

Patient Psychology Research Review™

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Issue 17 - 2016

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ACS = acute coronary syndrome


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Welcome to the latest issue of Patient Psychology Research Review.

We review a sobering paper that highlights the role that media play in mass shootings, three studies of the effects of marriage on health (some good, some not so good), and strong support for the adage 'you are only as old as you feel'. Australian researchers show the importance of positive recovery expectations on return to work time after car accident injuries, and we report the impact of mobile health interventions on adherence and outcomes in patients with chronic disease.

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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Contagion in mass killings and school shootings

Authors: Towers S et al.

Summary: This US study examined whether or not contagion is evident in high-profile school shootings and mass killings. A contagion model was fitted to data sets related to recent incidents in the US to assess whether a school shooting or mass murder temporarily increases the probability of a similar event occurring in the immediate future. The model found significant evidence that mass killings involving firearms are more likely after similar events in the immediate past. The temporary increase in probability lasted 13 days on average, and each incident incited at least 0.30 new incidents. There was also significant evidence of contagion in school shootings. Again, an incident was found to be contagious for an average of 13 days, and incited at least 0.22 new incidents.

Comment: After the Orlando shootings, this is a topical and sobering paper that highlights the role that media play in mass shootings. I was surprised to read that in the US mass killings involving firearms happen every 2 weeks and school shootings occur once a month. The paper clearly shows that mass killings are influenced by contagion through hearing about the shooting over media and by the level of gun ownership. Given the established link between media reporting and suicidal behaviour and the fact that many perpetrators of mass violence also kill themselves during the incident, it is not surprising that news items publicising and glamourising mass shootings lead to more of the same. Health professionals in the US need to take a stronger stand against the media sensationalising mass shootings in order to reduce contagion effects.

Reference: PLoS ONE 10(7):e0117259

[Abstract](#)

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Interpersonal emotional behaviors and physical health: a 20-year longitudinal study of long-term married couples

Authors: Haase C et al.

Summary: This analysis of data from a 20-year longitudinal study of long-term married couples showed that interpersonal emotional behaviours that emerged during a 15-min marital conflict interaction predicted the development of physical symptoms. Dyadic latent growth curve modelling showed that anger behaviour predicted increases in cardiovascular symptoms and stonewalling behaviour predicted increases in musculoskeletal symptoms. Both associations were found for husbands. The associations were not present at the start of the study, but emerged during the ensuing 20 years.

Comment: As anyone in a long term relationship can affirm, marriage is the source for the expression of emotion – both good and bad. In this provocative study, researchers followed 156 couples over a 20-year period. In the laboratory they examined the emotions that were expressed when couples were discussing a topic of ongoing disagreement in their marriage and how these emotions were associated with later health complaints. The researchers found anger behaviour in the lab discussion was associated with later cardiovascular symptoms and stonewalling behavior – defined as tuning out or a total lack of listening (yes, I was talking to you) – was associated with later musculoskeletal complaints. In a way the paper reaffirms an earlier psychosomatic idea that certain types of emotions are associated with particular illnesses. Something that has gone out of fashion in recent times with emotions more often now grouped into broad categories like positive and negative emotion.

Reference: *Emotion* 2016; published online May 23

[Abstract](#)

Effects of marital status and economic resources on survival after cancer

Authors: Gomez S et al.

Summary: This cohort study evaluated the impact of marital status and economic resources on survival after cancer. 783,167 cancer patients who were first diagnosed in 2000–2009 were identified from the California Cancer Registry and followed through 2012. Age- and stage-stratified Cox proportional hazard models were used to estimate hazard ratios (HRs) for all-cause mortality associated with marital status. Compared with married patients, unmarried patients had a higher risk of mortality that was higher among males (HR, 1.27) than among females (HR, 1.19). Adjustment for insurance status and neighbourhood socioeconomic status (nSES) slightly reduced the marital status HRs to 1.22 for males and 1.15 for females. There was some evidence of synergistic effects of marital status, insurance, and nSES, with relatively higher risks observed for unmarried status among those who were under-insured and living in high nSES areas compared with those who were under-insured and living in low nSES areas.

Comment: This paper looks at the differences in survival between married and unmarried cancer patients. Consistent with a number of other studies, the paper shows an increased survival benefit of marriage for males compared with female cancer patients. The large sample in this study allowed for the examination of the effects of economic factors, US medical insurance status and neighbourhood socioeconomic status, all of which did not substantially reduce the sex difference. The authors suggest that the effect may be due to marriage reinforcing the adoption of protective health behaviours and this may be more important for men than for women.

Reference: *Cancer* 2016;122:1618-25

[Abstract](#)

The impact of marital status on mortality and length of stay in patients admitted with acute coronary syndrome

Authors: Hayes R et al.

Summary: This study investigated the impact of marital status on length of stay and mortality in patients with ACS admitted to hospitals in the North of England. During the study period, 929,552 adult admissions were recorded, of which 25,287 (2.7%) were admitted with a new diagnosis of ACS. Mean age was 66.6 years, 64.2% were male, and 80.3% identified as Caucasian. 38.2% of ACS patients died and mean length of stay was 7.0 days. Cox regression analysis adjusted for patient age and sex demonstrated significantly lower mortality rates for married (odds ratio [OR], 0.863; $p < 0.0001$), widowed (OR, 0.959; $p < 0.0001$) and unmarried patients (OR, 0.973; $p < 0.01$) when compared to single patients.

Comment: This study looked at how length of hospital stay and mortality were influenced by marital status following cardiac events and found lower mortality rates in married couples and a significantly shorter hospital stay. Consistent with the last study looking at a cancer population, the data point to a long term stable relationship being associated with improved health behaviour in terms of a greater adherence to medical treatment, and a healthier lifestyle. Perhaps positive support from a spouse and from children as well can also lead to increased motivation to engage in healthy behaviours over the longer term.

Reference: *Int J Cardiol* 2016;212:142-44

[Abstract](#)



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Feeling older and risk of hospitalization

Authors: Stephan Y et al.

Summary: This analysis of data from 3 longitudinal cohorts examined whether subjective age predicts hospitalisation among older adults. Participants were aged 24–102 years and were drawn from the 1995–1996 and 2004–2005 waves of the Midlife in the United States Survey (MIDUS; n=3209), the 2008 and 2012 waves of the Health and Retirement Study (HRS; n=3779), and the 2011 and 2013 waves of the National Health and Aging Trends Study (NHATS; n=3418). In each cohort, subjective age and covariates were assessed at baseline, and hospitalisation was assessed at follow-up. After controlling for age, sex, race, and education, participants who felt subjectively older at baseline had an increased likelihood of hospitalisation across all 3 samples (combined effect size: 1.17). Further adjustment for disease burden and depression reduced the magnitude of the association, but it remained significant in the MIDUS and HRS cohorts.

Comment: The saying that you are only as old as you feel has received some strong support from the three studies covered in this report. The researchers asked participants to specify in years how old they felt and found the discrepancy from chronological years was a marker for future poorer physical and mental health and predicted future hospitalisation. Previous research referenced in this paper has also found an older subjective age related to faster cognitive decline, depression, systemic inflammation and premature mortality.

Reference: *Health Psychol* 2016;35(6):634-7

[Abstract](#)

Predictors of return to work following motor vehicle related orthopaedic trauma

Authors: Murgatroyd D et al.

Summary: This study determined predictors of return to work (RTW) after motor vehicle-related orthopaedic trauma. 452 patients were recruited from two trauma hospitals with upper and/or lower extremity fractures after a motor vehicle crash. Baseline and follow-up data were collected by written questionnaire. 334 patients (74%) were working pre-injury and were included in the analysis. Follow-up data were available for 233 (70%), 210 (63%), and 182 (54%) participants at 6, 12 and 24 months, respectively. A longer time to RTW was associated with greater injury severity and lower occupational skill levels. A shorter time to RTW was associated with recovery expectations for usual activities within 90 days, full-time pre-injury work hours, and very good health status pre-injury.

Comment: This paper highlights the role of patient expectations as well as greater injury severity and lower job skills being important in return to work following a moderate to severe orthopaedic injury. Using Australian data, the researchers showed the importance of positive recovery expectations in speed of return to work. This factor is potentially the most modifiable in the short-term compared to injury severity and job skills and it is surprising that there is not more research looking at whether expectation interventions can have an impact on reducing disability and the high costs associated with serious motor vehicle injuries.

Reference: *BMC Musculoskelet Disord* 2016;17:171

[Abstract](#)

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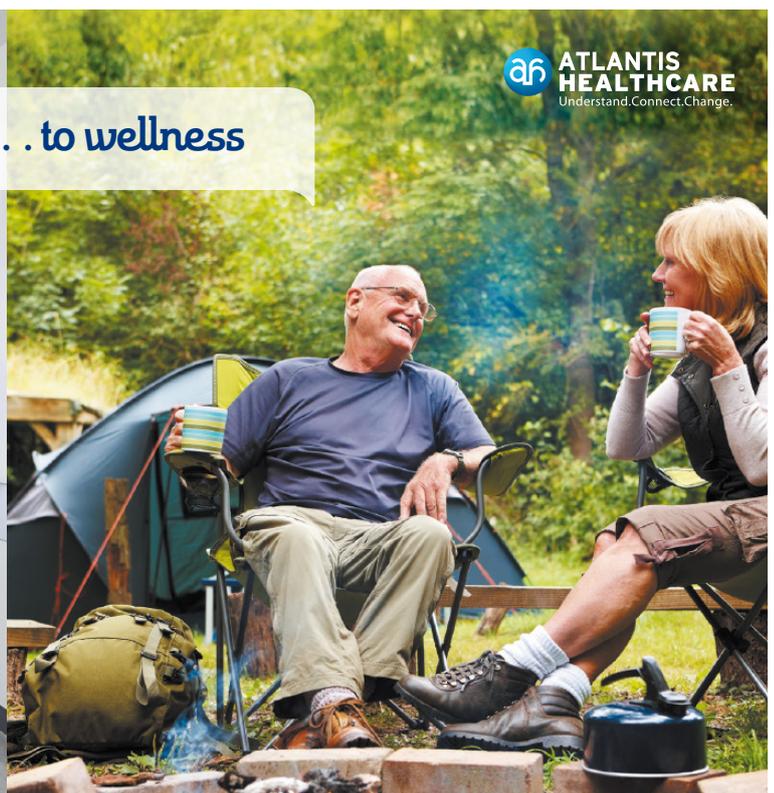
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Positive influence of short message service and voice call interventions on adherence and health outcomes in case of chronic disease care

Authors: Yasmin F et al.

Summary: This systematic review evaluated the impact of mobile health interventions (texts and/or voice messages) on adherence and outcomes in patients with chronic diseases. A search of PubMed, Cochrane Library, the Library of Congress, and Web Sciences identified 14 studies suitable for inclusion. The findings showed evidence that the use of mobile Short Message Systems and/or Voice Calls improved adherence (taking medication and following dietary and physical activity advice) and health outcomes (e.g. glycosylated haemoglobin, blood glucose, blood cholesterol, blood pressure and asthma symptoms).

Comment: This systematic review found improved adherence to medication and improved disease outcome in studies using text messages or voice calls. While the number of studies in this review was relatively small (14) and half of the studies aimed at improving adherence to medication in HIV infection, the results were reasonably consistent that text messages improved adherence to treatment as well as health outcomes. While a growing number of interventions are being trialled in behavioural medicine much more work needs to be done to make the interventions more engaging to patients so they use the apps long-term, not just for a research study. Part of this involves tailoring the content to the patient, setting relevant illness management goals and providing feedback so patients can see the progress they are making.

Reference: *BMC Med Inform Decis Mak* 2016;16:46

[Abstract](#)

To what extent are surgery and invasive procedures effective beyond a placebo response?

Authors: Jonas W et al.

Summary: This meta-analysis examined the benefits of surgery and invasive procedures beyond a placebo response. A search of numerous electronic databases identified 55 randomised controlled trials (n=3574) of surgery and invasive procedures that penetrated the skin or an orifice and had a parallel sham procedure for comparison. 39 studies (n=2902) provided sufficient data for inclusion in the main analysis. The overall standardised mean difference (SMD) of the continuous primary outcome between treatment/sham-control groups was 0.34 (p<0.00001). The SMD for surgery versus sham surgery was non-significant for pain-related conditions, marginally significant for studies on weight loss, and significant for gastroesophageal reflux disorder studies (0.65; p<0.001) and for other conditions (0.44; p=0.004). The mean improvement in sham groups relative to active treatment was larger in pain-related conditions and obesity than in gastroesophageal reflux disorder and other conditions, and was smaller in classical-surgery trials than in endoscopic trials or those using percutaneous procedures.

Comment: This is an interesting paper that sets out to look at the size of the non-specific effect in surgery or other invasive procedures. Perhaps surprisingly, given the number of such surgery and procedures that are performed, the authors only found 55 studies that compared such a procedure with a suitable sham control. Many of these were for pain conditions, but studies on obesity, gastroesophageal reflux as well as other conditions were included. Perhaps reassuringly, the authors found a positive effect of the intervention over sham, although this effect was reduced in studies with larger sample sizes (>100 participants). The researchers found non-specific effects accounted for 65% of the effect from invasive procedures but were even higher in pain and obesity treatments. The potential for placebo effects in surgery has been recognised by researchers for some time and underlines that placebo-controlled studies should be considered to reduce the number of ineffective procedures performed.

Reference: *BMJ Open* 2015;5:e009655

[Abstract](#)

Perceptions, attributions and emotions toward endocrine therapy in young women with breast cancer

Authors: Walker H et al.

Summary: This study determined perceptions about endocrine therapy in young women with breast cancer, and the impact of these perceptions on treatment adherence. 106 young women (mean age 39 years) who were taking endocrine therapy for hormone receptor-positive breast cancer completed an online survey that assessed demographic and medical characteristics, as well as symptom attribution, emotions, and perceptions related to endocrine therapy. Two-thirds of the women had stage 1 or 2 breast cancer. The women attributed an average of 9 symptoms to endocrine therapy, the most common being hot flashes, night sweats, and decreased libido. Positive emotions toward endocrine therapy were more common than negative emotions, although only 48% of respondents felt that endocrine therapy was essential. Adherence with endocrine therapy was greater in women of higher financial status and in those who reported more positive emotions.

Comment: This paper conducted with colleagues at UCLA and Harvard looked at the perceptions of young women to taking endocrine therapy. Although endocrine therapy has been demonstrated to reduce the risk of cancer recurrence, rates on non-adherence are high and especially so in women aged less than 40. We found some surprising findings in this group of young women, including the fact that around 50% of the sample did not believe that endocrine therapy was essential and around 40% reported extreme or extreme concerns about the long-term effects of endocrine therapy. This finding highlights the need to explain that the benefits of the treatment usually far outweigh the risks of dangerous side effects from long-term use.

Reference: *J Adolesc Young Adult Oncol* 2016;5(1):16-23

[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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