted in an intervention to change behaviour.

The MRC guidance does not provide details of which theoretical perspective is most appropriate and many overlapping theories of behaviour change exist. Therefore, we will be using a number of methodological techniques in order to identify the psychosocial concepts which influence the performance of diabetes self-management, the theories that these psychological concepts tap into and hence the behaviour change techniques (BCTs) that need to be adopted within the intervention in order to change behaviour. This approach will allow us to develop a diabetes self-management intervention for people with SMI that has strong theoretical underpinnings.

Development of a diabetes self-management intervention for people with SMI

In order to meet the various stages of the MRC guidance (Craig et al., 2008) for developing a complex intervention we are currently undertaking and planning a number of research studies in order to identify the evidence base and theory, and model the processes and outcomes relevant to this clinical context.

Identifying the evidence base and theory

Systematic review

We are currently undertaking a Cochrane review in order to assess the effectiveness of diabetes self-management interventions for people with type 2 diabetes across a broader range of SMIs (McBain et al., 2014). This will extend the scope of the previous

review undertaken by Cimo et al. (2012) to include people with personality disorder, bipolar disorder and depression with psychotic features. In addition to looking at the evidence for their effectiveness, the review will also provide us with the opportunity to describe, using established reporting systems (Michie et al., 2013; Michie & Prestwich, 2010), the active components of these interventions and the theoretical frameworks within which they were developed.

The Behaviour Change Technique Taxonomy (BCTTv1) (Michie et al., 2013) will be used to specify the content of these interventions. The BCTTv1 contains 93 BCTs clustered into 16 hierarchically structured groups and will be used alongside a coding system to assess the different ways that these behavioural interventions have employed theory (Michie & Prestwich, 2010). Use of these coding systems will therefore enable us to systematically identify and document the content of diabetes self-management interventions for people with SMI and type 2 diabetes and establish which components and theories are most effective in changing behaviour and improving outcomes. This will be achieved by undertaking subgroup analyses by these intervention characteristics.

Qualitative exploration

Self-management of diabetes is complex and the demands of managing diabetes when living with SMI present additional challenges for both service users and healthcare professionals. In spite of this, very little research has asked people with diabetes and SMI about what they find most challenging when trying to manage their diabetes and their perceived barriers and facilitators to successful diabetes self-management. A small number of UK studies have discovered role ambiguity concerning the responsibilities of mental health nurses (Blythe & White, 2012; Robson, Haddad, Gray, & Gournay, 2012) and primary care health professionals (Lester, Tritter,

& Sorohan, 2005) in providing both physical and mental healthcare and another investigating the diabetes training needs of nurses (Nash, 2009). One additional study interviewed seven people with diabetes and SMI about their experience of diabetes care and identified stigma, diagnostic overshadowing and a purposeful splitting of physical and mental health by health professionals as barriers to the delivery of effective care (Nash, 2014). However, no other European studies have asked people with diabetes and SMI about how they manage their diabetes and the difficulties they experience in doing so.

Enabling people with SMI to manage their diabetes effectively could involve intervening to change their behaviour, that of healthcare professionals, or both and these qualitative studies aim to help identify how and where best to intervene by exploring the topic from a range of perspectives. The team are therefore undertaking qualitative semi-structured interviews with both people with SMI and type 2 diabetes, and a group of healthcare professionals who are involved in the care of this population. This includes psychiatrists, care coordinators, practice nurses, GPs, diabetes specialist nurses and mental health nurses.

The research will explore service users' experiences of the elements of self-management that they find most challenging and the barriers and facilitators which enable them to manage their diabetes. It will also explore healthcare professionals' recommendations for how best to facilitate self-management and the psychological factors which impact on them delivering diabetes care. The interview topic guide for these semi-structured interviews is based on the Theoretical Domains Framework (TDF) of behaviour change (Cane, O'Connor, & Michie, 2012), with additional questions designed to allow participants to discuss topics most important to their experience of diabetes and mental illness. The TDF (Cane et al., 2012) was developed to integrate the different theories of behaviour change. The framework consists of 14 domains that have been found to influence behaviour: knowledge; skills;

beliefs about capabilities; beliefs about consequences; emotions; environmental context and resources; social influences; memory, attention and decision processes; social/professional role and identity; reinforcement; intentions; goals; optimism; behavioural regulation. The interview topic guides include broad questions with additional prompts and probes to cover each of these 14 domains and data will be coded using this framework. This process will allow us to identify the key behaviours people with diabetes and SMI find most challenging, as well as the specific beliefs, which patients and healthcare professionals hold, which may impact upon effective diabetes self-management and the theoretical constructs and models which determine these behaviours.

Modelling processes and outcomes

In order to understand how these beliefs impact upon behaviour, a cross-sectional survey with healthcare professionals and people with SMI and type 2 diabetes will follow these qualitative interviews. Using statistical modelling, we will be able to identify the beliefs that are most strongly associated with performance of diabetes-related behaviours. Following established methods for developing behaviour change interventions (Francis et al., 2009), the beliefs identified within the qualitative semi-structured interviews will be mapped onto theories of behaviour change and the constructs within these theories will be included for operationalization in this questionnaire study.

The questionnaires will identify the psychological constructs that predict, in the case of patients, the performance of diabetes self-management behaviours such as self-monitoring of blood glucose, adherence to dietary behaviours, exercise, adherence to medication, titration of insulin (if relevant), foot care and attendance for regular screening including diabetic retinopathy and general check-ups. For healthcare professionals the questionnaire will provide a better understanding of what current

practices are being implemented for this population by the various professions and provide an understanding of the psychological constructs that predict performance of these practices.

Summary

The management of type 2 diabetes in people with SMI presents serious challenges for a group of people who may view their physical health as low priority and have very little motivation to change their behaviour. There also appears to be confusion and role ambiguity concerning the responsibilities of both physical and mental healthcare professionals. Together this may be contributing towards the poorer physical health of this population and higher mortality. In order to empower people with SMI to manage their diabetes, evidence-based interventions need to be developed that meet the needs of this population. Together the studies we are currently undertaking will inform the development and evaluation of an intervention(s) that we hope will enhance diabetes self-management in this clinical context.

References

- Becker, T. & Hux, J. (2011). Risk of acute complications of diabetes among people with schizophrenia in Ontario, Canada. *Diabetes Care*, 34(2), 398-402. doi:10.2337/dc10-1139
- Blythe, J. & White, J. (2012). Role of the mental health nurse towards physical health care in serious mental illness: an integrative review of 10 years of UK literature. *International Journal of Mental Health Nursing*, 21(3), 193-201. doi:10.1111/j.1447-0349.2011.00792.x
- Buhagiar, K., Parsonage, L., & Osborn, D. P. (2011). Physical health behaviours and health locus of control in people with schizophrenia-spectrum

- disorder and bipolar disorder: a cross-sectional comparative study with people with non-psychotic mental illness. *BMC Psychiatry*, 11(104). doi:10.1186/1471-244X-11-104
- Cane, J., O'Connor, D., & Michie, S. (2012). Validation of the theoretical domains framework for use in behaviour change and implementation research. *Implementation Science*, 7(37). doi:10.1186/1748-5908-7-37
- Chang, C. K., Hayes, R. D., Perera, G., Broadbent, M. T., Fernandes, A. C., Lee, W. E. et al. (2011). Life expectancy at birth for people with serious mental illness and other major disorders from a secondary mental health care case register in London. *PLoS One*, 6(5), e19590. doi:10.1371/journal.pone.0019590
- Cimo, A., Stergiopoulos, E., Cheng, C., Bonato, S., & Dewa, C. S. (2012). Effective lifestyle interventions to improve type II diabetes self-management for those with schizophrenia or schizoaffective disorder: A systematic review. *BMC Psychiatry*, 12(24). doi:10.1186/1471-244X-12-24
- Craig, P., Dieppe, P., Macintyre, S., Michie, S., Nazareth, I., & Petticrew, M. (2008). Developing and evaluating complex interventions: the new Medical Research Council guidance. *BMJ*, 337, a1655. doi:10.1136/bmj.a1655
- De Hert M., Dekker, J. M., Wood, D., Kahl, K. G., Holt, R. I., & Moller, H. J. (2009). Cardiovascular disease and diabetes in people with severe mental illness position statement from the European Psychiatric Association (EPA), supported by the European Association for the Study of Diabetes (EASD) and the European Society of Cardiology (ESC). *European Psychiatry*, 24(6), 412-424. doi:10.1016/j.eurpsy.2009.01.005
- Deakin, T., McShane, C. E., Cade, J. E., & Williams, R. D. (2005). Group based training for self-management strategies in people with type 2 diabetes mellitus. *The Cochrane Database of Systematic Reviews*. doi:10.1002/14651858.CD003417.pub2
- El-Mallakh, P. (2006). Evolving self-care in individuals with schizophrenia and diabetes mellitus 1. *Archives of Psychiatric Nursing*, 20(2), 55-64. doi:10.1016/j.apnu.2005.09.002
- Francis, J. J., Tinmouth, A., Stanworth, S. J., Grimshaw, J. M., Johnston, M., Hyde, C., ... Eccles, M. P. (2009). Using theories of behaviour to understand transfusion prescribing in three clinical contexts in two countries: Development work for an implementation trial. *Implementation Science*, 4(70). doi:10.1186/1748-5908-4-70
- Goldberg, R. W., Kreyenbuhl, J. A., Medoff, D. R., Dickerson, F. B., Wohlheiter, K., Fang, L. J. et al. (2007). Quality of diabetes care among adults with serious mental illness. *Psychiatric Services*, 58(4), 536-543. doi:10.1192/bjpp.107.045732
- International Diabetes Federation. (2013). *International Diabetes Federation Diabetes Atlas (6th ed)*. Retrieved from http://www.idf.org/sites/default/files/EN_6E_Atlas_Full_0.pdf
- Lawrence, D., Mitrou, F., & Zubrick, S. R. (2009). Smoking and mental illness: results from population surveys in Australia and the United States. *BMC Public Health*, 9(285). doi:10.1186/1471-2458-9-285
- Lester, H., Tritter, J. Q., & Sorohan, H. (2005). Patients' and health professionals' views on primary care for people with serious mental illness: focus group study. *BMJ*, 330(1122). doi:10.1136/bmj.38440.418426.8F
- Mathur, R., Hull, S. A., Boomla, K., & Robson, J. (2012). Ethnic differences in primary care management of diabetes and cardiovascular disease in people with serious mental illness. *British Journal of General Practice*, 62(601), e582-e588. doi:10.3399/bjgp12X653642
- McBain, H., Mulligan, K., Haddad, M., Flood, C., Jones, J., & Simpson, A. (2014). Self-management interventions for type 2 diabetes in adult people with severe mental illness (Protocol). *The Cochrane Database of Systematic Reviews*. doi:10.1002/14651858.CD011361
- Michie, S., Richardson, M., Johnston, M., Abraham, C., Francis, J., Hardeman, W. et al. (2013). The behavior change technique taxonomy (v1) of 93

- hierarchically clustered techniques: building an international consensus for the reporting of behavior change interventions. *Annals of Behavioural Medicine*, 46(1), 81-95.
doi:10.1007/s12160-013-9486-6
- Michie, S. & Prestwich, A. (2010). Are interventions theory-based? Development of a theory coding scheme. *Health Psychology*, 29(1), 1-8.
doi:10.1037/a0016939
- Nash, M. (2014). Mental health service users' experiences of diabetes care by Mental Health Nurses: an exploratory study. *Journal of Psychiatric & Mental Health Nursing*, 21(8), 715-723.
doi:10.1111/jpm.12140
- Nash, M. (2009). Mental health nurses' diabetes care skills - a training needs analysis. *British Journal of Nursing*, 18(10), 628-630.
doi:10.12968/bjon.2009.18.10.42472
- National Institute for Health and Care Excellence. (2014). *Behaviour change: Individual approaches*. Retrieved from <http://www.nice.org.uk/Guidance/PH49>
- National Institute for Health and Care Excellence. (2007). *Behaviour change: The principles for effective interventions*. Retrieved from <http://www.nice.org.uk/guidance/ph6>
- National Institute for Health and Clinical Excellence (2008). *The management of type 2 diabetes (update) (Clinical guideline 66)*. London: NICE. Retrieved from <https://www.nice.org.uk/guidance/cg87/resource/s/cg66-type-2-diabetes-full-guideline2>
- NHS Diabetes (2011). *Commissioning Mental Health and Diabetes Services*. Retrieved from <https://www.diabetes.org.uk/Documents/nhs-diabetes/commissioning/commissioning-guide-diabetes-mental-health-0611.pdf>
- Ogawa, M., Miyamoto, Y., & Kawakami, N. (2011). Factors associated with glycemic control and diabetes self-care among outpatients with schizophrenia and type 2 diabetes. *Archives of Psychiatric Nursing*, 25(1), 63-73.
doi:10.1016/j.apnu.2010.06.002
- Osborn, D. P., Wright, C. A., Levy, G., King, M. B., Deo, R., & Nazareth, I. (2008). Relative risk of diabetes, dyslipidaemia, hypertension and the metabolic syndrome in people with severe mental illnesses: systematic review and meta-analysis. *BMC Psychiatry*, 8(84). doi: 10.1186/1471-244X-8-84
- Pal, K., Eastwood, S. V., Michie, S., Farmer, A. J., Barnard, M. L., Peacock, R. et al. (2013). Computer-based diabetes self-management interventions for adults with type 2 diabetes mellitus. *The Cochrane Database of Systematic Reviews*. doi:10.1002/14651858.CD008776.pub2
- Reilly, S., Planner, C., Hann, M., Reeves, D., Nazareth, I., & Lester, H. (2012). The role of primary care in service provision for people with severe mental illness in the United Kingdom. *PLoS One*, 7(5), e36468. doi:10.1371/journal.pone.0036468
- Robson, D., Haddad, M., Gray, R., & Gournay, K. (2012). Mental health nursing and physical health care: A cross-sectional study of nurses' attitudes, practice, and perceived training needs for the physical health care of people with severe mental illness. *International Journal of Mental Health Nursing*, 22(5), 409-417. doi:10.1111/j.1447-0349.2012.00883.x
- Steed, L., Cooke, D., & Newman, S. (2003). A systematic review of psychosocial outcomes following education, self-management and psychological interventions in diabetes mellitus. *Patient Education and Counseling*, 51(1), 5-15. doi:10.1016/S0738-3991(02)00213-6
- Steinsbekk, A., Rygg, L., Lisulo, M., Rise, M. B., & Frøtheim, A. (2012). Group based diabetes self-management education compared to routine treatment for people with type 2 diabetes mellitus. A systematic review with meta-analysis. *BMC Health Services Research*, 12(213). doi:10.1186/1472-6963-12-213
- Thornicroft, G. (2011). Physical health disparities and mental illness: the scandal of premature mortality. *British Journal of Psychiatry*, 199(6), 441-442. doi:10.1192/bjp.bp.111.092718
- Thorpe, C., Fahey, L., Johnson, H., Deshpande, M., Thorpe, J., & Fisher, E. (2013). Facilitating healthy

coping in patients with diabetes: a systematic review. *Diabetes Educator*, 39(1), 33-52.

doi:10.1177/0145721712464400

Vinogradova, Y., Coupland, C., Hippisley-Cox, J., Whyte, S., & Penny, C. (2010). Effects of severe mental illness on survival of people with diabetes. *British Journal of Psychiatry*, 197(4), 272-277. doi:10.1192/bjp.bp.109.074674

Whyte, S., Penny, C., Phelan, M., Hippisley-Cox, J., & Majeed, A. (2007). Quality of diabetes care in patients with schizophrenia and bipolar disorder: Cross-sectional study. *Diabetic Medicine*, 24(12), 1442-1448. doi:10.1111/j.1464-5491.2007.02324.x

World Health Organization. (2013a). *Global action plan for the prevention and control of non-communicable diseases 2013-2020*. WHO Press. Retrieved from http://apps.who.int/iris/bitstream/10665/94384/1/9789241506236_eng.pdf

World Health Organization. (2013b). *Mental Health Action Plan 2013-2020*. WHO Press. Retrieved from http://apps.who.int/iris/bitstream/10665/89966/1/9789241506021_eng.pdf



Mark Haddad
School of Health Sciences, City University London, UK
Community Health Newham, East London NHS Foundation Trust
mark.haddad.1@city.ac.uk



Chris Flood
School of Health Sciences, City University London, UK
Community Health Newham, East London NHS Foundation Trust
c.flood@city.ac.uk



Julia Jones
School of Health Sciences, City University London, UK
j.jones.4@city.ac.uk



Jacqui Chapman
Community Health Newham, East London NHS Foundation Trust
Jacqui.chapman@eastlondon.nhs.uk



Hayley McBain
School of Health Sciences, City University London, UK
Community Health Newham, East London NHS Foundation Trust
Hayley.mcbain.1@city.ac.uk



Noeleen Hilton
Community Health Newham, East London NHS Foundation Trust
Noeleen.hilton@eastlondon.nhs.uk



Kathleen Mulligan
School of Health Sciences, City University London, UK
Community Health Newham, East London NHS Foundation Trust
Kathleen.mulligan.1@city.ac.uk



Alan Simpson
School of Health Sciences, City University London, UK
Community Health Newham, East London NHS Foundation Trust
a.simpson@city.ac.uk

The opportunities Item Response Theory (IRT) offers to health psychologists

Methods in Health Psychology Symposium IV

Alexandra Dima

University of Amsterdam

Chris Gibbons

University of Manchester

Mieke Kleppe

Philips Research and

Eindhoven University of

Technology

Katarzyna Byrka

University of Social Sciences

and Humanities of Wrocław

Marijn de Bruin

University of Aberdeen

Marie Johnston

University of Aberdeen

The 4th methods in Health Psychology Symposium

(Marijn de Bruin)

The 4th Methods in Health Psychology symposium at the EHPS in Innsbruck was organised by Alexandra Dima (University of Amsterdam), who together with Chris Gibbons (University of Manchester), Mieke Kleppe

(Phillips Research and Eindhoven University of Technology), and Katarzyna Byrka (University of Social Sciences and Humanities of Wrocław) organised an excellent and inspiring symposium on using Item Response Theory for developing and validating questionnaires and theory testing. The presentations were diverse: from an introduction to IRT to examples of Rasch models and Mokken scale analyses. Prof. Marie Johnston, who has extensive expertise on measurement issues, closed the session as a discussant. A summary of this symposium is presented below. To give you an impression of the relevance of the issues raised: in the well-filled Kaiser-Leopold-Saal, about 90% of the audience indicated to know little about IRT prior to the symposium; after the symposium, about 90% said they would attend an IRT workshop if one would be organised at a future EHPS conference. No doubt this article will be similarly compelling.

Background to Item Response Theory

(Alexandra Dima, Chris Gibbons, Mieke Kleppe, Katarzyna Byrka)

Researchers in health psychology rely on questionnaires to measure abstract constructs such as people's illness perceptions, treatment beliefs, relationship styles, depression, medication adherence and quality of life. It is therefore essential that reliable and valid questionnaire measures are available to allow health psychology researchers to produce high-quality evidence. Questionnaires are often developed and validated using a number of techniques including exploratory or confirmatory factor analyses and internal consistency (Cronbach's alpha), which are usually referred to as Classical Test Theory (CTT). CTT methods are considerably enhanced when used alongside additional psychometric techniques such as item response theory (IRT) and Rasch analyses.

The IRT approach to psychometric analysis includes a number of different but related techniques, including Mokken Analysis (Mokken, 1971), Samejima's Graded Response Model analysis (Samejima, 1969) and Rasch Analysis (Rasch, 1960). These methods have been shown to result in refined, accurate and concept-relevant questionnaires that are often shorter than measures developed with CTT. These IRT-derived measures also allow researchers to perform hypothesis testing from a different and often more theoretically-appropriate angle.

The added value that IRT approaches can bring to health psychology lies mainly in their different assumptions regarding measurement, compared to

more familiar CTT methods. CTT techniques are often based solely on correlations between questionnaire items. This statistical approach assumes that items are interchangeable and have a uniform relationship with the phenomena they represent. This assumption often does not hold in practice, as many concepts in health psychology consist of attributes that fall on a continuum which may be ordered from lowest to highest (e.g., impairment, quality of life or strength of beliefs). For such concepts, questionnaire development should take into account the way in which items are ordered to represent the underlying latent phenomenon. IRT and related methods allow the researcher to account for item ordering, and thus better understand the content of the construct and estimate individual scores more precisely. This, in turn, reduces measurement error and increases the statistical power to test the substantive relationships of interest (Fries, Krishnan, Rose, Lingala, & Bruce, 2011).

Due to the many advantages in questionnaire construction and theory testing (see Box 1) IRT offers, it is considered the gold standard approach in many academic disciplines and is quickly becoming the preferred methodology for large-scale projects in health outcomes measurement (e.g., Fries, Bruce, & Cella, 2005; Power, Quinn, Schmidt, & the WHOQOL-Old Group, 2005; Ravens-Sieberer et al., 2008). The purpose of the 4th EHPS Methods in Health Symposium was to promote IRT approaches by summarising the opportunities that they offer for both theory and questionnaire development and encourage a wider adoption of IRT techniques to improve the rigour of quantitative research in health psychology.

BOX 1: IRT for Health Psychology - Key advantages

1. *IRT improves measurement properties:* reliable and valid construct measurement leads to more accurate substantive findings, and thus to better evidence-based real-life decisions.

2. *IRT offers more sensitive detection of change due to interventions:* tools with good measurement properties at all levels of the latent continuum give better chances of detecting change when it happens.

3. *IRT enables a different, additional approach to theory testing:* IRT can be used for theory development and testing (not only for tool development).

4. *IRT helps find parsimonious measurement models:* obtains simple structure for data that within standard models (e.g., factor analysis) appear complex.

5. *IRT reduces measurement costs for funders and respondents:* lower measurement error leads to lower variability in scores, and thus to more precision in estimates and ability to identify significant differences with fewer subjects or less restricted inclusion criteria.

6. *IRT software is readily available:* software now available with good documentation, for example several IRT packages are free to use in the R environment.

7. *IRT is increasingly used:* researchers in health psychology have started to use IRT more for both measure development and theory testing.

8. *Using IRT is easier than expected:* the most important thing is to understand the principles, the method itself is easy to learn and one can also collaborate with IRT-trained researchers.

How can item-response theories improve questionnaire research in health psychology?

(Chris Gibbons)

In the first presentation of the symposium, Chris Gibbons (University of Manchester) discussed some of the scientific and practical advantages of IRT by introducing the IRT concepts of category threshold ordering, interval scaling, scale targeting, dimensionality, differential item functioning, and computer adaptive testing (Gibbons et al., 2013; Revicki & Cella, 1997).

Category threshold ordering

Most questionnaires used in health psychology have items with multiple response options, often using Likert scaling, and respondents rate their agreement to each item along a series of ordered responses. Category threshold ordering allows researchers to ensure that these responses are properly ordered by analysing how people respond to items. If certain response categories are systematically ignored the scoring structure for the item becomes inaccurate and unreliable. Category thresholds may become disordered when respondents do not distinguish between all of the possible response categories, indicating the need to rescore the item or to choose a more suitable response format. Such analyses help researchers choose the optimal response format for their questionnaires that strikes a perfect balance between item information and participant burden.

Interval scaling

For questionnaires to achieve the highest standard of measurement, it is crucial that resulting scores are intervally scaled. A questionnaire is intervally scaled when the scores are properly ordered and the difference between scores (the intervals) are uniform throughout the scale (e.g., the difference between

scores of 1 and 2 is the same as the difference between scores of 11 and 12). Scales must provide interval-level measurement if individual item scores are to be added together and used in arithmetic operations and parametric statistics (Karabatsos, 2001). Classical test theories are only capable of creating ordinal-level measurement, which does not guarantee consistent intervals between scale scores and therefore does not meet the additivity requirement of fundamental measurement (Wright, 1992). To assist researchers in gaining interval-level estimates from questionnaire research, IRT models can provide a 'conversion rate' to transfer raw scale scores into interval-level estimates to fully satisfy the conditional requirements of statistical tests (Gibbons et al., 2013).

Scale targeting

Scale targeting lets a researcher know how well matched a certain set of items is to the target population. Such analyses can also indicate if questionnaires are not providing information about certain members of a population. If the scale information is not closely matched to the population we are unable to gain much information about the population we are interested in. Developing and selecting items on IRT principles and item diagnostics leads to constructing questionnaires that can obtain maximum information on the construct of interest in the target population (see the medication adherence study below).

Unidimensionality

Unidimensionality is another important characteristic of questionnaire measures. A scale is unidimensional when all items correspond to the same underlying construct. The stricter tests of dimensionality provided in IRT models are better placed to give an accurate view of dimensionality than factor analyses, and thus more appropriate for testing structural validity of questionnaires (see the study on the dimensionality of health performance below; for another example see Tennant and Pallant

(2006)

Differential item functioning

Differential item functioning (DIF; Holland & Weiner, 1995) occurs when different groups respond differently to certain items for reasons other than differences in their level of the underlying trait. For example, on a fatigue scale for patients with motor neurone disease men were more likely than women to agree with the item "I wake up in the night on most nights", irrespective of their underlying level of fatigue. This suggested that there was some reason other than fatigue that men frequently woke during the night, possibly due to nocturia which is present in more than half of elderly men (Gibbons et al., 2011; Jackson, 1999). Failure to identify DIF may result in erroneous disparities in scale scores between demographic groups that may be wrongly attributed to the trait being measured. Identifying and excluding items with DIF allows unbiased comparisons between different subgroups (e.g., based on gender, age or nationality).

Computer adaptive testing

Of special interest are the close links that IRT and Rasch analysis have with computer adaptive testing (CAT), an exciting method for administering questionnaires that has a number of significant advantages over pencil-and-paper questionnaires. CAT is a technique for the electronic administration of questionnaires that significantly reduces questionnaire length and response burden (Haley, Raczek, Coster, Dumas, & Fragala-Pinkham, 2005; Wainer, 2000). This is achieved through selective item administration based on each individual's previous responses, and omitting irrelevant items based on individual characteristics (e.g., patient's disease group or other demographic factor) (Ware, Bjorner, & Kosinski, 2000; Weiss, 1985). CAT questionnaires take a fraction of the time to complete and can be just as reliable, valid and sensitive to change when compared to their paper-based counterparts (Haley et al., 2005). Instantaneous calculation of questionnaire scores, including comparison with previous scores and

graphical feedback, is also achievable using CAT platforms, thus increasing their simplicity for use in time-pressured clinical environments.

There are numerous other practical and methodological advantages to IRT and Rasch analysis that are described more comprehensively elsewhere (Pallant & Tennant, 2007).

Using the Rasch model to compare medication adherence questionnaires

(Mieke Kleppe)

One construct that has proven difficult to measure using self-report questionnaires is medication adherence (i.e., the extent to which medication is taken as prescribed by a physician). Recent research on measuring medication adherence using self-reported measures provides a perfect illustration of how 'scale targeting' using IRT can enable researchers to develop a better assessment tool. Commonly-used self-report measures often provide heavily skewed results with limited variance, suggesting that most participants are highly adherent to their prescribed medication. This finding contrasts with results of objective adherence measures which indicate that many people are non-adherent (Nguyen, Caze, & Cottrell, 2014; Reach et al., 2011; Vermeire, Hearnshaw, Van Royen, & Denekens, 2001). In the second presentation, Mieke Kleppe (Philips Research and Eindhoven University of Technology) argued that a possible explanation for these results is that these adherence questionnaires cover a restricted range of adherence behaviours. That is, the items do not match the non-adherence behaviours people perform (i.e., they are too easy for the sample). In developing these questionnaires researchers implicitly assumed that item difficulties are similar for all items and did not take into account that for example forgetting a pill might occur more often (and it is thus more difficult to report being adherent on this item) than stop taking pills for a whole week. To resolve this

issue, we developed a new item set (the ProMAS), aiming specifically to cover a broader range of difficulties (Kleppe, Lacroix, Ham & Midden, 2014). Winsteps software (Linacre, 2007) was used for all Rasch analyses, including the calculation of adherence estimates, item and person fit statistics and dimensionality analyses.

A study was conducted among elderly taking medication for chronic conditions ($N = 370$). A selection of the items was made to shorten the scale based on fit statistics and item difficulties, and 18 items remained in the final scale. The final item set of the ProMAS was compared to the Medication Adherence Report Scale (MARS), one of the most frequently used current adherence measures. The ProMAS adherence estimates were less skewed and provided more variance than the MARS adherence scores. To test whether the ProMAS item difficulties covered a wider range of non-adherence behaviours than the MARS, items from both scales were entered into one Rasch analysis. Results indicated that the ProMAS items cover a wider range of item difficulties that are better matched to participants' behaviours. While the MARS only provided one item to distinguish between the 50% most adherent patients, the ProMAS provided six items. These items are most relevant for distinguishing between participants with higher adherence scores. The wider item difficulty range resulted in adherence scores that better accord with those obtained with objective adherence measures in previous studies. This study showed that using the IRT concept of scale targeting, questionnaires can be developed that are better capable of discriminating participants on the variable of interest. In this case, the Rasch model provided the statistical tools to obtain an improved measure of medication adherence.

Health performance within the Campbell paradigm: IRT models for testing new approaches in health psychology

(Katarzyna Byrka)

Beyond its psychometric value, IRT offers unique solutions for testing novel theories. In the third presentation, Katarzyna Byrka (University of Social Sciences and Humanities of Wrocław) described how examining dimensionality with IRT models provokes a paradigm shift in thinking about interdependence of health behaviors.

In health psychology, it is believed that behaviors such as screening for cancer, calorie counting or fastening seatbelts do not belong to a single, general behavioral class (Stroebe & Stroebe, 1995). The independence of health behaviors, however, has been judged on the basis of correlations and related methods such as factor analysis. The problem is that correlations between behaviors are likely to be artificially deflated when examined items differ significantly in their 'difficulties' (i.e., the percentage of people that perform a certain behavior). Consequently, meaningful psychological interpretation of the data structure using correlations is only possible if examined items are homogeneous with respect to their difficulty (Ferguson, 1941). Obviously, health behaviors differ in 'difficulty', as the costs (both figurative and literal) of performing some is higher than of others; for example, light exercise 15 minutes per day bears far less behavioural cost than jogging (Kaiser, Byrka, & Hartig, 2010). In such situations when items are not homogenous the complex and the multidimensional structure of the data obtained with factor analyses likely stems from a statistical artifact.

Contrary to common findings in health psychology, a recently developed approach, the Campbell paradigm, assumes that all specific health behaviors

are interdependent and belong to a single behavioral class (Byrka & Kaiser, 2013). In this approach, the interdependence of behaviors is conceptualized as steps of variable difficulty undertaken by people to achieve a particular goal (i.e., being healthy). Such an assumption can be only tested within a model that takes into account the 'difficulty' of behaviors.

In a cross-sectional study with a sample of Dutch adults ($N = 396$) a one-parameter logistic Rasch model was applied to corroborate the assumptions of the Campbell paradigm (Byrka & Kaiser, 2013). Specifically, unidimensionality of a comprehensive health performance measure composed of behavioral self-reports was tested. It was found that health behaviors associated with different domains such as sustenance, hygiene, and physical exercise formed a homogenous class. A more complex five-dimensional model, a multidimensional extension of a one-parameter Rasch model (Adams, Wilson & Wang, 1997), did not predict the data meaningfully better than a parsimonious one-dimensional version (the models were compared within the Conquest software). Additionally, the same data were explored using factor analysis. Out of fifty items ten dimensions were generated based on eigenvalues above 1. As a result, some dimensions appeared of rather poor psychometric quality as they were composed of only one or two items. In sum, these findings speak of the unity of health performance when explored with IRT and of multidimensional complexity when explored with factor analysis.

In sum, applying psychometric models stemming from IRT is the best solution to find unbiased relations between behaviors that are heterogeneous in difficulty (Embretson & Reise, 2000). Moreover, to test certain theoretical assumptions, such as the Campbell paradigm, IRT models are the only conceptually-appropriate methods. IRT allows the researchers to find parsimonious models and simple structures for data that within standard CTT models appear complex, and thus help minimize the ongoing segmentation of the field of health psychology (Schwarzer, 2008) and lead researchers to derive more

meaningful models.

Mokken Scaling Analysis: scale development the NIRT way

(Alexandra Dima)

Developing questionnaires that achieve fundamental measurement and thus fully meet the requirements of parametric statistical tests is one of the main advantages of using IRT approaches, and is best achieved by parametric methods such as Rasch modeling. However for some psychological concepts and measures this may not always be an attainable goal. One reason is that some concepts may by definition only refer to differences in degree between cases (be it people, groups, or events); for these concepts, no matter how well the items have been developed, the data does not fit a parametric IRT model. Moreover, in some research settings data can only be collected for a few items (e.g., surveys with numerous scales) and from fewer cases (e.g., small population, low resources); for these datasets, no matter how well the measurement was performed, the study will be underpowered for a parametric IRT analysis. In the fourth presentation of the symposium, Alexandra Dima (University of Amsterdam) described how non-parametric IRT (NIRT) allows the researcher to account for item ordering using less restrictive models, and how NIRT can also provide complementary information for questionnaires that do fit parametric models (for a more detailed introduction see Sijtsma, 1998).

The best developed and most accessible NIRT method is Mokken Scaling Analysis (MSA; Schuur, 2003); a well-documented software package (*mokken*) is available for the R environment (Ark, 2007) and produces several quite intuitive and easily interpretable outputs. Homogeneity (H) indicates to what degree an item, a pair of items or a scale can be considered as reflecting a single latent dimension.

When a more exploratory approach to dimensionality testing is needed, an automatic item selection procedure (aisp) can cluster items to optimize scale homogeneity given increasing homogeneity thresholds (c), and gives an informative overview on the dimensionality of item sets (Hemker, Sijtsma, & Molenaar, 1995). As its parametric equivalent, MSA also allows examination of various item properties (e.g., via Item Response Function graphs). These outputs make MSA a useful and flexible research tool for many health psychology topics, such as exploring health communication processes, assessing patient preferences, and understanding the structure and quality of medical or socio-behavioral care.

A health communication process that lends itself to NIRT analyses is diagnosis disclosure, an incremental process of shifting from no disclosure to being completely open about one's diagnosis. This may happen as a single process, or there might be several distinct processes that include specific groups or single individuals. A recent study used MSA to examine the dimensionality of HIV status disclosure in people living with HIV in Tanzania and identified several distinct voluntary disclosure processes (to spouse, children, family members, and larger community), each showing different patterns of association with relevant concepts such as stigma and social support; these differences would be overlooked if sum scores were used (Dima, Stutterheim, Lyimo, & de Bruin, 2014). This new way of examining disclosure processes can inform more targeted disclosure counseling and may prove informative for studying disclosure in other contexts.

Another phenomenon that can be conceptualized as an ordered item set refers to patients' treatment beliefs; these may range from being strongly against to strongly supportive of a treatment. In a recent study of low back pain treatments, the aisp analysis allowed a comparative examination of patients' beliefs about four treatments recommended in UK primary care: medication, exercise, manual therapy and acupuncture (Dima et al., 2013). We examined four themes hypothesized as distinct dimensions

(concerns, credibility, effectiveness and individual fit) and found that the distinction between concerns and the other three (closely-related) themes is more salient regarding medication, but applies less to acupuncture, exercise and manual therapy. The findings suggest that the cost-benefit dichotomy in treatment decision-making may not apply to a broader range of treatments beyond medication, and highlights the usefulness of NIRT in investigating dimensionality of patients' beliefs.

Quality of care is yet another phenomenon intuitively described as a set of activities of increasing difficulty, from basic to more advanced care, for which NIRT can prove useful. Within a large ongoing observational cohort study on asthma treatment, reports of medical care and adherence support activities by French general practitioners were examined via MSA. Preliminary results showed that, while medical care activities do not form a single dimension, several key adherence support activities can be ordered from basic to comprehensive support and form a scale showing significant associations with relevant determinants of adherence support (Dima, van Ganse, Le Cloarec, de Bruin, & the ASTRO-LAB group, 2014). This encourages the development and use of NIRT-based questionnaires to assess quality of care.

These are just three situations in which MSA can offer relevant insights into the data and lead to novel interpretations. MSA has been used in health research for several decades, and many other examples are available (Watson et al., 2012).

How can the use of IRT methods be enhanced in health psychology?

(Marie Johnston)

Papers using IRT have been presented intermittently at EHPS for at least ten years. The papers presented in this symposium provide very persuasive arguments about the potential gains for

health psychology of using these methods to improve measurement, provide additional methods of testing theory, and reduce measurement burden. IRT methods can be used alongside the psychometric methods of CTT to achieve more sensitive, accurate measurement, and to reject redundant, insensitive and irrelevant items. All of this is clearly of considerable value not only in health psychology but in areas of routine professional practice where reducing respondent burden while retaining sensitive accurate measurement may be particularly valuable.

Given the immense potential value of IRT, why has the use of these methods been so sporadic in health psychology? The symposium audience was almost unanimous in agreeing that IRT methods held considerable potential and were likely to result in good research outcomes, but had low confidence in using the methods. Using a Social Cognitive Theory analysis of our behavior, outcome expectancies were high but self-efficacy was low with the result that the methods are not frequently used. Considering Bandura's four methods of enhancing self-efficacy, the symposium presentations had included persuasive messages and had modelled successful vicarious experiences of using IRT. However perhaps we need more mastery experiences and opportunities to reduce our emotional responses to these sophisticated analytic methods.

It was therefore proposed that a workshop on IRT methods will be organized prior to a future EHPS conference. We encourage readers interested in increasing their IRT self-efficacy and skills to look out for announcements.

References

- Ark, L. A. van der. (2007). Mokken scale analysis in R. *Journal of Statistical Software*, 20(11), 1–19.
- Byrka, K., & Kaiser, F. G. (2013). Health performance of individuals within the Campbell paradigm. *International Journal of Psychology: Journal International De Psychologie*, 48(5), 986–999. doi:10.1080/00207594.2012.702215
- Dima, A. L., Lewith, G., Little, P., Moss-Morris, R., Foster, N. E., Hankins, M., & Bishop, F. L. (2013). Beyond medication beliefs: A comparative NIRT analysis of patients' beliefs on four back pain treatments. *Psychology & Health*, 28(sup1), 87. doi:10.1080/08870446.2013.810851
- Dima, A. L., Stutterheim, S. E., Lyimo, R., & de Bruin, M. (2014). Advancing methodology in the study of HIV status disclosure: The importance of considering disclosure target and intent. *Social Science & Medicine*, 108, 166–174. doi:10.1016/j.socscimed.2014.02.045
- Dima, A. L., van Ganse, E., Le Cloarec, H., de Bruin, M., and the ASTRO-LAB group (2014, November). *Adherence support in routine asthma care: development and validation of a clinician-report tool*. Poster presented at the 17th annual meeting of the European Society for Patient Adherence, Compliance and Persistence, Lausanne, Switzerland.
- Embretson, S. E., & Reise, S. (2000). *Item response theory for psychologists*. Mahwah, NJ: Erlbaum Publishers.
- Ferguson, G. A. (1941). The factorial interpretation of test difficulty. *Psychometrika*, 6(5), 323–329. doi:10.1007/BF02288588
- Fries, J. F., Bruce, B., & Cella, D. (2005). The promise of PROMIS: using item response theory to improve assessment of patient-reported outcomes. *Clinical and Experimental Rheumatology*, 23(5, Suppl 39), S53–57.
- Fries, J. F., Krishnan, E., Rose, M., Lingala, B., & Bruce, B. (2011). Improved responsiveness and reduced sample size requirements of PROMIS physical function scales with item response theory. *Arthritis Research & Therapy*, 13(5), R147. doi:10.1186/ar3461
- Gibbons, C. J., Kenning, C., Coventry, P. A., Bee, P., Bundy, C., Fisher, L., & Bower, P. (2013). Development of a Multimorbidity Illness Perceptions Scale (MULTIPLEs). *PLoS ONE*, 8(12), e81852. doi:10.1371/journal.pone.0081852

- Gibbons, C. J., Mills, R. J., Thornton, E. W., Ealing, J., Mitchell, J. D., Shaw, P. J., ... Young, C. A. (2011). Development of a patient reported outcome measure for fatigue in motor neurone disease: the Neurological Fatigue Index (NFI-MND). *Health and Quality of Life Outcomes*, 9(1), 101. doi:10.1186/1477-7525-9-101
- Haley, S. M., Raczek, A. E., Coster, W. J., Dumas, H. M., & Fragala-Pinkham, M. A. (2005). Assessing mobility in children using a computer adaptive testing version of the pediatric evaluation of disability inventory. *Archives of Physical Medicine and Rehabilitation*, 86(5), 932-939. doi:10.1016/j.apmr.2004.10.032
- Hemker, B. T., Sijtsma, K., & Molenaar, I. W. (1995). Selection of Unidimensional Scales From a Multidimensional Item Bank in the Polytomous Mokken I RT Model. *Applied Psychological Measurement*, 19(4), 337-352. doi:10.1177/014662169501900404
- Holland, P., & Weiner, H. (1995). *Differential Item Functioning*. Philadelphia, PA: Lawrence Erlbaum.
- Jackson, S. (1999). Lower urinary tract symptoms and nocturia in men and women: prevalence, aetiology and diagnosis. *BJU International*, 84(S1), 5-8. doi:10.1046/j.1464-410X.84.s1.6.x
- Kaiser, F. G., Byrka, K., & Hartig, T. (2010). Reviving Campbell's Paradigm for Attitude Research. *Personality and Social Psychology Review*, 14(4), 351-367. doi:10.1177/1088868310366452
- Karabatsos, G. (2001). The Rasch model, additive conjoint measurement, and new models of probabilistic measurement theory. *Journal of Applied Measurement*, 2(4), 389-423.
- Kleppe, M., Lacroix, J. P. W., Ham, J. R. C. & Midden, C. J. H. (2014). *The development of the ProMAS: A Probabilistic Medication Adherence Scale*. Manuscript submitted for publication.
- Linacre, J. M. (2007). *Winsteps* (version 3). Chicago. Retrieved from www.winsteps.com
- Mokken, R. J. (1971). *A theory and procedure of scale analysis: With applications in Political Research*. New York: de Gruyter (Mouton).
- Nguyen, T.-M.-U., Caze, A. L., & Cottrell, N. (2014). What are validated self-report adherence scales really measuring?: a systematic review. *British Journal of Clinical Pharmacology*, 77(3), 427-445. doi:10.1111/bcp.12194
- Pallant, J. F., & Tennant, A. (2007). An introduction to the Rasch measurement model: An example using the Hospital Anxiety and Depression Scale (HADS). *British Journal of Clinical Psychology*, 46(1), 1-18. doi:10.1348/014466506X96931
- Power, M., Quinn, K., Schmidt, S., & the WHOQOL-Old Group. (2005). Development of the WHOQOL-Old Module. *Quality of Life Research*, 14(10), 2197-2214. doi:10.1007/s11136-005-7380-9
- Rasch, G. (1960). *Probabilistic models for some intelligence and attainment tests*. Copenhagen, Denmark: Danish Institute for Educational Research.
- Ravens-Sieberer, U., Gosch, A., Rajmil, L., Erhart, M., Bruil, J., Power, M., ... Kilroe, J. (2008). The KIDSCREEN-52 Quality of Life Measure for Children and Adolescents: Psychometric Results from a Cross-Cultural Survey in 13 European Countries. *Value in Health*, 11(4), 645-658. doi:10.1111/j.1524-4733.2007.00291.x
- Reach, G., Michault, A., Bihan, H., Paulino, C., Cohen, R., & Le Clésiau, H. (2011). Patients' impatience is an independent determinant of poor diabetes control. *Diabetes & Metabolism*, 37(6), 497-504. doi:10.1016/j.diabet.2011.03.004
- Revicki, D. A., & Cella, D. F. (1997). Health status assessment for the twenty-first century: item response theory, item banking and computer adaptive testing. *Quality of Life Research*, 6(6), 595-600. doi:10.1023/A:1018420418455
- Samejima, F. (1969). Estimation of latent ability using a response pattern of graded scores. *Psychometrika Monograph Supplement*, 34(4, Pt. 2), 100.
- Schuur, W. H. van. (2003). Mokken Scale Analysis: Between the Guttman Scale and Parametric Item Response Theory. *Political Analysis*, 11(2), 139-163. doi:10.1093/pan/mpg002
- Schwarzer, R. (2008). Modeling health behavior change: How to predict and modify the adoption and maintenance of health behaviors. *Applied*

Psychology, 57(1), 1–29. doi:10.1111/j.1464-0597.2007.00325.x

- Sijtsma, K. (1998). Methodology review: Nonparametric IRT approaches to the analysis of dichotomous item scores. *Applied Psychological Measurement*, 22(1), 3–31. doi:10.1177/01466216980221001
- Stroebe, W., & Stroebe, M. S. (1995). *Social psychology and health*. Buckingham: Open University Press.
- Tennant, A., & Pallant, J. F. (2006). Unidimensionality matters! (a tale of two Smiths?). *Rasch Measurement Transactions*, 20(1), 1048–1051.
- Vermeire, E., Hearnshaw, H., Van Royen, P., & Denekens, J. (2001). Patient adherence to treatment: three decades of research. A comprehensive review. *Journal of Clinical Pharmacy and Therapeutics*, 26(5), 331–342. doi:10.1046/j.1365-2710.2001.00363.x
- Wainer, H. (2000). *Computer adaptive testing: A primer*. Hillsdale, NJ: Earlbaum Associates.
- Ware, J. E., Bjorner, J. B., & Kosinski, M. (2000). Practical implications of item response theory and computerized adaptive testing: a brief summary of ongoing studies of widely used headache impact scales. *Medical Care*, 38(9 Suppl), II73–82.
- Watson, R., van der Ark, L. A., Lin, L.-C., Fieo, R., Deary, I. J., & Meijer, R. R. (2012). Item response theory: How Mokken scaling can be used in clinical practice. *Journal of Clinical Nursing*, 21(19–20), 2736–2746. doi:10.1111/j.1365-2702.2011.03893.x
- Weiss, D. J. (1985). Adaptive testing by computer. *Journal of Consulting and Clinical Psychology*, 53(6), 774–789. doi:10.1037/0022-006X.53.6.774
- Wright, B. D. (1992). Raw Scores Are Not Linear Measures: Rasch vs. Classical Test Theory CTT Comparison. *Rasch Measurement Transactions*, 6(1), 208.



Alexandra Dima
Department of Communication
Science, University of Amsterdam,
The Netherlands
a.dima@uva.nl



Chris Gibbons
NIHR Collaboration for Applied
Health Research and Care, Centre for
Primary Care, Institution of
Population Health, University of
Manchester, UK
chris.gibbons@manchester.ac.uk



Mieke Kleppe
Philips Research, Eindhoven, the
Netherlands; Eindhoven University of
Technology, Department of
Human-Technology Interaction,
School of Innovation Sciences,
Eindhoven, The Netherlands
m.kleppe@tue.nl



Katarzyna Byrka
University of Social Sciences and
Humanities of Wrocław, Poland
kbyrka@swps.edu.pl



Marijn de Bruin
Aberdeen Health Psychology Group,
Institute of Applied Health Sciences,
College of Life Sciences and
Medicine, Aberdeen, UK
m.debruin@abdn.ac.uk



Marie Johnston
Aberdeen Health Psychology Group,
Institute of Applied Health Sciences,
College of Life Sciences and
Medicine, Aberdeen, UK
m.johnston@abdn.ac.uk

Create workshop 2014: Leveraging Mobile Technology and Social Media in Behavioral Research

Marijn Stok

*University of Konstanz
Utrecht University*

Laura König

University of Konstanz

Johanna Nurmi

University of Helsinki

Andre Matthias

Müller

University of Malaya

The 2014 CREATE workshop brought together some forty young health behavior researchers from thirteen different countries, all sharing an interest in mobile technology and social media research. The three-day workshop was held in Innsbruck, Austria, prior

to the general EHPS conference and was facilitated by Dr. Sherry Pagoto (University of Massachusetts Medical School, Massachusetts, USA) and Dr. Kristin Schneider (Rosalind Franklin University, Illinois, USA). Throughout the workshop, participants garnered valuable understanding of the many possibilities of modern-day technologies and received insightful tips for unlocking this great potential. During the workshop, we zoomed in on two particular topics. The first day of the workshop was reserved for an extensive discussion of mHealth. Particularly, the focus was on mobile applications, which have outstanding potential for health behavior research. During days two and three, the focus shifted to social media. The facilitators demonstrated how social media can be leveraged with great success for conducting health behavior research as well as for the development of our professional careers.

Applications for mobile devices, or apps, are being developed at a rapid pace and they offer unforeseen research opportunities for various fields. A vast amount of these apps are specially designed to change health behavior (such as diet or physical activity) and therefore make health accessible “on the go”. The potential of these health-related apps is

so great because for the first time, behavioral researchers have the opportunity to measure, monitor and guide individual behavior anywhere and anytime, providing countless new possibilities to explore, and intervene on, health behavior. In order to encourage, for instance, healthy food choices and/or increase daily step counts, apps are – in principle – designed to enhance motivation, influence self-regulation and advocate for social support – reliable predictors of a variety of health behaviors. However, we learned during the workshop that unfortunately, many apps fall short of actually employing best-practice behavior change techniques that have been validated and shown to be effective. For instance, Conroy, Yang and Maher (2014) found that apps designed for the promotion of physical activity only utilized on average 4 out of 40 valid behavior change techniques that are potentially effective in increasing healthy behavior (Michie et al., 2011). The authors further reported that the techniques that are used in apps are typically either motivational or educational in nature, whereas techniques that have been shown to be more successful in bridging the gap between intention and behavior are less commonly applied.

In addition, as Dr. Pagoto and Dr. Schneider pointed out, apps tend to be designed narrowly around behavior change, ignoring the larger context in which many health behaviors occur. One important reason for this is a lack of expertise among app developers, who are not usually experts in behavioral theory and who may be primarily driven by economic incentives. It hence appears essential to engage researchers in the development, adjustment and scientific evaluation of mobile apps in order to successfully impact individual as well as public health. However, there are challenges, both to the

development of useful apps as well as to reliable content analysis and rigorous efficacy testing of apps. During the workshop, we were sensitized to the elaborate process and the many steps involved in the development of an app by testing an app that one of the facilitators was currently developing. With regard to the evaluation of apps, some of the difficulties are that apps often change over time and the fact that behavior changes only occur after a longer period of use and thus cannot be evaluated immediately. Moreover, a discussion emerged among workshop participants about the fact that the research cycle, with a potentially long delay between study and publication, might inhibit the swift delivery of urgently needed evidence. It therefore appears necessary to develop and implement innovative research designs that allow rapid but reliable evaluations of apps as well as communication of the results (Kumar et al., 2013).

The second part of the workshop focused on the use of social media for behavioral science. Social media are Internet-based applications that allow the users to generate and exchange content, e.g. social networks, video platforms and blogs (Kaplan & Haenlein, 2010). Focusing mainly on the social networks Facebook and Twitter, the CREATE participants learned about the potential of these platforms and explored the possibilities with some hands-on testing. Due to their tremendous reach across diverse populations and their inherent versatility, these platforms offer great opportunities for behavioral researchers in terms of recruitment and assessment of study participants as well as for the delivery of interventions. Additionally, the workshop participants learned that social media can not only be used for passive observation, but also to monitor disease outbreaks, to disseminate health messages and to create online patient communities. Moreover, delivering behavioral interventions via social networks has become increasingly popular in recent years. Dr. Pagoto shared a personal success story of an unexpectedly effective Twitter-intervention using a health-related hashtag (#PlankADay) and showed how

such interventions can be used to encourage health behavior change. Hashtags can rapidly spread across a social network and thus can cause a snowball effect, reaching a great number of people with minimum effort (Pagoto, 2013). Furthermore, there are also advantages from the participants' perspective. In particular, they value the possibility of setting up reminders, e.g. via automatic tweets, and the opportunity to exchange experiences and support one another within the community.

Not only are social media used to support health research; during the workshop we also learned how to leverage social media to promote our professional development. Personal Facebook pages, Twitter profiles and blogs are useful tools for building an online presence aside from static homepages. These services allow the user to actively disseminate results of current research to a wider audience, to network within the scientific community, and to interact with the public. While signing up for Twitter is done within seconds, one has to be aware that time needs to be invested in maintaining the profile to accumulate followers and to keep the audience interested. In order to maximize efficacy of an online presence, it is advisable to present oneself to the public with a short but appealing profile description, to frequently interact with other users, to adopt a liberal following strategy, and to post concise updates several times per week.

The workshop offered the participants with plenty of food for thought (and action). New avenues for recruiting participants and conducting research were opened up for us, and many felt inspired to give our own online presence a boost. Indeed, many participants were directly applying what they learned during the workshop by opening Twitter accounts and sharing their experiences of the workshop and the subsequent EHPS conference using the official conference hashtag (#EHPS2014). Furthermore, the social program of the workshop provided us with plenty of time to get to know researchers from different countries and to discuss the workshop insights. In sum, the 2014 CREATE workshop on

leveraging mobile technology and social media in behavioral research was valuable and provided interesting content, both for the fruition of the participants' research as well as for their professional development.

References

- Conroy, D. E., Yang, C.-H., & Maher, J. P. (2014). Behavior change techniques in top-ranked mobile apps for physical activity. *American Journal of Preventive Medicine*, 46(6), 649–652. doi:10.1016/j.amepre.2014.01.010.
- Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of Social Media. *Business Horizons*, 53(1), 59–68. doi:10.1016/j.bushor.2009.09.003
- Kumar, S., Nilsen, W. J., Abernethy, A., Atienza, A., Patrick, K., Pavel, M., . . . Spruijt-Metz, D. (2013). Mobile health technology evaluation: the mHealth evidence workshop. *American Journal of Preventive Medicine*, 45(2), 228–236. doi:10.1016/j.amepre.2013.03.017
- Michie, S., Ashford, S., Sniehotta, F. F., Dombrowski, S. U., Bishop, A., & French, D. P. (2011). A refined taxonomy of behaviour change techniques to help people change their physical activity and healthy eating behaviours: the CALO-RE taxonomy. *Psychology & Health*, 26(11), 1479–1498. doi:10.1080/08870446.2010.540664
- Pagoto, S. (2013, February 26). Can behavior change go viral? A case study of the health hashtag adopted by thousands [Blog post]. Retrieved from <http://www.psychologytoday.com/blog/shrink/201302/can-behavior-change-go-viral>



Marijn Stok
Psychological Assessment & Health
Psychology, University of Konstanz,
Germany
Clinical & Health Psychology, Utrecht
University, The Netherlands
marijn.stok@unikonstanz.de



Laura König
Psychological Assessment & Health
Psychology, University of Konstanz,
Germany
laura.koenig@unikonstanz.de



Johanna Nurmi
Faculty of Social Sciences, HIIT,
University of Helsinki, Finland
johanna.nurmi@helsinki.fi



Andre Matthias Müller
Sports Centre, University of Malaya,
Kuala Lumpur, Malaysia
andrematthiasmueller@gmail.com

Annual Report - Australia

Barbara Mullan *Conferences*
Curtin University

There are two health psychology conferences next year. The 1st is the ASBHM annual scientific meeting which will be held in Auckland, New Zealand, 11-13th February 2015. The overall Theme of the conference is "Addressing barriers to health outcomes for people and populations." It will run from Wednesday 11th to Friday 13th February, 2015 at the Mercure Hotel, Perth, Australia. The specific Conference Themes are:

Settings where behavioural medicine can be applied: Social media & technology, urban environment, rural communities, policy & legislation systems, healthcare settings, education settings, family and social networks.

One of the keynote speakers is EHPS member Professor Susan Michie (University College London, UK).

The 2nd is the 2nd APS College of Health Psychology Conference being held on the 10-11th April, 2015 at Coogee Beach Sydney. The theme of the conference is "Facilitating health behaviour change and maintenance". One of the keynote speakers is EHPS member Professor Falko Sniehotta.

Publications

There are no national health psychology journals but this year witnessed for the 1st time a special issue by health psychologists in Australia.

Australian Psychologist Vol. 49 Issue 2
Special Issue: The 'Health' of Health Psychology in

Australia: Behavioural Approaches and Interventions, (April 2014, pages 63-138).

This special issue included the following contributions:

The 'Health' of Health Psychology in Australia: Behavioural Approaches and Interventions (pages 63-65) - *Dr Kyra Hamilton and Professor Martin S Hagger.*

Health Psychology Intervention in Key Social Environments to Promote Adolescent Health (pages 66-74) - John W Toumbourou, Craig A Olsson, Bosco Rowland, Solomon Renati and Bill Hallam.

Perceived Needs for Supported Self-management of Type 2 Diabetes: A Qualitative Investigation of the Potential for a Web-based Intervention (pages 75-85) - Mandy Cassimatis, David J Kavanagh and Anthony C Smith.

The Training Crisis in Health Psychology in Australia (pages 86-95) - Paul R Martin, Rochelle Cairns, Helen Lindner, Jeannette Milgrom, Shirley Morrissey and Lina A Ricciardelli.

Intervening to Improve Psychological Outcomes after Cancer: What Is Known and Where Next? (pages 96-103) - Suzanne Kathleen Chambers, Sandy Hutchison, Samantha Clutton and Jeff Dunn.

Experimental Methods in Health Psychology in Australia: Implications for Applied Research (pages 104-109) - *Barbara Mullan, Jemma Todd, Nikos LD Chatzisarantis and Martin S Hagger.*

The Intersect of Theory, Methods, and Translation in Guiding Interventions for the Promotion of Physical Activity: A Case Example of a Research Programme (pages 110-126) - Ronald Plotnikoff, Philip J Morgan, David R Lubans, Ryan Rhodes and Sarah A Costigan.

Understanding Adherence in Patients With

Coronary Heart Disease: Illness Representations and Readiness to Engage in Healthy Behaviours (pages 127–137) - Ian Platt, Heather J Green, Rohan Jayasinghe and Shirley A Morrissey.



Barbara Mullan
Health Psychology & Behavioural
Medicine Research Group, School of
Psychology and Speech Pathology,
Curtin University, Australia
barbara.mullan@curtin.edu.au

Roles and professional development

1. The new State Chair for the APS Health College for Queensland is EHPS member Kyra Hamilton. The new ICAP secretary and Chair Elect of ASBHM is EHPS member Barbara Mullan.

2. The APS health college continues to organize professional development events for members. This year with the launch of the Health Psychology and Behavioural Medicine group in Curtin University in Perth WA there have been a number of other professional development events including:

a. A behaviour and alcohol research and policy networking breakfast meeting supported by the Health Psychology and Behavioural Medicine (HPBM) Research Group at Curtin University. The meeting will bring together people with research and policy interests in interventions, measures and policies aimed at reducing excessive alcohol intake on the 29th October 2014.

b. A professional development event with EHPS member Professor Susan Michie in Curtin University 2015.

c. Professional development event with EHPS member Professor Falko Sniehotta in Curtin University 2015.

Annual Report - Belgium

Olivier Luminet

Université catholique de Louvain and Belgian Fund for Scientific Research FRS-FNRS

The main issues for health psychology in Belgium in the following weeks are the organization of two medium size meetings, each gathering will attract between 200 and 300 delegates. These meetings show that Belgium is at the crossroads of Southern and Northern health psychology in Europe. Both the AFPSA (<http://www.afpsa.fr/>) and the ARPH(<http://www.arph.nl>) will organize their meetings for the first time in Belgium.

The 8th Francophone Association of Health Psychology Conference will take place on December 15, 16 and 17, 2014 in Liège, in collaboration with four Belgian Universities: Université de Liège (Coordination), Université libre de Bruxelles, Université catholique de Louvain and Université de Mons. (<https://conferences.fapse.ulg.ac.be/AFPSA/>)

Three major topics will be discussed at the conference.

1. With regard to social evolutions, the population ages and the prevalence of chronic diseases increases. New configurations of work (hyper-flexible and precarious jobs) and family are a challenge for health psychologists who have to face the need to reconsider their concepts and methods of intervention.

2. In addition, there are new technological innovations both in the medical field and public health. For example, our ability to predict by genetic or biopsychosocial epidemiological tests, in a healthy individual, the possibility of later developing a serious condition raises new questions regarding ethics and interventions. It is essential to study, as they arise, the psychological outcomes of these

advanced diagnoses.

3. In Health Policy, health care systems are subject to numerous issues: What is the place of professionals in physical and mental health? How to reconcile all innovations (i.e., electronic versions of medical records, genetic test, etc.) available to individuals in order to manage their health while allowing them to keep their identities?

The conference will also host an international symposium on "Nutrition and health : The challenge of obesity from a psychological perspective" organized by Olivier Luminet. And finally three keynote speakers will be invited: Stan Maes (Leiden), Philippe de Timary (UC Louvain) and Marie Préau (Lyon).

The 4th edition of the annual conference of the Association for Researchers in Psychology & Health (ARPH) will take place in Ghent, February 5-6, 2015 (<http://www.arphconference.nl>).

ARPH is a non-profit organization that was founded in April 2011 by a group of scientifically oriented psychologists interested in advancing the scientific study of psychology and health in The Netherlands and Belgium, and its representation at the international level. It is the only health psychological congress in the Dutch-Belgian area, and as such offers an excellent opportunity for both junior and senior researchers in this field to meet, present their latest work, and exchange new ideas. Previous congresses were held in Utrecht, Twente, and Groningen. In all of these previous congresses, international experts have given keynotes, including Niels Birbaumer, Fabrizio Benedetti, Mario Mickulincer, Kirk Warren Brown, Reinout Wiers, Richard Brown, Lynn Martire, and Denise De Ridder. The 2015 congress in Ghent will be the first to take

place in Belgium. Keynote speakers this year are Lance McCracken (London), James Coyne (Pennsylvania/Groningen), and Ilse De Bourdeaudhuij (Ghent).

The objective of the congress is to stimulate and coordinate the academic study of psychological approaches to health and illness by providing a platform for researchers to exchange knowledge and research initiatives on the study of health promotion, the prevention of illness, to direct the development of new theoretical and methodological approaches to the study of psychology and health, and to initiate a network between institutes and junior and senior researchers involved in the scientific study of psychology and health.



Olivier Luminet
Université catholique de Louvain and
Belgian Fund for Scientific Research
FRS-FNRS, Belgium
olivier.luminet@uclouvain.be

Annual Report - Bulgaria

Anna Alexandrova-Karamanova Health psychology has rapidly developed in the last years in Bulgaria and the proportion of health psychology topics within the national psychology research agenda and applied activities continues to increase.

Conferences

The triennial Bulgarian National Congress of Psychology was held on 31 October-2 November 2014 in Sofia. A specialized health psychology section was included in the program for a third consecutive edition of the congress.

An international conference "Psychological intervention and prevention of the work-family conflict" took place on 19-20 September 2013 in Sofia. It was the final conference of the eponymous international research project with partners including Institute for Population and Human Studies at the Bulgarian Academy of Sciences, Bulgarian Association for People Management and Institute of Psychology at the Romanian Academy of Science.

A national conference "Psychology in Medicine", organized by the Faculty of Medicine, Trakia University – Stara Zagora, was held on 7-8 February 2014 in Stara Zagora.

The Health Psychology Research Center, Sofia, Bulgaria, together with the partners from the Seventh Framework Programme project "Improving quality and safety in the hospital: The link between organizational culture, burnout and quality of care –

ORCAB", were involved in the First international meeting on Wellbeing and Performance in Clinical Practice, 28 May-1 June 2014, Alexandroupolis, Greece.

Participation of Bulgarian health psychologists in other international conferences:

- 27th Conference of the EHPS, 16-20 July 2013, Bordeaux, France;
- 2nd Symposium of Social Sciences and Humanities PhD Students "Education, Culture and Society - Nowadays Challenges", 14-17 October, 2013, Wrocław, Poland;
- 23rd Biennial Meeting of the International Society for the Study of Behavioural Development, Shanghai, China, 8-12 July, 2014.

Organizational aspects

A Health Psychology Section within the Bulgarian Psychological Society was established in 2013.

Sofia University's doctoral programme in health psychology will be officially accredited by the National Evaluation and Accreditation Agency in 2015. Until now two PhD students have graduated from the programme, and two new students have started their PhD studies.

Continuing education

A 3-day workshop "The Science of Well-Being:

Evidence-Based Interventions for Children, Adolescents, and Families”, led by Drs. James Maddux, Robyn Mehlenbeck, Christianne Esposito-Smythers, & Sarah Fischer, George Mason University, USA, was held on 11-13 July 2014 at Sofia University.



Anna Alexandrova-Karamanova
Department of Psychology, Institute
for Population and Human Studies,
Bulgarian Academy of Sciences,
Bulgaria
annaalexandrova@yahoo.com

Published books in the area of health psychology

Zornitza Ganeva (2013). Something more about breast cancer, Sofia: Elestra. The book reviews literature on psychooncology and breast cancer and presents research on the experiences of women with breast cancer at the time of diagnosis and one year after.

Annual Report - Cyprus

Theano Kalavana *Research*

*University of Nicosia Medical
School*

Maria Karekla

University of Cyprus

To the best of our
knowledge, the following
Health Psychology research

projects are currently running in Cyprus:

1. The "ALGEA" project is a new multilevel research approach for the study of chronic pain in patients in Greece and Cyprus. The primary aim of this project is the creation of a new therapeutic environment for chronic pain patients and their families, by incorporating the needs of local health services providers and communities in Greece and Cyprus including – patients, family members, doctors, health and support organisations. The study is funded by The Cross Border Cooperation (CBC) Programme "Greece- Cyprus" and through government funds from both countries. Project partners include the University of Cyprus, the University of Crete and the Cyprus Institute of Neurology and Genetics. This study, among others, is being conducted by the recently established ACTHealthy: Clinical Psychology and Behavioral Medicine laboratory at the University of Cyprus. The main academic and clinical interests of this laboratory include: the development and expansion of behavioral medicine theories and treatments for a wide range of health-related problems and chronic illnesses. Acceptance and Commitment Therapy and contextual-based theories are the core approaches being examined via various protocols in the lab. Different European and locally funded projects are being conducted, such as; Smoking cessation interventions for adolescences, prevention programs for eating disorders, dealing

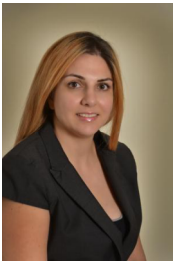
with cravings, psycho-social support for patients with Thalassaemia and other serious illnesses.

2. Quasi experimental research project run by Theano Kalavana, as an expansion from a funding from Europeans Regional Structural Funds and Republic of Cyprus on health care professionals' self-regulation skills and clinical communication in relation to patients' satisfaction. The project involves nurses from Cyprus general public hospitals and has been expanded recently in the hospitals of the private sector. The results have shown that teaching self-regulation skills to health care professionals not only increases patients' satisfaction but also improve nurses' self-efficacy and satisfaction from work. We are now also investigating other parameters such as burnout and emotional exhaustion in relation to health care professionals' self-regulation skills.

Finally, the preparations for the Synergy expert meeting in Cyprus in 2015 are well underway. The expert meeting will be held over 2 days: 31st August-1st September 2015 (Monday and Tuesday respectively) and the title of the upcoming meeting is: Mhealth for behaviour change: opportunities, challenges and future directions. The meeting will be facilitated by Profs Lucy Yardley, Susan Michie and Robert West. Further details about the meeting will be uploaded soon on Synergy's website <http://ehps.net/synergy/>



Theano V Kalavana
University of Nicosia Medical School,
Cyprus
kalavana.t@unic.ac.cy



Maria Karekla
Department of Psychology, University
of Cyprus, Cyprus
mkarekla@ucy.ac.cy

Annual Report - Czech Republic

Renata Hacklová *History*

National Institute of Public Health

The Czech (formerly Czechoslovak) Section of Health Psychology was founded in 1988, originally as the Psychology of Healthy Life Section, and since 1990 as the Czech Health Psychology Section and as one of sections of the Czech-Moravian Psychological Association.

Elections

As the period of the current Committee of the Czech Section of Health Psychology (2004 – 2012) finished in 2012, the elections of the new Committee was initiated by the former Committee, and organized and implemented using an electronic vote by the Czech-Moravian Psychological Association.

Based on the results of the elections, the structure of the new Committee of the Czech Section of Health Psychology for the 2013 – 2020 period consists of the following Committee representatives and members:

Vladimír Kebza, Chair, EHPS National delegate (Charles University, Dept. of Psychology, and Czech University of Life Sciences);

Bohumil Koukola, Deputy Chair (Ostrava University, Faculty of Education, Dept. of Educational and School Psychology, Ostrava);

Iva Štetovská, Secretary (Dept. of Psychology, Charles University, Prague);

Members:

Radim Badošek (Ostrava University, Faculty of Education, Dept. of Educational and School

Psychology, Ostrava);

Renata Hacklová (National Institute of Public Health, Prague);

Tereza Kimplová (Ostrava University, Faculty of Education, Dept. of Educational and School Psychology, Ostrava);

Jirí Mareš (Charles University, Faculty of Medicine, Hradec Králové);

Following the elections, the new Committee accepted the proposal of Vladimír Kebza that Renata Hacklová should be the new Czech national delegate. The committee thanked Vladimír Kebza for his ten years of work in the position of Czech national delegate.

Main activities of the Section

All member of the Committee of the Czech Section of Health Psychology in cooperation with members of the Section, and the Czech-Moravian Psychological Association and also with Charles University in Prague were honoured by the EHPS to organize the 26th 2012 EHPS Annual Conference for the first time in the Czech Republic. After this Conference, we, the Czech health psychologists were very pleased that the 26th EHPS Conference was evaluated as very successful.

As regards to other activities, the web page of the Czech Health Psychology Section within the web page of the Czech-Moravian Psychological Society (<http://cmeps.ecn.cz/?page=ps-zdravi>), and the web page of the 26th 2012 EHPS Conference (<http://www.ehps.net/node/37>) were the main IT sources both for our members, and for other psychologists, physicians, teachers, and other

professionals working in this field.

Czech health psychologists took part in the mentioned period also in some important international psychological events: one of them was the 13th European Congress of Psychology, Stockholm, Sweden, July 9 – 12, 2013, the second was also the 27th Conference of the European Health Psychology Society, Bordeaux, France, July 16 – 20, 2013.

The Czech Health Psychology Section members and supporters meet regularly at the Annual National Section Conferences held in Vernírovice (see below) in the 3rd weekend in May 2013. The Committee members are also organizers as well as participants of the mentioned Annual National Section Conference in Vernírovice. A lot of Czech health psychologists participate also in educational and training activities as university teachers, supervisors, tutors etc. Some new, but experienced and encouraging colleagues as R. Hacklová from Prague Charles university and the National Institute of Public Health, and R. Badošek and T. Kimplová from Ostrava University who completed their Ph.D. study were involved into activities of our Section.

Conferences and special events

The Annual National Conference of the Section held in Vernírovice was organized by the Committee of the Section (Bohumil Koukola from the Ostrava University, member of the Committee, is a local organizer), in the third week-end of May. This year the Conference of our Section in Vernírovice was associated with the two important anniversaries: the 25th anniversary of the Czech Section of Health Psychology, and the 20th anniversary of Vernírovice conferences.

The programme consisted of regular lectures, evening round table discussions, and workshops, implemented in a week-end period (Friday evening –

Sunday afternoon), using plenary, and two parallel sessions. About 60 participants from Bohemia, Moravia, Silesia, and Slovakia presented at this conference. The Book of Abstracts of the Conference presentations was prepared and distributed at the Conference via CD-ROM with an ISBN.

Education

Some regular, and some new training courses in health psychology are offered at Czech and Moravian universities. As a part of the Master's Curriculum, a two-term course is offered at the Faculty of Philosophy, Charles University, Dept. of Psychology (within the Master's Programme of Psychology). Several health psychology courses and lectures are offered also at the Masaryk University in Brno, Ostrava University in Ostrava, Palacký University in Olomouc, West-Bohemian University in Plzen, University Hradec Králové, and at other Czech and Moravian universities. The majority of Czech and Moravian Faculties of Education offers a course called Education for Health

The postgraduate course for psychologists working in the health care system Psychologists in the Health Service, was accredited by the Czech Ministry of Health and is offered at universities in Prague, Olomouc and Brno. One new PhD programme in health psychology, the first in the Czech Republic, is still underway at the Faculty of Philosophy, Dept. of Psychology, Charles University in Prague. Its implementation depends on the appointment of an Associate Professor or Professor position that is needed for the accreditation procedure of the Czech Ministry of Education.

Research

Some important research projects were

implemented in 2013 by members of the Section. One of them is the further period of research within the grant project Longitudinal Study of Optimal Development, developed and completed by M. Blatný from the Institute of Psychology, Czech Academy of Science, and Vladimír Kebza from the Czech University of Life Sciences. In 2013 M. Blatný et al. in Brno conducted research concerning the quality of life. Research focused on the relations between burnout syndrome, engagement and social events was conducted by V. Kebza and I. Šolcová in Prague. V. Kebza with I. Šolcová, R. Ptáček and I. Paclt completed and published their monograph Load and Stress in Medical Professions.

E. Rehulka and his team from Masaryk University in Brno finished and successfully defended the results and outcomes of his long-term research related to the study of complex problems entitled School and Health for the 21st Century. J. Mareš completed and published his monograph Posttraumatic Growth of Man and with his colleagues from the Faculty of Medicine, Charles University Hradec Králové published results of their research on patient perceptions of disease. B. Koukola from Ostrava University finished his project concerning the results of the SOC questionnaire in a sample of school-aged children. In Krnov B. Hátlová and her colleagues from the Dept. of Psychology, Faculty of Education of the J. E. Purkyně University in Ústí nad Labem implemented a research project on the therapeutic use of movement activities in psychiatric treatment. K. Paulík and his colleagues from Ostrava University completed and published in a monograph results of their research project concerning psychological aspects of coping with stress in a sample of Czech men and women.



Renata Hacklová
National Institute of Public Health,
Prague, Czech Republic
renata.hacklova@gmail.com

Annual Report - Denmark

Nina Rottmann *National association of Research
University of Southern Health Psychology
Denmark*

In Denmark, the National Health Psychology Association (Dansk Sundhedspsykologisk Selskab) is part of the Danish Psychological Association. Its aim is to develop the discipline of Health Psychology, for instance by organizing courses and workshops, etc. (Link to webpage: www.sundhedspsykologi.org).

The Danish Association for Psychosocial Medicine (Dansk Selskab for Psykosocial Medicin) focuses on a closely related field. Its aim is to promote research, teaching and development in the multidisciplinary research area of psychosocial medicine. (Link to webpage: www.dspm.dk)

Education, training & professionalization

The Universities in Copenhagen, Aarhus, Odense, Aalborg and Roskilde offer bachelor and master degrees in psychology. As part of this education, they may offer courses in Health Psychology.

After having earned a Master's degree, a psychologist can attain public authorization by performing clinical work and undergoing supervision.

In addition to the Master's degree and authorization, the Danish Psychological Association (<http://www.dp.dk>) has developed a number of specialist degrees. The specialist degree in Health Psychology (children and adults) focuses on health promotion and psychological efforts in relation to physical illness.

Research in the field of Health Psychology is conducted at the psychology departments, but also at other health-related multidisciplinary research institutions.

For example, the Department for Psychology and Behavioral Sciences at Aarhus University has a Research Unit for Psychooncology and Health Psychology (<http://psykoonko.dk/>). The Institute of Psychology at the University of Southern Denmark in Odense is part of the Faculty of Health, and Health Psychology is one of the its four research and educational pillars.

(http://www.sdu.dk/en/0m_SDU/Institutter_centre/Institut_psykologi)

The Institute of Psychology at the University of Copenhagen has a Centre for Humanistic Health Research.

(http://www.psy.ku.dk/Forskning/Fokusomraader/centre_for_humanistic_health_research/)



Nina Rottmann
Institute of Psychology and Institute of Public Health, General Practice, University of Southern Denmark, Denmark
nrothmann@health.sdu.dk

Annual Report - Finland

Nelli Hankonen

University of Helsinki

Research in the field is being conducted in several Finnish universities and research institutes, often in multidisciplinary teams. There are two health psychology professors in the country. Finland hosted the EHPS conference in Helsinki a decade ago, in 2004.

Professional activities

The Section of Health Psychology in the Finnish Psychological Society, originally formed in 1993, aims 1) to increase the networking opportunities of the members working in areas of health psychology research and practice, as well as 2) to advance discussion of topics of psychological theory, research, health-enhancing interventions, and good professional practice. In 2013, there was a "generation shift" in the executive board, which currently consists of six people.

Activities of the section have included e.g. the electronic publication of the Finnish Health Psychology Newsletter. In 2014, a major activity of the section was to organize a Health Psychology Symposium, with the topic of "Evidence and research based promotion of well-being", with high-quality talks from academics and practitioners in the field. The symposium was popular, with well over 150 participants registering more than one month before the symposium.

The Section collaborates with other national scientific (Society for Social Medicine in Finland, Section of Behavioral Medicine) and professional societies (The Finnish Psychological Association) as

well as with health authorities. Future plans include setting up a Finnish Health Psychology Conference in 2015. The webpage address is <http://www.terveyspsykologianjaos.net/>

Education

Health Psychology studies in Finland are implemented as one of the national post-graduate programmes for the registration as special psychologists (LicPsych) demanding approximately four years of part-time studies. The studies are organised by a university network. The licentiate is an academic degree locating approximately "half-way" between the MA and the PhD, not requiring as extensive research as the PhD degree. In addition to health psychology, the training is given in four areas of specialization (e.g., neuropsychology and psychotherapy). In addition to this training, health psychology related courses are also given in several other Finnish university departments, e.g. Social Psychology Unit at the University of Helsinki.



Nelli Hankonen
University of Helsinki
nelli.hankonen@helsinki.fi

Annual Report - Latvia

Kristine Martinsone

Rīga Stradins University

The Latvian Health Psychology Association (LHPA) was established in December, 2012. Presently,

there are 18 members in the Association. In 2013, the LHPA started its work based on the strategic goals and tasks, mission, vision and values, stipulated in the statutes that were agreed during the foundation meeting.

(1) Defining and development of the theoretical and empirical fundamentals of health psychology

In 2013-2014, the main goal was to define the conceptual fundamentals of health psychology, actualize the need to train the professionals in Latvia, and to introduce these statements to Latvian professional psychologists, as well as to the wider society.

At the same time, it was important to summarise and publish the information on the research already performed in the field of health psychology in Latvia. To achieve this goal, the representatives of the LHPS have implemented the following activities:

(a) Preparing scientific publications.

- Martinsone, K., & Navaitis, G. (2014). The Approach towards the Economics of Happiness in the Baltic States. From: 28th Conference of the European Health Psychology Society: [Electronic] Abstract booklet (p.284). Retrieved November 5, 2014, from <http://www.ehps2014.com/abstracts/>

- Martinsone K., Freimane G., Mihailova S. (2014). Veselibas psihologija Latvija: izaicinājumi, to

risinašanas iespējas un ieguvums sabiedrībai. Sabiedrība un kultūra. Rakstu krājums XVI. Sastād., atbildīgais redaktors A.Medveckis. – Liepāja: LiePA, 262. – 269.lpp.(in Latvian)

- Мартинсоне К., Фреймане Г., Колесникова Е. (2014). Психология здоровья в Латвии в контексте современных европейских исследований. Медицинская психология в России nr. 5(28):

http://www.mprj.ru/archiv_global/2014_5_28/nomer/nomer05.php

- Hartmane S., Martinsone K., Sudraba V. (2014). Dramas terapija no psihoaktīvam vielām atkarīgiem trauksmainiem pusaudžiem rehabilitācijas procesā veselības uzvedības sekmešanai: pilotpētījums. RSU Zinātniskie raksti, 352 – 363.lpp (in Latvian)

- Sudraba V., Martinsone K. (2014). Narkologisko pacientu sociālā intelekta radītāji. RSU Zinātniskie raksti. 345.- 351.lpp. (in Latvian)

- Freimane, G., Martinsone, K., Rasa, I., Pavlina, I. Relationship between illness perception, coping style and health behaviour in diabetes mellitus patients. In: Psychology & Health. Special Issue: Abstracts Supplement: "Well-being, Quality of Life and Caregiving": 27th Conference of the European Health Psychology Society, Bordeaux, France, 16th – 20th July 2013. Vol. 28, Supplement 1, 2013, pp 154.

- Kolesnikova, J. (2013). No narkotikām atkarīgo pacientu personības traucējumu loma rehabilitācijas procesā saistībā ar sociālo problēmu risināšanas izmaiņām: longitudināls pētījums. Latvijas Universitātes rakstu krājums. Psihologija, 786. sejmums, 37-49. (in Latvian)

- Kolesnikova, J., Miezīte, S., Osis, G. (2013). Relationship of drug-addicted patients' personality

disorders to social problem-solving changes during the rehabilitation process. *Nordic Journal of Psychiatry*, 67 (4), 282-288.

- Martinsone, K., Freimane, G., Mihailova, S., Mihailovs I.J. (2013) *Veselības psiholoģijas izveides pamatojums Latvijā. Sabiedrība, integrācija, izglītība. Starptautiskas zinātniskas konferences materiāli. 2.dalā. Rezekne: RA izdevniecība. 593. – 602.lpp.* (in Latvian)

- Mihailova, S. *Deja un veselība: pētījumu pārskats.* No: S. Mihailova, I.J. Mihailovs (Red.). (2013). *Deja, kustība, ķermenis. Zinātnisko rakstu krājums.* Rīga: Drukātava, 144. – 169.lpp. (in Latvian)

- Navaitis G., Martinsone K., Labutis G. (2013). *The Approach towards the Economy of Happiness in the Baltic States. Outlines of Social Innovations in Lithuania.* European Scientific Institute, ESI Publishing, pp.196- 208.

In 2013, a collective monograph *Psychology* (in 3 volumes) has been drawn up. A section *Health Psychology* (Ieva Stokenberga, Gunta Freimane) included in this book will facilitate the awareness of the Latvian society about the aim, tasks, and trends of research of health psychology.

(b) Participation in scientific and practical conferences.

The representatives of the LHPA have presented reports at the international psychology conferences – at the annual conference of the European Health Psychology Association in Bordeaux (France) and Innsbruck (Austria); Riga Stradins University (RSU) Scientific conference 2013, 2014; Riga Stradins University International Multidisciplinary conference *Sabiedrība. Veselība. Labklājība* (Society. Health. Welfare) 2012, 2013, 2014.; Liepāja University International conference *Sabiedrība un Kultūra* (Society and Culture); Rezekne Higher Education Institution International conference *Sabiedrība, integrācija, izglītība* (Society, integration, education), *Международная научно-практическая конференция «Медицинская (клиническая) психология: исторические традиции и*

современная практика» 02-04 октября 2014 *Ярославская государственная медицинская академия; III Международная научно-практическая конференция. Человек и транспорт. Эффективность. Безопасность. Эргономика. Санкт-Петербург. 15 - 18 сентября 2014.*

(2) Facilitating of the awareness on health psychology among the population of Latvia

(a) The population of Latvia is able to learn about the development of the new field through the website created by the LHPA (www.veselibaspsihologija.lv).

(b) Initiative to start organising a *Psychology Days in Latvia*.

- A *Psychology Days* has been organised by 7 Latvian professional organisations of psychologists, as well as 5 Latvian higher education institutions involved in the training of psychologists (more information on www.psihologijasdienas.lv). 13 LHPA members took part in organising the *Psychology Days* (Kristīne Martinsone, Gunta Freimane, Kristīne Vende, Anda Upmale, Indra Majore-Dusele, Anna Kasina, Jelena Kolesnikova, Sandra Hartmane, Aelita Vagale, Anita Pipere, Reinis Upenieks, Zane Ozolina, Sandra Dzilna).

- Within the framework of the *Psychology days*, the LHPA organised 8 activities, including the *International Conference Psychology in healthcare in cooperation with the Latvian Association of Clinical Psychologists (LACP)*. At this conference, 9 members of the LHPA presented reports related to the field of health psychology. About 120 participants took part in the conference. They represented all the professional psychology organisations and higher education institutions involved in the training of psychologists. Prof. Paul Norman (The University of Sheffield, Dept. of Psychology; President, European Health Psychology Society (2010-2012) has attended

the conference and was a keynote speaker. Prof. Norman has contributed to the development of the health psychology in Latvia, and during the conference he gave a detailed explanation of what the aims and objectives health psychology are, as well as participating in methodological discussions about what are the differences / borders for the health psychology and clinical psychology.

- During the Psychology Day, Professor Paul Norman led a master class on Factors Influencing the Human Behaviour Associated to Health, and how to Change this Behaviour. This workshop led by Prof. Norman has been the first major event dedicated to the further education in health psychology for psychologists in Latvia.

- Within the framework of the Psychology Days, the contacts with the WHO head of the Latvian office Dr. Aiga Rurane have been strengthened in association with facilitation of the role of health psychology in public health.

A wide range of psychologists and the representatives of other caring professions, as well as the representatives of the society learned about health psychology as a new branch of psychology and the necessity of its development from the website of Psychology days (www.psihologijasdienas.lv), as well as from the social media networks (Twitter, Facebook) and the information published in press. More than 1000 people attended the Psychology days.

In 2014, all the academic staff of the RSU and all the 2nd year master students of the Health Psychology programme have participated in the preparation of the Psychology Days. RSU has organised the following events: "Professional scope of activities of a health psychologist", "Health perception and behaviour", "History and principles of health psychology", "A brief insight into the health psychology", "Regulation of body functions and health". In the framework of Psychology Days-2014, an activity – Contest for Young Scientists – has been organised in cooperation with the Latvian Association of Psychologists. A 1st year master student K. J. Lazdins has won the 3rd place in this competition

with the video presentation (<https://www.youtube.com/watch?v=7VvdtfQloQ0>) of the results obtained in his bachelor thesis on aggressive driving and drivers' behaviour.

(3) Development of cooperation with professional organisations and concerned institutions

(a) Following the establishment of LHPA in December, 2012, the information on the establishment of the Association, its goals and values was prepared and sent to professional psychological organisations, educational and state administration institutions, as well as to health and public welfare institutions, and to the international organisations. A Memorandum on cooperation with the Ministry of Welfare of Latvia was also signed in order to acknowledge the LHPA as an organisation willing to cooperate in defining the legal acts and policy documents.

(b) Support from the EHPS to ensure the participation of Prof. Paul Norman (UK) in the Conference organised by the LHPA and LACP, and for the master class led by Paul Norman. Both two events gave a significant contribution to the future development of health psychology in Latvia.

(4) Facilitation of the involvement of health psychologists in the fields of health, social care, and education

In 2013, as it was mentioned above, it was important to create understanding among the professionals involved in healthcare and other fields on the role of health psychology, its tasks, and range of operation. This goal was attained by preparing the publications, presenting the reports at the conferences, organising the conference Psychology in

healthcare and the master class by Prof. Paul Norman on health behaviour, and other activities within the framework of Psychology days, for example, on the role of the psychologist in the multidisciplinary team in the healthcare.

(5) Development of the legal regulation of health psychology

(a) An important goal in 2013/2014 was to evaluate which changes would be necessary in policy planning documents and statutory enactments accepted in Latvia to prevent the barriers to the development of health psychology, facilitate the training of specialists, and get involved in the labour market and healthcare medium. For that goal, the LHPA has started the analysis and evaluation of the legal regulation of the health psychology and included this information in the prepared publications.

(b) The LHPA together with LCPA initiated discussions within the Latvian Association of the Professional Rehabilitation Organisations and preparation to write a letter to the Latvian Ministry of Health on the changes in the statutory regulations that would be necessary to ensure that health and clinical psychologists are equally involved in the process of treatment.

(c) A members' professional and economic interest advocacy measures have been fulfilled through participation in preparing the proposed Law on the professional activities of the psychologists that was submitted to the Saeima (Latvian parliament) at the end of 2013. In 2013/2014, there were also discussions on the most essential problems of the professional activities of the psychologist, for example, the certification. Collaboration in the discussions on the preparing the proposed law on the professional activities of the psychologists facilitated the recognisability of the LHPA and wider awareness

on health psychology in Latvia among the psychologists.

In 2014, the work on evaluation of the legal regulation of the health psychology and preparing the proposals on its improvement has been continued. It is also planned to follow the review process of the proposed Law on the professional activities of the psychologists in the Saeima.

It was stated that the Association has performed significant work to attain its strategic goals and tasks, and this should be continued also in 2015, increasing the awareness of health psychology and its role in the improvement of public health and quality of life among the professional psychologists, as well as politicians and the Latvian society. An overarching task for the year 2015 is to propose changes to the normative regulations in order to ensure the possibility for the health psychologists to work in the field of healthcare.

The first professional master study programme with the specialty of Health Psychology in Latvia

At the end of 2012, the Ministry of Science and Education of Latvia issued a license authorising the Riga Stradins University to implement a professional master study programme "Health Psychology" (the founder and director of the programme since July 1, 2014, - assoc. prof. Dr.psych. Kristine Martinsone, now - Dr.psych. Jelena Kolesnikova). This study programme consists of two parts - a general and a specific one. The specific part has been created according to the specialty, in this case - health psychology. This part of the scope of the programme corresponds to the guidelines developed by the European Health Psychology Society. During the development of the study programme, the experience related to the study programmes in Great Britain,

Lithuania, and other countries have been analysed. The training of the specialists has begun on September 1, 2013.

As regards further development of the study programme, the crucial priorities have been proposed: facilitating the cooperation with colleagues from abroad and teaching personnel from other universities, strengthening the research capacity, development of cooperation with employers, social partners, and professional societies.

The teaching personnel and students have to take the responsibility of the development of the field in Latvia, clarifying the specifics of health psychology and possibilities both among the professionals and interested persons.

On July 1, 2014, Public Health and Social Welfare Faculty at Riga Stradins University has established the Department of Health Psychology and Pedagogy. The head of the Department is assoc. prof. Dr.psych. Kristine Martinsone. The establishment of the Department will contribute to the further improvement of the learning process of health psychology, such as development and implementation of the further education programme.



Kristine Martinsone
Riga Stradins University
Kristine.Martinsone@rsu.lv

Annual Report - Lithuania

Antanas Gostautas *Conferences*

Vytautas Magnus University

25-27 April, 2013 - Lithuanian Congress of psychologists, "Psychology for Health and Wellness" at Vilnius University. Section of health psychology chaired by prof. A. Gostautas had 11 presentations.

16-20 July 2013 - 27th Annual Conference of the EHPS, Bordeaux, France. 7 articles were presented by psychologists from Lithuania.

24 May, 2013 - Union of Lithuanian Health Psychologists Conference, organized by Kaunas regional municipality and Vytautas Magnus University. "Quality of life of Kaunas region students and teachers, related to health, in the context of health psychology". There were 14 presentations on the topic for school teachers and health professionals in the Kaunas region.

Legislation

Up till now there are ongoing discussions about having specialized legislation for Psychologists' practice. Some projects on this topic were prepared and discussed in working groups under the guidance of the Ministry of Health; however, no conclusions have been reached so far. Psychologists are working under legislation regulating the health care system including laws on biomedical ethics.

Education

In 2013 there was a two years Health psychology master studies programme (full and part time) in Vytautas Magnus University in Kaunas. Two master programmes in clinical psychology and health psychology in Vilnius University in Vilnius. In the Health university in Kaunas, within the department of health psychology, there is an ongoing 4 years bachelor programme specialized in health psychology.

Organizational aspects

Graduates from both clinical and health psychology programmes (not graduates from other master programmes in psychology) may apply to working places within the health care system and to be registered as medical psychologists under regulations of the ministry of health. No internship or licensing is still required. There is no professional title in practice as clinical or health psychologist, nor in doctoral studies which goes under the general name - social sciences, psychology, without a further specification.

There have been ongoing discussions with the Health Ministry about the situation of health psychology in Lithuania. At the present time there are 102 medical psychologists within 107 primary mental health care centres. Currently one psychologist serves 40,000 residents. The health minister of Lithuania signed a document extending the number of work places for medical psychologists up to 150 in 2016, which will be one psychologist per

20,000 residents.

Dissemination Activities

Two regional health promoting summer camps “Communication for health” for senior school children were carried out by the Union of Lithuania’s Health Psychologists in the Jonava and Kaunas regions under the guidance of Prof. A. Gostautas in collaboration with the Jonava and Kaunas regional municipalities.

Research

There is a lot of ongoing research, practical projects and publications (including dissertations in the social science area) on topics related to health promotion, disease prevention and rehabilitation. It is difficult to separate these topics from other health related areas and they cannot be identified solely with Health Psychology.



Antanas Gostautas
Department of Psychology, Social
Sciences Faculty, Vytautas Magnus
University, Lithuania
a.gostautas@smf.vdu.lt

Annual Report - Romania

Catrinel Craciun *Education*
Babes-Bolyai University

During the last year an increased interest in health psychology is indicated by the increase in the number of PhD theses, MA and BA dissertations on topics from the field of health psychology. For instance, a number of PhD theses are written under the supervision of Prof. Dr. Adriana Baban at the Babes-Bolyai University, Cluj, Romania. These cover very different aspects of health psychology ranging from bullying in school aged children to the use of technology in developing interventions or health at the workplace. For example, the health psychology MA student Cristina Vajaeen has developed an intervention package to improve resilience in teenagers with cancer, which will be tested in the oncology clinic in Cluj Napoca, Romania.

The master program on health psychology initiated at the department of psychology of the Babes Bolyai University in Cluj Napoca is attracting more students interested in developing and testing health promotion interventions. Some innovative courses have been introduced such as studying health promotion in vulnerable populations. The continuous development of the master program and PhD program in health psychology has greatly benefited from the contribution of Prof. Dr. Adriana Baban who has also received an award from the EHPS for her activity this year at the EHPS Conference in Innsbruck.

Research

New insights in research have been brought by Dr.

Diana Taut who is studying issues connected to women's health, namely representations of breastfeeding in discussion forums. Dr. Taut will also start her term as secretary in the EHPS EC committee this year.

Some researchers have collaborations with international Universities. Dr. Catrinel Craciun has completed a project on resources for positive aging in collaboration with Prof. Dr. Uwe Flick at the Free University Berlin, sponsored by the Alexander von Humboldt Foundation and the EHPS networking grant with a project of promoting physical activity among older people from four different European countries. For the upcoming year she has established collaboration with Jacobs University Bremen with Prof. Sonia Lipkke and Prof. Dr. Hisao Osada from the Oberlin University in Tokyo. She was invited to give a lecture at the Japanese Health Psychology in Tokyo and thus established collaboration between the Romanian Health Psychology Society and the Japanese Health Psychology Society.

Regarding the participation in the EHPS conference, more than 10 members of the Romanian Health Psychology Society presented papers at the EHPS Conference in Bordeaux 2013 and Innsbruck 2014. They also became members of the EHPS. Other conferences with an increased participation of Romanian health psychologists were the IAAP in Paris and the International Congress of Behavioral Medicine in Groningen, the Netherlands. Moreover, 2014 was the year when the STAR Conference was hosted in Cluj Napoca at the Babes Boyai University and the European Psychosomatic Medicine Conference was organized in Sibiu. Several Romanian EHPS members presented papers at the STAR Conference and European Psychosomatic Medicine Conference.



Catrinel Craciun
Department of Psychology, Babes-
Bolyai University, Cluj-Napoca,
Romania
CatrinelCraciun@psychology.ro

Annual Report - United Kingdom

Angel Chater
UCL School of Pharmacy

Health Psychology in the UK

Health psychology is now a well-established discipline in the UK. The British Psychological Society's (BPS) Division of Health Psychology (DHP) currently has 2,115 members in total as of November 2014, constituting 696 full members, 1,224 general members and 195 members in-training. This continues to increase from 1,601 in 2010, 1,676 in 2011, 1,947 in 2012 and 2,036 in 2013.

The DHP committee, now Chaired by Sasha Cain, alongside past Chair Professor Paul Bennett and incoming Chair Professor Karen Rodham, continues to support Health Psychology in the UK and has key sub-committees to do this in the areas of Research, Practice, CPD (continuing professional development), Training, Publicity and Liaison, Postgraduate Affairs and Conference organization.

There are also representatives from DHP Northern Ireland (Dr Noleen McCorry) and DHP Scotland (Hannah Dale), with the current development of DHP Wales (Dr Michele Gray) and a DHP England, for whom the committee are currently seeking a representative.

Alongside the work of the DHP, a group of psychologists are working on the development of an Applied Psychology Network, which is currently in its early days. Further to this, there has been the recent development of a Health Psychology in Public Health Network, Chaired by the Director of Public Health, Hertfordshire, Jim McManus, with myself (Dr Angel Chater) as Chair Elect, which will have its inaugural meeting in February 2015.

More information on the DHP, along with activities, events and targeted leaflets that give details about Health Psychology to the general public,

employers, employees and GPs, can be found on the website through the following link:
<http://www.bps.org.uk/dhp>

Training and Professional Development in Health Psychology in the UK

The review of competencies of trainee health psychologists has now been completed and an updated curriculum is now being rolled out across all accredited programmes. This has created more focus on practitioner skills and techniques. Requirements for training in Health Psychology in the UK currently stands as a 1 year full-time (or 2 year part-time equivalent) MSc in Health Psychology, which when accredited by the BPS leads to a Stage 1 qualification in Health Psychology. This needs to be followed by a period of 2 years (or part-time equivalent) supervised practice in Health Psychology which must show competency in the key areas of generic professional practice, research, teaching, consultancy and behaviour change for a trainee to be eligible to apply for Full membership of the DHP and Chartered Status with the BPS. This training provides the trainee with the Standards of Proficiency needed to register with the Health and Care Professions Council (HCPC), a legal requirement to be able to practice as a Health Psychologist in the UK. There are currently 38 accredited MSc Health Psychology (Stage 1) programmes within the UK. Stage 2 can be studied through either a university route, of which there are 11 accredited courses in the UK, or via an independent route, whereby the student would be independently supervised by a suitably qualified Health Psychologist to gain the competencies through

a BPS agreed training plan.

Supporting continuing professional development (CPD) portfolios in health psychology, the CPD sub-committee of the DHP, chaired by Francis Quinn is continuing to develop workshops in the area. These are advertised through the BPS learning centre.

We have delivered several career talks around the country, with a focused session for Health Psychologists in Training at our annual meeting. Our Twitter account is going strong with 2,824 followers, allowing us to keep those interested in Health Psychology informed in DHP activity, new research and issues relevant to health psychology. Anyone can follow the DHP @divhealthpsych. We also now have a Division of Health Psychology Community Group on Facebook that keeps people up to date on related topics in the discipline.

Health Psychology Research and Dissemination in the UK

The national journal linked to the BPS is the British Journal of Health Psychology, with an impact factor of 2.045, led by the current editors Professor Alison Wearden and Professor David French. The Division of Health Psychology also publishes the Health Psychology Update, which goes out to all members of the DHP and is managed by the Publicity and Liaison Sub-committee (Chaired by Margaret Husted). The current editor is Katherine Swainston.

The Research Sub-committee of the DHP, led by Dr Koula Asimakopoulou, continues to promote research in the discipline. A popular initiative is the award for most outstanding Health Psychology MSc thesis. Students who have achieved the highest grade in their institution can be nominated by their course director for the award. Winners are invited to attend and present at the annual conference. We have also been working to get health psychologists onto research funding panels and develop impact case studies to support Health Psychology research.

The 2014 annual conference and general meeting for the DHP was held from the 10th-12th September 2014 in the scenic city of York. Key note speakers included Professor Chris Armitage who discussed "Implementation intentions as theory delivery devices"; Professor Ron Borland, who spoke about "Building theory to understand the complexities of smoking cessation"; Professor Jane Wardle, who debated "Genes or behaviour as the cause of obesity: A false dichotomy" and Professor Alison Wearden, who discussed "Understanding and managing chronic fatigue syndrome in an interpersonal context".

The 2015 annual DHP conference will be held in London on the 16th - 18th Sept 2015, while we prepare a joint 2016 DHP/EHPS conference in Aberdeen. We hope members of the EHPS will join us at our next annual meeting.

Overall, the Division of Health Psychology encourages links with our European friends and the EHPS and any ideas on how to do this are welcomed, which I as National Delegate can facilitate.



Angel Chater
Centre for Behavioural Medicine,
Department of Practice and Policy,
UCL School of Pharmacy, UK
a.chater@ucl.ac.uk

announcement

Principles of Behaviour Change in Health and Illness

What to expect from the upcoming EHPS conference

Maria Karekla

University of Cyprus

Yael Benyamini

Tel Aviv University

This year, the annual EHPS conference will take place in the beautiful island of Cyprus (the island of love and beauty). The conference theme is "Principles of Behaviour Change in Health and Illness." Until recently, behavior change in the field of health psychology emphasized the exploration of theoretical models to explain health and illness and the investigation of empirically supported interventions for changing unhealthy or maladaptive behavioral patterns. Though great knowledge has been gained by these contributions, it has become increasingly important to not only investigate the effectiveness or efficacy of interventions, but also to explore the principles that contribute to behavior change. Gordon Paul (1967) posed an iconic question when referring to the importance of individualization in psychotherapy, asking: "What treatment, by whom, is most effective for this individual with that specific problem, and under which set of circumstances?" This question is still relevant when considering interventions aiming to change any behavior and especially health-related behaviors at the individual, the family, or the societal level. We hope to move the field forward by expanding on the question posed so many years ago by Paul and answering a slight variation of his question: which principles, under which set of circumstances, and for which specific individuals, considering their individual differences and needs,

are most relevant when designing interventions for health behavior change. The aim is to move in the direction of empirically supported principles to guide the field and the conference theme was chosen to reflect this interest.

Preparations for the conference are underway and the program has already started to take shape. We are very excited to host four exceptional keynote speakers. The Distinguished Professor of Psychology from the University of California, Riverside, Howard Friedman, will open the conference keynotes (Wednesday, September 2nd) with his talk on "Pathways to Health and Longevity." Prof. Friedman

believes that "it is not random who enters and sustains healthy pathways" and he will explore the astounding variability found in individuals' susceptibility to illness and the speed and likelihood of recovery.

On Thursday (September 3rd), we will have the pleasure of hearing a pioneer of our EHPS association, Professor of Clinical

and Health Psychology at the University College London, Susan Michie. Prof. Michie, will present on "Building the science of behavior change." She is a big proponent of the empirical evaluation of behavior change interventions and aims to understand, develop, evaluate and improve behavioural interventions by exploring their component techniques and causal mechanisms.

The next keynote speaker (Friday, September 4th) will be Professor JoAnne Dahl, from the University of Uppsala in Sweden. Prof. Dahl's talk promises to challenge our notions of health and illness behavior



change interventions and is titled "You are always 'greater than' your symptoms: Acceptance and Commitment Therapy and Behavioral Medicine." Recently acceptance and mindfulness-based approaches have received considerable interest by both the research and applied communities. Acceptance and Commitment Therapy (ACT) has achieved the status of an empirically supported intervention (American Psychological Association) for various problems, particularly for chronic pain. Dr. Dahl's work was pivotal in ACT gaining this prestigious status.

The final keynote presentation (Saturday, September 5th) will be delivered by Professor Ronan O'Carroll of Stirling University in the United Kingdom. His keynote talk will address the topic of "Health psychology and organ donation." His research focuses on exploring strategies to increase donor registration for organ transplantation and on prediction of outcome following medical and surgical interventions.

In addition to the keynote addresses, the conference this year will showcase a new type of presentation, titled "Overview talk." These will be 30-minute talks that provide an extended presentation of a topic, a theory, or an innovative line of research. The Scientific Committee will consider overview talks that are of interest to a wide audience. Individuals who wish to compete for these special overview talks should submit a 300-word abstract accompanied by a short statement justifying an extended talk by January 12th to the Chair of the Scientific Committee (Yael Benyamini, benyael@post.tau.ac.il). These submissions will be judged by the Scientific Committee by the end of January (to allow submission of a regular presentation if not accepted).

Another innovation this year is that in addition to regular posters being presented, the scientific committee has decided to include three special

sections of posters themed "Lessons learned," "Work in progress," and "Hands-on interventions." Since, very often, problems in research tend to be very informative, the "Lessons learned" posters will be devoted to discussing lessons learned from problems and pitfalls in specific research projects. The "Work in progress" posters allow researchers to present and share work in progress. Although these posters do not require data collection to be completed, the work still has to be of demonstrably good scientific quality to be accepted. The "Hands-on interventions" will allow for presentation of interventions and intervention material, if possible in terms of the facilities and equipment needed and linguistic barriers.

As in previous years, the conference program will be rich in various sessions, including oral presentations, symposia, roundtable discussions, debates, and participatory sessions. Oral presentations typically describe original empirical research or meta-analyses and reviews. Symposia (consisting of five oral presentations or 4 oral presentations and a discussant) provide an opportunity for focused presentations of a particular topic. A roundtable or debate provides an opportunity to take forward an issue of relevance to health psychology by critiquing current evidence

and suggesting future directions for research and applications. Finally, workshops (half or full day) will take place on Tuesday (September 1) before the official opening of the conference. A workshop provides an opportunity for a group of participants to achieve a specific goal or address a particular problem. It may be designed to train or educate participants in a particular research methodology or theoretical approach, or to address a specific problem, such as how to use particular research findings in health care or policy. A workshop can also be a useful way to develop a consensus on a particular issue. For example, the goal of the workshop may be to produce



a position statement or policy on a particular topic, to identify priorities in a specific area or to develop theoretical perspectives or methodologies. It should have a clear structure and require active participation by everyone involved.

Abstract submission has opened (visit the conference website at www.ehps2015.org) and will close on February 14th 2015. In addition to the scientific program, the venue and social programme promises to make this a successful scientific event that will provide many opportunities for both academic and social connections. As promised during our presentation at EHPS2014, Cyprus can offer exciting opportunities to combine intellectual stimulation with pleasure for both individuals and families. Apart from an innovative social program (e.g. beach party, yoga on the beach etc.), Limassol can offer a fulfilling outlet for all tastes and preferences (e.g. historical, cultural, night life, outdoor activities). We encourage you to submit your work and are looking forward to seeing you in Cyprus in September!



**DON'T MISS this opportunity to attend
the FIRST MI Conference in Singapore!**

SO SAVE THESE DATES TODAY!

APSMI 2015

Asia-Pacific Symposium on Motivational Interviewing

2 DAY MI CONFERENCE FEB 5-6, 2015 | SIN

Concorde Hotel Singapore

The Inaugural Asia-Pacific Symposium on Motivational Interviewing will take place in Singapore between 5-6 February 2015. The event will offer one day of interactive presentations and discussions on theory, practice and research on MI (5 February) as well as one day of professional skill building workshops (6 February). Professor Stephen Rollnick, the Co-founder of MI is one of keynote speakers alongside international speakers United States, United Kingdom, Australia, Hong Kong and Singapore. See <http://apsmi2015.com> for more details.



EDINBURGH 2015 3rd - 6th June

ISBNPA International Society of Behavioral
Nutrition and Physical Activity

Advancing Behavior Change Science

Professors Nanette Mutrie and Annie Anderson are delighted to invite you to attend ISBNPA's 2015 meeting in Edinburgh, Scotland's capital and a designated UNESCO World Heritage Site.

The scientific programme will consist of keynotes and plenary lectures from world leading researchers (e.g. Kelly Brownell and Kylie Ball, Martin Hagger, among others). Parallel sessions of symposia, short orals, posters and workshops will provide key updates and debate on recent progress in theory, methods and new findings related to *physical activity and nutrition behaviour*. Satellite meetings are also in place, allowing for great networking and learning experiences.

Key dates:

Conference June 3-6, 2015

Early bird registration ends on March 27

Regular abstract deadline is December 5

Late breaking abstracts deadline is March 27

More info:

www.isbnpa2015.org or www.isbnpa.org

@ISBNPA2015 or @ISBNPA

isbnpaorganization@gmail.com

EHP Editorial Board

Editors

Anthony Montgomery

University of Macedonia, Greece

Konstadina Griva

National University of Singapore,
Republic of Singapore

Co-Editors

Teresa Corbett

University College Galway, Ireland

Catrinel Craciun

Babes-Bolyai University Cluj, Romania

Thomas Fuller

Maastricht University, The
Netherlands

Kyra Hamilton

Griffith University, Australia

Aikaterini Kassavou

University of Cambridge, UK

Floor Kroese

Utrecht University, The Netherlands

Dominika Kwasnicka,

University of Newcastle, UK

Marta Marques

University of Lisbon, Portugal

Gjalt Jorn Peters

Open University, The Netherlands

Editorial Manager

Katerina Georganta

University of Macedonia, Greece

EHPS Executive Committee (2014-2016)

President

Robbert Sanderma

University of Groningen |
University Medical Center,
Groningen, The Netherlands

President Elect

Karen Morgan

Royal College of Surgeons in
Ireland, Ireland & Perdana
University, Kuala Lumpur,
Malaysia

Past President

Falko Sniehotta

Newcastle University, United
Kingdom

Secretary

Diana Taut

Babes-Bolyai University, Romania

Treasurer

Gudrun Sproesser

University of Konstanz, Germany

Ordinary Member & Grants Officer

Molly Byrne

National University of Ireland Galway,
Ireland

Ordinary Member & Membership and Communication Officer

Rik Crutzen

Maastricht University, The
Netherlands

Ordinary Member

Ewa Gruszczynska

University of Social Science and
Humanities Warsaw, Poland

Co-opted Member and Web Officer

Gjalt-Jorn Peters

Open University, The Netherlands

**The Executive Committee is
supported by Sharon Cahill,
Administrator.**

Disclaimer: The views expressed within the European Health Psychologist are those of the authors and do not necessarily represent those of the European Health Psychology Society (EHPS) or the European Health Psychologist's (EHP) editorial board.