

# Patient Psychology Research Review™

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Issue 9 - 2014

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## Welcome to the latest issue of Patient Psychology Research Review.

Highlights include evidence that consultation recordings are a simple and effective way of improving recall and the patient's understanding of their diagnosis and treatment. We also report that anxiety is associated with a worse prognosis after MI, and medication regimens could be simplified for many elderly patients. We finish with a look at the relationship between causal beliefs and the decision to have a bilateral mastectomy in women with breast cancer. We hope you find the selected studies interesting and look forward to any feedback you might have.

Kind regards

**Keith Petrie**

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## Providing recording of clinical consultation to patients – a highly valued but underutilized intervention

**Authors:** Tsulukidze M et al.

**Summary:** This review examined the benefits of providing recordings of clinical consultations to patients. 33 suitable studies were identified from a search of 7 literature databases. Review of the studies showed that 53.6–100% of patients listened to their recorded consultations, and a mean 68% of them shared the audio-recordings with other people. Patients who received recorded consultations had enhanced information recall and understanding, and reported positive reactions to receiving the recordings. Some medico-legal concerns were reported. In conclusion, most patients benefit from listening to recorded consultations.

**Comment:** This interesting paper reviews studies that have examined the effect of providing patients with an audio recording of their medical consultation. Most of the studies included in the review were conducted outside of the US, probably because of the concern about litigation in the US. The review highlights that the recording of consultations is a simple and effective strategy for improving recall and increasing understanding of the patient's diagnosis and treatment. Nearly 70% of patients in the review shared their recording with other people, most commonly their family, but occasionally another doctor. Most patients preferred the consultation recording over getting a copy of the doctor's letter to their GP. While most of the work on recording consultations has been conducted in oncology, there is a strong argument for it to be trialled in other medical specialties. The widespread use of smartphones makes recording now much easier than previously, when special equipment was required. The review highlights that recordings may be especially useful with older patients, patients who are emotionally overwhelmed at the time of their consultation, and patients with disabilities such as deafness.

**Reference:** *Patient Educ Couns* 2014;95(3):297-304

[Abstract](#)



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## Symptom dimensions of anxiety following myocardial infarction: associations with depressive symptoms and prognosis

**Authors:** Roest A et al.

**Summary:** This study examined the impact of anxiety on prognosis after acute myocardial infarction (MI). 418 patients were assessed for anxiety and depression using The Hamilton Anxiety and Depression Rating Scales 2 months post-MI. Patients were then followed up for a mean 3.8 years for all-cause mortality and recurrent MI. After adjustment for demographic and clinical variables, somatic anxiety was significantly associated with recurrent MI and mortality (hazard ratio [HR] 1.32;  $p=0.03$ ), and a trend was shown for an association between psychological anxiety and outcome (HR 1.29;  $p=0.06$ ). The total anxiety score of the HARS was the strongest predictor of recurrent MI and mortality (HR 1.38;  $p=0.02$ ). The HARS and the HDRS were highly correlated ( $r=0.86$ ;  $p<0.01$ ). In conclusion, anxiety was associated with an adverse prognosis after acute MI.

**Comment:** While there has been considerable work on the association between depression and recovery from MI, there is less research on how anxiety predicts outcome. This large study of over 400 patients recruited from four Dutch hospitals found scores on the Hamilton Anxiety Rating Scale were predictive of a further MI and mortality, even after controlling for demographics and cardiac risk factors. The 10% of patients with a total Hamilton Anxiety Rating Scale score of 18 or over had almost double the risk of a future death over the 4-year follow-up period, compared with patients scoring below 18. There may be several mechanisms at work that explain this relationship. Anxiety tends to be associated with difficulties in adopting healthy lifestyle changes, but there also may be several biological mechanisms that explain this relationship as well. Higher levels of anxiety are associated with an increased risk of ventricular arrhythmias as well as changes in inflammatory processes.

**Reference:** *Health Psychol* 2013; published online Nov 25

[Abstract](#)

## How common are symptoms? Evidence from a New Zealand national telephone survey

**Authors:** Petrie K et al.

**Summary:** This study assessed the frequency of symptoms in the general population, and the associations between symptom reporting, demographics, medical visits and medication use. 1000 individuals in the general population were randomly surveyed by telephone. Participants were asked whether they had experienced any of a list of 46 symptoms in the previous 7 days. The median number of symptoms reported by participants in the previous week was 5. Only 10.6% of participants reported no symptoms. The five most common symptoms were back pain (38%), fatigue (36%), headache (35%), runny or stuffy nose (34%) and joint pain (34%). Symptom reporting was positively associated with medical visits in the previous year and current medication use. Women reported a significantly greater number of symptoms than men.

**Comment:** In this recent NZ survey we looked at how often individuals in the general population experience common physical symptoms. We used a longer (46-item) list of symptoms than previous general population studies, which enabled us to make a better estimate of the average number of symptoms individuals report over the previous week. We found symptoms to be very common, with the median number of symptoms being 5 in the previous week and, as expected, symptom reports were strongly associated with doctor visits. The study reinforces the fact that physical symptoms are a normal part of the human experience and mostly provide no genuine health risk. Given the number and range of symptoms experienced, it is very easy for individuals to attribute symptoms to perceived environmental threats or other factors that may cause health concerns. Knowledge of how commonly symptoms are experienced may help normalise everyday health complaints.

**Reference:** *BMJ Open* 2014;4:e005374

[Abstract](#)

## Unnecessary complexity of home medication regimens among seniors

**Authors:** Lindquist L et al.

**Summary:** This study determined whether home medication regimens for the elderly are unnecessarily complex. 200 community-dwelling patients aged >70 years were interviewed in their homes to see how they took their medications over a typical day. A pharmacist and physician then examined the regimens to determine the least number of times a day the medication could be taken. It was found that the regimens could be simplified for 85 (42.5%) patients (53 of them could have had the number of dose times reduced by one time per day, and 32 of them could reduce by two dose times or more). The three most common causes of overcomplexity were misunderstanding the instructions, concern over drug absorption (e.g. with or without food), and perceived drug interactions. In conclusion, almost half of the group had medication regimens that could be simplified.

**Comment:** The complexity of drug regimens is closely related to compliance. As many other studies have found, this paper has highlighted how many elderly patients could have their medication taking simplified by reducing the number of times of day drugs were taken. What is interesting is this paper also looked at the reasons for the complexity of existing regimens. The most common belief, with apparently no pharmacological basis, was that the medication needed to be tied to a meal – either before, during or after. This drug absorption belief was present in about half of patients where medication timings were not coordinated. Another common reason was the unnecessary splitting of doses. The paper highlights just how common unnecessary complexity is in older patients and suggests that simplification is likely to lead to improved adherence in a large proportion of patients.

**Reference:** *Patient Educ Couns* 2014;96(1):93-97

[Abstract](#)

## Patient Psychology Research Review

### 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.

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## The psychosocial context impacts medication adherence after acute coronary syndrome

**Authors:** Kronish I et al.

**Summary:** This study determined whether cognitive, behavioral, and/or psychosocial vulnerabilities for depression explain the association between depression and poor medication adherence in patients with acute coronary syndrome (ACS). 169 patients with ACS were enrolled within 1 week of hospitalisation and had their aspirin adherence measured using an electronic pill bottle for 3 months after discharge. Linear regression analysis showed that, of the depression vulnerabilities, only role transitions ( $p=0.02$ ) and interpersonal conflict ( $p=0.03$ ) predicted poor adherence. Depression vulnerabilities did not mediate the association between depressive symptoms and medication adherence.

**Comment:** Depression is known to interfere with adherence to medication following MI, with depressed patients being of greater risk of non-compliance and a poor outcome. This research has the advantage of using a MEMS cap device or electronic pill bottle that recorded whenever the bottle cap was opened. The investigators looked more closely at what could be causing this association between depression and adherence. They found that non-adherent patients were characterised by a greater number of major life events in the prior year, such as job loss, divorce, or a move, than the more adherent patients. A greater level of interpersonal conflict also characterised non-adherent patients' relationships. The work suggests that recent life stress and interpersonal conflict may be useful pointers to poor adherence to cardiac medication following hospital discharge.

**Reference:** *Ann Behav Med* 2014;47:158-164

[Abstract](#)

## A systematic review of patient education in cardiac patients: do they increase knowledge and promote health behavior change?

**Authors:** Ghisi G et al.

**Summary:** This review investigated the impact of education on health behaviour in cardiac patients. A literature search of several electronic databases was undertaken for published articles that included cardiac patients, and described delivery of educational interventions by a healthcare provider. Outcomes were knowledge, smoking, physical activity, dietary habits, response to symptoms, medication adherence, and psychosocial well-being. 42 articles were identified, of which 23 were randomised controlled trials, and 16 were considered "good" quality. Eleven studies (26%) assessed knowledge; 10 of these showed a significant improvement with education. Educational interventions were significantly and positively related to physical activity, dietary habits, and smoking cessation. The interventions were most frequently delivered after discharge, by a nurse, and in groups. These findings support the use of educational interventions in cardiac patients.

**Comment:** This review asks: does the education of cardiac patients increase knowledge and change behaviour? It concludes that on the whole education programmes do increase knowledge but their effect on behaviour change is strongest for physical activity, smoking and improved diet, and equivocal for managing symptoms, adherence and well-being. Most interventions were poorly described both in terms of the material covered and the method of delivery but the most common topics covered were nutrition, exercise, cardiac risk factors and managing medication. For cardiac rehabilitation to improve, more detailed and manualised interventions need to be evaluated and programmes need to be clearer about the type of beliefs or behaviours they are seeking to change.

**Reference:** *Patient Educ Couns* 2014;95(2):160-74

[Abstract](#)

### CONGRATULATIONS

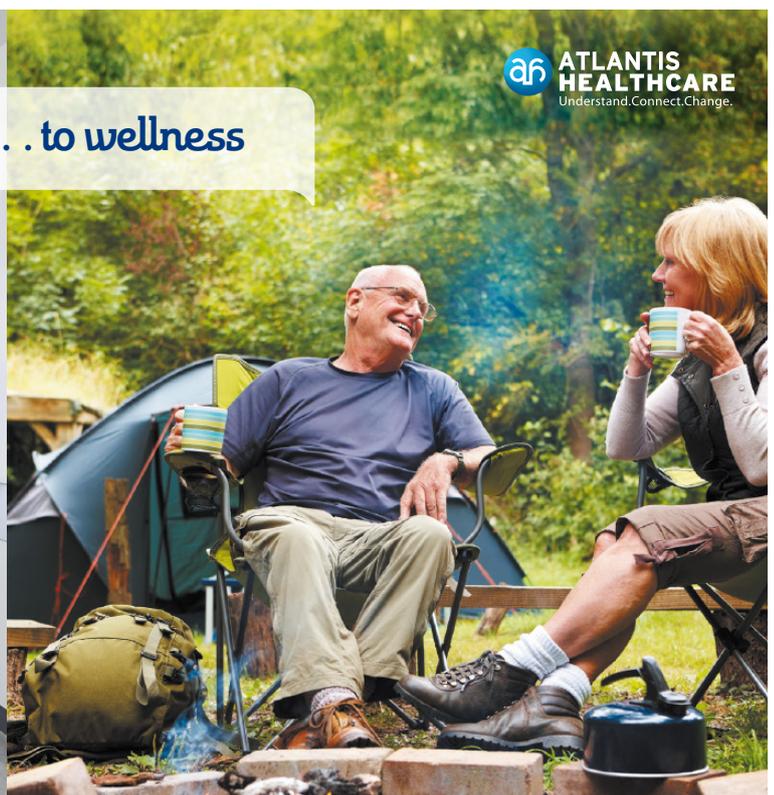
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## Conscientiousness and medication adherence

**Authors:** Molloy G et al.

**Summary:** This meta-analysis estimated the strength of the association between conscientiousness and medication adherence. 16 studies (n=3476) were identified from a literature search of electronic databases. Overall, a higher level of conscientiousness was associated with better medication adherence ( $r = 0.15$ ; 95% CI 0.09–0.21), and the association was stronger in younger samples.

**Comment:** It may be surprising to many that conscientiousness explains only a relatively small amount of medication adherence. The authors found a correlation across 16 studies and over 3,000 patients of  $r = 0.15$ , which explains only 2% of the variance in medication adherence. This is a similar level to the effect of depression on non-adherence. On the surface you would think that a personality dimension that involves a propensity for planning, prioritising tasks and following norms and rules would have a much stronger association with compliance. The findings highlight the range of other factors influencing adherence behaviour and that predicting non-adherence on the basis of patient personality is likely to be erroneous.

**Reference:** *Ann Behav Med* 2014;47(1):92-101

[Abstract](#)

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**Research Review publications are intended for New Zealand health professionals.**

## Effective behaviour change techniques in smoking cessation interventions for people with chronic obstructive pulmonary disease

**Authors:** Bartlett Y et al.

**Summary:** This meta-analysis determined which behaviour change techniques are associated with greater effectiveness in smoking cessation interventions for people with chronic obstructive pulmonary disease (COPD). 17 randomised controlled trials involving 7446 people with COPD were identified from a search of Web of Knowledge, CINAHL, EMBASE, PsycINFO, and MEDLINE. The sample-weighted mean quit rate for all the trials was 13.19%. Thirty-seven behaviour-change techniques were each used in at least three interventions. Four of the techniques were found to be associated with greater effectiveness, and 3 new COPD-specific behaviour change techniques were identified. Smoking cessation interventions for patients with COPD appear to benefit from using techniques focussed on forming detailed plans and self-monitoring.

**Comment:** This review looked at the most effective behavioural strategies for stopping smoking in COPD patients. The overall quit rate in the trials covered ranged from 0 to 29% and on average was only 13%, with interventions delivered in a clinical setting, as opposed to the home, being more effective. The review found that assessing nicotine dependence and boosting motivation and self efficacy were associated with reduced intervention effectiveness. The review suggests that interventions that include the development of "if-then" plans, provide advice about how to manage weight gain following quitting, link smoking to COPD, and encourage the self-monitoring of current smoking are most likely to be successful. These are useful pointers to developing more effective interventions for a difficult behaviour to change.

**Reference:** *Brit J Health Psychol* 2014;19(1):181-203

[Abstract](#)

## The relationship between the belief in a genetic cause for breast cancer and bilateral mastectomy

**Authors:** Petrie K et al.

**Summary:** This study investigated the relationship between the belief in a genetic cause for breast cancer and the decision to have a bilateral mastectomy. 2269 women from the Army of Women's breast cancer research registry completed an online survey. They were asked what they believed caused their breast cancer, and what type of surgery they underwent after their diagnosis. The women were grouped into 8 causal categories based on what they believed caused their cancer. The most common causal beliefs were hormonal factors (22%) and genetics (19%), followed by 'don't know' (19%), environmental toxins (11%), negative emotions (9%), poor health behaviour (8%), other (6%) and random/bad luck (6%). Compared with random/bad luck as the referent category, the odds ratio of having a bilateral mastectomy was significantly higher in both the genetics and hormonal causal belief groups (2.36 and 1.98, respectively). In conclusion, beliefs in a genetic cause for breast cancer are common and are associated with high rates of bilateral mastectomy.

**Comment:** This paper I did with colleagues from Dana Farber, UCLA and the Norwegian Institute of Public Health looks at how causal beliefs guide actions to manage an illness. Rates of double mastectomy in the US have risen sharply in recent years and have probably been given further impetus by the media stories around Angelina Jolie's decision to undergo a preventive double mastectomy. In this study, conducted with over 2,000 women diagnosed with breast cancer, we found that women who held the belief that their breast cancer was caused by genetic factors were over two times more likely to have a double mastectomy than women who believed their cancer was due to bad luck or just random. There is quite a striking contrast between the 19% of women who believed in a genetic cause for their breast cancer and the established percentage of breast cancers with a genetic cause, which is usually put at less than 3% of cases. The common overestimation of the role of genetic factors and the fact that survival benefits have not been demonstrated for bilateral mastectomy suggest that correcting misconceptions about genetic causal beliefs in breast cancer are likely to be important to help women make appropriate treatment choices following diagnosis.

**Reference:** *Health Psychol* 2014; accepted May 9

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