

Patient Psychology Research Review™

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Issue 18 - 2016

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Abbreviations used in this issue

CBT = cognitive behaviour therapy
PD = Parkinson disease



Welcome to the latest issue of Patient Psychology Research Review.

This month we review a unique study that looks at depression and anxiety in parents of very preterm infants, followed by an excellent update on the nocebo response. A small feasibility study in people with chronic renal disease needing dialysis shows the potential of internet CBT programmes for these patients, and an Auckland study looks at the impact of upright posture in people with depression. We report positive outcomes for patients with Parkinson disease who sing in choirs, and finish with a clever study that shows that photo-taking increases enjoyment of experiences.

We hope you find these and the other selected studies interesting, and look forward to any feedback you may have.

Kind regards

Keith Petrie

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Evolution of depression and anxiety symptoms in parents of very preterm infants during the newborn period

Authors: Pace C et al.

Summary: This study evaluated the evolution of depression and anxiety in parents of very preterm infants. 113 mothers and 101 fathers of 149 very preterm infants were compared with 117 mothers and 110 fathers of 151 healthy full-term infants born at the Royal Women's Hospital. Parents were assessed shortly after the birth and again at 6 months' postnatal age. Mean scores and rates of depression and anxiety reduced over time for parents of very preterm infants in the 12 weeks after the birth, although rates did not drop below 20%. Compared with parents of full-term infants, parents of very preterm infants had significantly higher rates of depression and anxiety shortly after the birth and at 6 months. Few perinatal or social risk factors predicted longitudinal changes in depression or anxiety.

Comment: This study is unique in that it looked at the levels of depression and anxiety in both mothers and fathers of very preterm infants, and also compared their level of psychological distress to parents of healthy full-term babies. The results show that while the level of depression and anxiety improves in the 12 weeks after birth, mothers and fathers of very preterm infants have very high rates of distress. Depression rates are much higher in mothers after birth compared to mothers of healthy babies (40% vs 6%) and this difference is also evident at 6 months (14% vs 5%). One of the strengths of this study is the inclusion of fathers. Very few studies of fathers have been completed in this area but the results of this study suggest they are affected just as much as mothers. More work is needed in this area to identify what factors of the hospital environment and experience can help reduce these rates of distress.

Reference: *JAMA Pediatr* 2016;170(9):863-70

[Abstract](#)

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A systematic review of factors that contribute to nocebo effects

Authors: Webster K et al.

Summary: This systematic review examined factors that contribute to nocebo effects. A search of Web of Science, Scopus, MEDLINE, PsycINFO, Journals@Ovid full text, and Global Health identified 89 studies that evaluated nocebo effects. In the studies, participants were exposed to an inert substance and the investigators assessed 1 or more baseline or experimental factor(s) for their ability to predict symptom development in response to the inert exposure. The strongest predictors of a nocebo effect were a higher perceived dose of exposure, explicit suggestions that the exposure triggers arousal or symptoms, observing other people having symptoms from the exposure, and higher expectations of symptoms. Therefore, to reduce nocebo-induced symptoms associated with medications, clinicians could reduce expectations of symptoms, limit suggestions of symptoms, correct unrealistic dose perceptions, and reduce exposure to people having an adverse event.

Comment: For those with an interest in the nocebo effect this recent review provides an excellent update on work in the area. The nocebo effect is often called the evil twin of the placebo effect and is typically defined as the experience of physical symptoms following exposure to an inert substance. The nocebo effect is often used to explain reports of adverse effects to drugs that are not attributable to the medication. One review suggests that only around 10% of reported adverse drug reactions are clearly attributable to the physiological action of the medication. The review highlights the importance of patients' expectations of adverse events (an example of this in action is illustrated in the next paper), social factors – in terms of seeing or hearing about others who are experiencing symptoms (research shows that is a particularly strong factor for females), and descriptions that emphasise the strength of the medication.

Reference: *Health Psychol* 2016; published online Sep 22
[Abstract](#)

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Disclaimer: This publication is not intended as a replacement for regular medical education but to assist in the process. The reviews are a summarised interpretation of the published study and reflect the opinion of the writer rather than those of the research group or scientific journal. It is suggested readers review the full trial data before forming a final conclusion on its merits.

Research Review publications are intended for New Zealand health professionals.

Is it best to expect the worst? Influence of patients' side-effect expectations on endocrine treatment outcome in a 2-year prospective clinical cohort study

Authors: Nestoriuc Y et al.

Summary: This study examined the role of patients' side-effects expectations on their adherence to endocrine treatment for breast cancer. 111 postoperative patients with hormone-receptor-positive breast cancer who were scheduled to start adjuvant endocrine treatment were included. Patients were assessed for their side-effects expectations, quality of life, and treatment adherence during the first week post-surgery and for 24 months of endocrine treatment. Patients reported high rates of side effects during follow-up, including symptoms not directly attributable to the medication. In multivariate models controlling for relevant medical and psychological variables, pre-treatment expectations significantly predicted patient-reported long-term side effects and quality of life. The likelihood of side effects was higher in patients with high vs low negative expectations at baseline (relative risk, 1.833). Baseline expectations were associated with adherence at 24 months.

Comment: Non-adherence to endocrine therapy for breast cancer is a major issue and mostly this is due to complaints of side effects from the medication. This study looked specifically at expectations of side effects prior to treatment and the subsequent reporting of side effects. The researchers found 29% of women expected moderate or severe side effects to endocrine therapy. This group was twice as likely to report side effects and, importantly, also significantly more likely to drop out of treatment. The study suggests that spending time modifying expectations prior to treatment, particularly in groups that are expecting severe side effects, may pay dividends in terms of long-term adherence. In fact, increasing of positive expectations as an intervention prior to treatment is an area with enormous potential to improve outcomes.

Reference: *Ann Oncol* 2016; published online Aug 22
[Abstract](#)

Examining internet-delivered cognitive behaviour therapy for patients with chronic kidney disease on haemodialysis

Authors: Chan R et al.

Summary: This feasibility study evaluated the use of internet-delivered CBT for depression and anxiety in patients with chronic kidney disease (CKD). 22 CKD patients on dialysis who were using an established internet CBT treatment for anxiety and depression were included. Clinically significant improvements were reported for the primary outcomes of depression (mean 34% improvement), anxiety (31%) and general distress (26%); these improvements were maintained during the 3-month follow-up. Improvements were also reported for quality of life (12%) but there were no improvements in disability or kidney disease burden.

Comment: Internet CBT programmes are beginning to be used more frequently for patients with physical illnesses. This small feasibility study shows the potential of internet CBT programmes in patients with renal disease. Patients on dialysis have high rates of depression and report lower quality of life. While the study is limited by a small sample and lack of control group, internet therapy did show impressive reductions in psychological distress. The results of the study suggest that the time patients spend while on dialysis could also be used for some online therapy.

Reference: *J Psychosom Res* 2016;89:78-84
[Abstract](#)

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Upright posture improves affect and fatigue in people with depression

Authors: Wilkes C et al.

Summary: This study investigated the impact of posture in people with mild to moderate depression. 61 community participants with mild to moderate depression were recruited into a study purportedly on the effects of physiotherapy tape on cognitive function. They were randomised to sit with either usual or upright posture before having physiotherapy tape applied, and were assessed using the Trier Social Stress Test speech task. At baseline, all participants had significantly more slumped posture compared with normative data. The physiotherapy tape significantly improved posture and increased high arousal positive affect and fatigue compared to usual posture. Participants in the upright group spoke more words than the usual posture group. They also used fewer first person singular personal pronouns, but more sadness words. Upright shoulder angle was associated with lower negative affect and lower anxiety in both groups.

Comment: The area called embodied cognition, where researchers examine the effect of bodily states on psychological variables has received quite a bit of attention lately. The use of power poses proposed by Amy Cuddy in her highly watched TED talk has created a lot of debate, even amongst her research collaborators. This Auckland study looks at the application of upright posture in people who are reporting depressive symptoms. One of the nice methodological aspects of this study is the cover story that the study was about physiotherapy taping in order to reduce participants' expectancy beliefs. The study found upright posture improved mood and fatigue and suggests that this intervention may be worth trying in patients with more severe depressive symptoms.

Reference: *J Behav Ther Exp Psychiatry* 2016;54:143-49
[Abstract](#)

Impact of statin related media coverage on use of statins: interrupted time series analysis with UK primary care data

Authors: Matthews A et al.

Summary: This study evaluated the impact of media reports about the risk:benefit balance of statins on the use of statins for primary or secondary prevention. Primary care electronic data were collected from the Clinical Practice Research Datalink (CPRD) in the UK over a 4-year period. Patients who were newly eligible for or currently taking statins for primary or secondary prevention in each month from January 2011 through March 2015 were assessed. Adjusted odds ratios were calculated for starting/stopping statins after a 6-month period of intense media coverage of their risks and benefits (from October 2013 to March 2014). There was no evidence that the period of high media coverage was associated with changes in statin initiation for primary or secondary prevention, but patients already taking statins were more likely to stop taking them after the high media coverage. Older patients and those with a longer continuous prescription were more likely to stop taking statins. The increased rates of cessation waned after 6 months.

Comment: This paper is an analysis of the effects of extensive media coverage about the benefits of statins versus the risks from side effects that occurred from October 2013 to March 2014. The negative media coverage was sparked by publication of two non-blinded observational studies highlighting the side effects of statins. The study found no influence from the negative media stories on whether patients started statins but the researchers found an 11–12% increase in existing statin users stopping taking their medicine. Patients who were older and had been on statins longer were more likely to be affected by the media coverage and to stop taking statins. The effect of negative stories lasted about six months. This strong study shows that the power of negative stories about medication in the media can have a significant effect on public health. The researchers calculated that the negative media coverage could have been responsible for an excess of over 2,000 cardiac events in the UK in the following 10 years.

Reference: *BMJ* 2016;353:i3283

[Abstract](#)



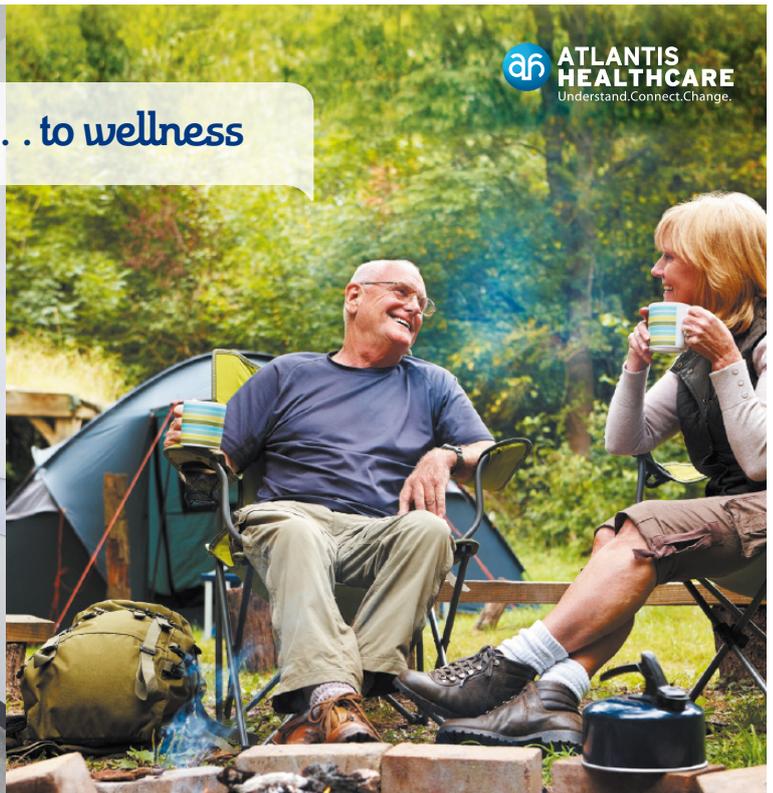
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Group singing and health-related quality of life in Parkinson's disease

Authors: Abell R et al.

Summary: This study investigated the effects of group singing on health-related quality of life (HRQoL) in people with PD. 11 patients with PD (mean age 70.6 years) were recruited from a community singing group for people with PD, their family and their carers. Participants were interviewed for their perception of the effect of group singing on their quality of life. Interpretive Phenomenological Analysis (IPA) was used for data collection and analysis. Group singing was found to improve HRQoL, with all participants reporting positive effects regardless of PD stage or symptom severity. Weekly engagement in group singing had multiple benefits for the participants and counteracted some of the negative effects of PD.

Comment: This is a very small Australian study without a control group but the results are very positive for the effects of choir singing. There have been a number of studies looking at the effect of choral singing in neurological and stroke patients and PD patients. Researchers in this study examined the effect of choir participation among PD patients in the delightfully named singing group "The Shake, Rattle and Roll Choir". Patients reported benefits in social connectedness, improved self-confidence and improved mood. Existing social activities like choirs for patients with chronic disease are an underused resource.

Reference: *Health Psychol* 2016; published online Sep 1

[Abstract](#)

What do we know about mobile applications for diabetes self-management?

Authors: Hood M

Summary: The availability of commercial diabetes self-management apps is increasing rapidly, making it difficult for patients and providers to select the most useful one. This review summarised the results and themes of various reports of commercial apps for patients with diabetes. Areas for further consideration in the use of mobile apps for diabetes were also discussed.

Comment: Most estimates put the number of apps available for people with diabetes at well over 1,000. This review looks at the main features of these apps and finds the majority focus on blood glucose, diet, exercise and weight tracking, but surprisingly few have educational material relevant for diabetes. The suggestion from the review is that paid apps may not necessarily be better than free apps. Two other aspects stand out. Firstly, most of the available apps are not based on any theories of health behaviour change which could strengthen their possible effect on diet and exercise behaviour. Secondly, there are very few apps that have high quality evidence from randomised controlled trials to support their effectiveness. Clearly, apps have an important role to play in the future management of chronic illness but more health researchers need to get involved in this area to produce better quality apps backed up with good quality data.

Reference: *J Behav Med* 2016; published online Jul 13

[Abstract](#)

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How taking photos increases enjoyment of experiences

Authors: Diehl K et al.

Summary: This study investigated the impact of photo-taking on enjoyment of experiences. Three field and 6 lab experiments were undertaken. The investigators found consistent evidence that photo-taking heightened enjoyment of positive experiences in a variety of real-life situations, including a city bus tour, eating a midweek lunch, and visiting a museum. The findings were replicated in more controlled laboratory settings, both with virtual photo-taking experiences, and with a hands-on arts-and-craft experience. Photo-taking had a positive effect regardless of whether the experience was relatively uncommon (city bus tour), relatively common and self-selected (midweek lunch), or relatively inconsequential (as part of a lab study). The effect of photo-taking was robust to delayed evaluations and did not only occur immediately after the experience.

Comment: To finish with here is a clever study looking at whether taking photos increases enjoyment of experiences. This is a question that has not received much attention from psychologists. Surprising, as apparently the users of Facebook upload 2 billion photos daily and Instagram users post 80 million photos per day! In a series of nine studies these researchers look at different aspects of how taking photos influences peoples' enjoyment of their experience. Probably most convincing are the field studies where participants are taken on city tours and assigned to take photos or not. The results are remarkably consistent that taking photos improves enjoyment and engagement with experiences. The effects are relatively small but consistent. Time to get your camera out.

Reference: *J Pers Soc Psychol* 2016;111(2):119-40

[Abstract](#)

Independent commentary by Professor Keith Petrie

Keith Petrie is Professor of Health Psychology at Auckland University Medical School. Keith Petrie worked as a clinical psychologist in medical settings before taking up a faculty position in Auckland. His early work in pain clinics and medical wards sparked his interest in the field of health psychology and, in particular, the different ways patients cope with medical symptoms and treatment. His research group also does work on adherence to treatment, psychoimmunology, symptom reporting as well as the placebo and nocebo response.



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