Patient Psychology Research Review™

Making Education Easy

Issue 21 - 2017

In this issue:

Abbreviations used in this issue
CBT = cognitive behavioural therapy
CRC = colorectal cancer

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Welcome to the latest issue of Patient Psychology Research Review.

This month we include an interesting article on the role of mindsets in treatment effectiveness, an analysis of verbal descriptors used in patient information leaflets, and evidence of an association between a patient's numeracy skills and their timeliness in seeking medical care for acute coronary syndrome. Perceived life expectancy is shown to influence participation in a colorectal cancer screening programme, and technology-based CBT is just as useful as traditional therapist-conducted CBT in patients with chronic back pain. We also report that jazzing up the descriptions of healthy food options on restaurant menus makes them more appealing.

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

Kind regards

Professor Keith Petrie
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Changing mindsets to enhance treatment effectiveness

Authors: Crum A & Zuckerman B

Summary: Mindsets orient an individual to a particular set of associations and expectations, and can profoundly affect health and well-being. Mindsets about treatment efficacy are often deeply embedded. However, instilling the mindset that treatment will work and that change is possible may be as simple as providing information or making subtle changes to how that information is framed.

Comment: The role of mindsets has been getting quite a bit of attention with recent pieces in the *BMJ* and this paper in *JAMA*. Ali Crum at Stanford University has conducted many of the studies on mindset. Mindsets are a set of expectations that alert people to make particular associations or guide attention. Crum makes the point in this article that doctors strongly influence patients' mindsets in two important areas: treatment efficacy and beliefs about the possibility of change. When both of these types of mindsets are strengthened the treatment benefits are maximised and patients feel more powerful in their ability to control their illness. Crum argues that mindsets should be utilised more in doctor-patient relationships in order to improve treatment outcomes. We revisit mindsets in the last couple of papers of this review.

Reference: JAMA 2017;317(20):2063-64
Abstract

Time spent reading this publication has been approved for CME for Royal New Zealand College of General Practitioners (RNZCGP) General Practice Educational Programme Stage 2 (GPEP2) and the Maintenance of Professional Standards (MOPS) purposes, provided that a Learning Reflection Form is completed. Please **CLICK HERE** to download your CPD MOPS Learning Reflection Form. One form per review read would be required.

Time spent reading this publication has been approved for CNE by The College of Nurses Aotearoa (NZ) for RNs and NPs. For more information on how to claim CNE hours please **CLICK HERE**.

People's understanding of verbal risk descriptors in patient information leaflets

Authors: Webster R et al.

Summary: This survey of adults living in England examined their understanding of the verbal risk descriptors recommended by the European Commission (EC) for use in patient information leaflets. 1003 individuals aged 18–65 years completed an online survey where they were given a hypothetical scenario regarding the risk of mild or severe medication side effects and asked to estimate how many out of 10,000 people would be affected. Analysis of the responses showed that participants greatly overestimated the risks conveyed by the EC-recommended verbal risk descriptors. Two distinct distributions were found for participant estimates of side effect risks: those for 'high risk' verbal descriptors (e.g. common, likely, high chance) and those for 'low risk' verbal descriptors (e.g. uncommon, unlikely, low chance). Within these two groups, the distributions were similar regardless of what adverb (e.g. very, high, fair) or adjective (e.g. common, likely, chance) was used.

Comment: This study addresses the question of how likely is likely? The authors tested participants' estimates of frequency to a variety of widely used verbal descriptors used to describe the likelihood of side effects, such as "very unlikely" or "rare" or "very likely". The study demonstrated that the verbal descriptors used in patient information leaflets are not accurately interpreted. Generally people overestimate the likelihood of side effects from descriptors compared to current guidelines. This was particularly so for mild as opposed to severe side effects. Because of this bias, the authors suggested abandoning verbal descriptors and using numerical estimates instead.

Reference: Drug Saf 2017; published online May 11
Abstract

Numeracy predicts risk of pre-hospital delay

Authors: Petrova D et al.

Summary: This study estimated the relationship between a patient's numeracy skills and their delay in seeking treatment for acute coronary syndrome (ACS). 102 survivors of ACS completed a questionnaire (about 5 days after the ACS) that included measures of numeracy and decision delay. Low patient numeracy was found to be related to longer decision delay (odds ratio [OR], 0.64), which was in turn related to higher odds (1.37) of positive troponin on arrival at the hospital. Compared with patients with low numeracy, those with high numeracy were about 4 times more likely to seek medical attention within the critical first hour after symptom onset (OR, 3.84).

Comment: Delay following the onset of symptoms of ACS is a common problem with many patients not seeking treatment in the first hour after noticing symptoms. Most of the delay period is made up of decision or appraisal delay where the individual is making their mind up about whether the symptoms warrant seeking medical care. Community interventions to reduce delay time have mostly been unsuccessful. This study investigated the role of numeracy as a factor in decision making. The authors argued that numeracy is related to decision making and evaluating risks. They found numeracy (particularly objectively measured as opposed to patients' subjective ratings of their numeracy) was strongly related to delay, with less numerate patients about 4 times more likely to delay, making it one of the most powerful factors identified to date.

Reference: Ann Behav Med 2017;51(2):292-306
Abstract

Perceived life expectancy is associated with colorectal cancer screening in England

Authors: Kobayashi L et al.

Summary: This study investigated the association between perceived life expectancy and participation in a national CRC screening programme. Data were retrieved from interviews with 3975 men and women participating in the English Longitudinal Study of Ageing (ELSA) who were within the eligible age range for the national CRC screening programme (60–74 years). Perceived life expectancy was indexed as the individual's estimate of their chance of living another 10–15 years, assessed in 2008/2009, and participation in CRC screening from 2010 to 2012/2013 was assessed in 2012/2013. Screening uptake was 76% in individuals who estimated they had a 75–100% chance of living another 10–15 years, compared with 52% in those who estimated they had a 0–25% chance.

Comment: Screening uptake is low for community bowel cancer screening programmes and this paper looked at how perceived life expectancy is related to screening behaviour. As expected, those participants from this older population who expected to live 10–15 years longer were more likely to undergo screening. Similar results have been found in breast screening programmes. How fatalistic attitudes influence screening decisions is an interesting area for future research.

Reference: Ann Behav Med 2017;51(3):327-36
Abstract

Randomised controlled trial of stand-alone tailored emails for smoking cessation

Authors: Westmaas J et al.

Summary: This study evaluated the use of automated emails for providing motivation and information for smoking cessation. 1070 smokers who wanted to stop smoking were randomised to receive 27 tailored cessation emails (deluxe email group [DEG]), 3–4 tailored emails with links to downloadable booklets (basic email group [BEG]), or a single non-tailored email (single email group [SEG]). All emails included links to quitting resources. Self-reported abstinence was assessed at 1 month, 3 months and 6 months. Abstinence was significantly greater across follow-ups for smokers in the DEG (34%) compared with the SEG (25.8%), but there was no significant difference between the BEG (30.8%) and the SEG. Results were independent of baseline cigarettes per day, interest in quitting, smoker in household, use of nicotine replacement therapy or varenicline, and gender.

Comment: Emails offer an efficient communication and nudge medium to change behaviour and they are being more widely used with the increase in smart phone use. They offer the advantage of providing a more tailored approach by incorporating personalised information to make the messaging have more impact for the individual. This study shows that an intensive email campaign to individuals wanting to give up smoking is much more effective than a light touch approach. While this approach shows efficacy for smoking it is likely to have applicability to other behavioural programmes, such as weight loss, exercise and treatment adherence.

Reference: Tobacco Control 2017; published online May 18
Abstract

Increasing physical activity through principles of habit formation in new gym members

Authors: Kaushal N et al.

Summary: This randomised controlled trial examined the impact of a habit formation intervention on physical activity in new gym members. 94 new gym members who were below international physical activity guidelines at baseline were randomised to an intervention group (workshop at baseline plus a follow-up booster phone call at week 4) or a control group (exercise as normal). The primary outcome of the study was the number of minutes of moderate-vigorous intensity physical activity (MVPA) at week 8. The intervention group showed a significant increase in MVPA after 8 weeks in both accelerometry (p=0.04) and self-report (p=0.01) compared with the control group. They also showed an increase in use of cues (p<0.001) and practice consistency (p=0.01) at week 8.

Comment: One of the early health psychologists Mark Twain once said "Habit is habit, and not to be flung out of a window by any man, but coaxed downstairs a step at a time". In this study the researchers examined whether setting up exercise habits would encourage greater maintenance of physical exercise. The intervention group attended a workshop where they were instructed to use their gym and other sports gear as cues to exercise and develop a set schedule for when they would be exercising. They also received a booster call at 4 weeks. The no-contact control group exercised as normal. The intervention group showed higher levels of physical activity than controls at the 2-month follow-up. This suggests that efforts put in at the start to help people establish habits and routines can improve adherence to physical exercise.

Reference: Ann Behav Med 2017; published online Feb 10
Abstract

CLICK HERE to read previous issues of Patient Psychology Research Review

Interactive voice response-based self-management for chronic back pain

Authors: Heapy A et al.

Summary: The COPES noninferiority trial compared the use of interactive voice response-based CBT (IVR-CBT) relative to in-person CBT for chronic back pain. 125 patients with chronic back pain were randomised to IVR-CBT or in-person CBT. Patients treated with IVR-CBT received a self-help manual and weekly prerecorded therapist feedback based on their IVR-reported activity, coping skill practice, and pain outcomes. In-person CBT included weekly, individual CBT sessions with a therapist. Both groups received IVR monitoring of pain, sleep, activity levels, and pain coping skill practice during treatment. The primary outcome was change from baseline to 3 months in average pain intensity measured by the Numeric Rating Scale (NRS). At 3 months, the adjusted mean decrease in NRS with IVR-CBT (–0.77) was similar to that with in-person CBT (–0.84). Improvements in physical functioning, sleep quality, and physical quality of life occurred in both groups, with no advantage for either treatment.

Comment: Interactive voice response technology allows patients to use their phone to provide pain levels and symptoms as well as listen to prerecorded CBT therapy. In this study the researchers found that this form of CBT was just as effective as in-person CBT for reducing chronic pain levels and functioning. While the study didn't include a no treatment or placebo control group, the results show technology-based CBT offers an effective and scalable alternative to traditional therapist-conducted CBT.

Reference: JAMA Intern Med 2017;177(6):765-73
Abstract

Reading between the menu lines: are restaurants' descriptions of "healthy" foods unappealing?

Authors: Turnwald B et al.

Summary: This study evaluated whether the words used to describe items in healthy menu sections at restaurants are less appealing than the words used to describe items in the standard menu sections. Menus from 26 top-selling American casual-dining chain restaurants with dedicated healthy submenus were examined. Words from 5873 health-labelled menu items were compared with those from 38,343 standard menu items. Items in the healthy menu included seafood, chicken, salads, sandwiches and soups. Log-likelihood analyses showed that descriptions of the healthy menu items used significantly fewer words like exciting, fun, traditional, American regional, texture, provocative, spicy hot, artisanal, tasty, and indulgent. In contrast, descriptions of healthy menu items used significantly more words such as foreign, fresh, simple, macronutrient, thinness, depriving, and nutritious.

Comment: This study confirms what you have probably suspected from reading restaurant menus. Healthy food options tend to be described in more unappealing ways compared to their less healthy alternatives on the restaurant menu. We know from other research that foods that are described in less appetising ways are eaten less frequently and also described by people as being less tasty. Interestingly, the term most absent in the health option descriptions was "exciting". Perhaps it's hard to make kale exciting. But as we see in the next paper, changing the labels of food can make even healthy options more appealing and popular.

Reference: Health Psychol 2017; published online May 25
Abstract

Association between indulgent descriptions and vegetable consumption: twisted carrots and dynamite beets

Authors: Turnwald B et al.

Summary: This study investigated whether using more indulgent descriptors for vegetables increases their consumption. Data were collected each weekday for 46 days in a large university cafeteria. Each day, one featured vegetable was randomly labelled in 1 of 4 ways: basic, healthy restrictive, healthy positive, or indulgent, but no changes were made to how the vegetables were prepared or served. During the study period, 8279 of 27,933 total diners (29.6%) selected the vegetable. Labelling had a significant effect on both the number of diners selecting the vegetable and the mass of vegetables consumed. Labelling vegetables indulgently increased selection by 25% compared with basic labelling, by 41% compared with healthy restrictive labelling, and by 35% compared with healthy positive labelling.

Comment: Following on from the last study, the same authors show the effect of jazzing up food labels to make healthy food more appealing. They found a 25% increase in people choosing vegetables in a cafeteria when they were labelled in an indulgent way. For example, zucchini was described as "slow-roasted caramelized zucchini bites" as opposed to the healthy restrictive alternative of "lighter-choice zucchini" or the healthy positive alternative of "nutritious green zucchini". This study demonstrates a clever low-cost intervention that could be used to increase the consumption of vegetables. Anyone for zesty ginger-turmeric sweet potatoes?

Reference: JAMA Intern Med 2017; published online Jun 12
Abstract

Independent commentary by Professor Keith Petrie

Keith Petrie is Professor of Health Psychology at Auckland University Medical School. He 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. **For full bio CLICK HERE.**

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