

# Patient Psychology Research Review™

Making Education Easy

Issue 5 - 2013

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

As usual we have included a rather eclectic mix of studies. These include the surprising findings that a cancer diagnosis does not motivate many people to make lifestyle changes; evidence that many women do not take personal risk information at face value when it comes to breast cancer; and an excellent example of how low cost simple interventions in health care (i.e. postcards) can produce surprising benefits for patients and the health system. Our final study examines the social life of a peanut allergy epidemic!

We hope you find our selection interesting and look forward to receiving your feedback.

Kind regards

**Keith Petrie**

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## Is a cancer diagnosis a trigger for health behaviour change? Findings from a prospective population-based study

**Authors:** Williams K et al

**Summary:** This study examined changes in health behaviours over time in UK cancer survivors taking part in the English Longitudinal Study of Ageing. Smoking, alcohol and physical activity were assessed on 3 occasions (0–2 years before a cancer diagnosis, 0–2 years after diagnosis and 2–4 years after diagnosis) in 433 cancer survivors and at matched times in 4713 controls. Participants with a cancer diagnosis were less likely to be physically active ( $p < 0.01$ ) and more likely to be sedentary ( $p < 0.001$ ) than controls but there were no between-group differences in alcohol or smoking. Smoking, alcohol and activity reduced over time in the whole group. In conclusion, a cancer diagnosis does not appear to motivate patients to make health-protective lifestyle changes.

**Comment:** This longitudinal study surprisingly found that a cancer diagnosis does not motivate the majority of people to improve their health behaviour in terms of physical activity, alcohol consumption or smoking. While early surveys suggested that cancer survivors make positive changes in health behaviour following diagnosis, most of these studies used small samples and no control group. Only a few of the prior studies collected data before the cancer diagnosis, which left them open to retrospective bias. This study used a much stronger design that included a control group without a cancer diagnosis and assessed participants prior to diagnosis (they were all part of a larger longitudinal aging study). The study underlines how difficult it is to motivate people to make long-term health behaviour changes even when the threat to their health is high. The smoking field is also a testament to this fact. While there was some evidence in the study that participants with a cancer diagnosis made immediate short-lived changes following diagnosis, for the majority these did not last over the long term.

**Reference:** *Brit J Cancer* 2013;108:2407-2412

<http://dx.doi.org/10.1038/bjc.2013.254>

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Is there an effective way to improve patient outcomes through increased medication adherence?

**Yes.** Turn over to find out more.

## Belief in numbers: when and why women disbelieve tailored breast cancer risk statistics

**Authors:** Scherer L et al

**Summary:** This study examined when and why women disbelieve information about their risk of developing breast cancer. 690 women participated in an online programme designed to teach them about drug treatments that can reduce the risk of breast cancer. The programme also presented tailored information about each woman's personal breast cancer risk. Half of the women were told how their risk numbers were calculated and the other half were not. They were later asked whether they believed that the programme was personalised, and whether they believed their risk numbers. 19% of women did not believe their personalised risk numbers; the most common reason for rejecting the risk estimate was a belief that it did not fully account for personal and family history. Explaining the risk calculation methods in greater detail enhanced the belief that the programme was personalised.

**Comment:** This interesting study asked women if they believed the risk information provided as part of an online programme to learn about drugs that can reduce the risk of breast cancer. In the study women were told of their personal risk of developing breast cancer in the next 5 years. Nineteen percent of the women in the study said they disagreed with the risk assessment. The women who disagreed with their assessment believed their own risk was inaccurate either due to their family history, or the number seemed too low or the assessment didn't take into account their health habits or previous medical history. The study highlights that many women do not take risk information at face value and have to fit this information into already established beliefs about personal risk. Providing women with more information focused on how the risk estimate is established and why certain factors are not taken into account could help make personal risk estimates seem more relevant.

**Reference:** *Patient Educ Couns* 2013; Apr 23 [online advanced publication]

<http://dx.doi.org/10.1016/j.pec.2013.03.016>

## Postcards from the EDge: 5-year outcomes from a randomized controlled trial for hospital-treated self poisoning

**Authors:** Carter G et al

**Summary:** This Australian study evaluated the use of postcard intervention in individuals who self-poison. 772 individuals who had previously self-poisoned were randomised to postcard intervention (they received 8 in 12 months) plus treatment as usual, or just treatment as usual. They were assessed over the next 5 years for hospital-treated self-poisoning and admission to a psychiatric hospital. Postcard intervention significantly reduced self-poisoning events (incidence risk ratio 0.54) and saved 306 general hospital bed days, and reduced psychiatric admissions (incidence rate ratio 0.66) and saved 2565 psychiatric hospital bed days over the 5-year period.

**Comment:** Jerome Motto, a psychiatrist working in San Francisco in the 1970s sent postcards to psychiatric patients admitted to hospital for depression or self-harm but refused treatment. He sent postcards or made phone calls to a random sample of this group over the next 4 years and found a lower level of suicidal deaths in the contacted group compared to the group who was not contacted. This approach has been picked up in several formal studies including this RCT recently published in the *British Journal of Psychiatry*. The study tested whether a postcard sent in a sealed envelope 8 times in the 12 months after discharge to Australian patients admitted for self-poisoning improved outcome. The researchers found a significantly lower number of self-poisonings and psychiatric admissions in the intervention group compared to the control group. This simple low cost intervention provided an enormous cost saving in general and psychiatric bed days (2,565 over 5 years). This paper is an excellent example of how low cost simple interventions in health care can often produce surprising benefits for patients and the health system.

**Reference:** *Brit J Psychiatry* 2013;202:372-380

<http://dx.doi.org/10.1192/bjp.bp.112.112664>

## If you had less than a year to live, would you want to know? A seven-country European population survey of public preferences for disclosure of poor prognosis

**Authors:** Harding R et al

**Summary:** This study investigated preferences for information disclosure regarding poor prognosis, the likely symptoms and problems, and care options available in the event of having a serious illness and less than a year to live. A random population-based telephone survey was undertaken in seven European countries. 9344 individuals responded to the survey. There was an international preference (73.9%) to always be informed in the scenario of having a serious illness such as cancer with less than a year to live. 21.1% of respondents did not want such information unless they asked, or at all. People younger than 70 years, men, those with experience of illness and those with more education were more likely to want to know if they had limited time left. In conclusion, these findings confirm that most people would prefer to be told if they had a poor prognosis.

**Comment:** Sometimes the obvious questions are not asked in research but this study investigated the preference for disclosure of a poor prognosis in a large sample drawn from 7 European countries. Not surprisingly, the majority of respondents to the survey reported that they would like to be informed of the time they had left if they were diagnosed with a serious illness (74%) as well as the options for care (90%) and the symptoms and problems they were likely to experience (81%). Not wanting to know if they had limited time left was higher in those aged over 70, women, those with lower education levels and those with less experience of illness. The data underline the fact that the vast majority of patients want full knowledge about their prognosis care options and likely future symptoms.

**Reference:** *Psycho-Oncology* 2013; Mar 18 [online advanced publication]

<http://dx.doi.org/10.1002/pon.3283>



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## The psychological effects of a companion robot

**Authors:** Robinson H et al

**Summary:** This NZ study investigated the psychosocial effects of a companion robot (Paro) in a rest home/hospital setting. 40 residents at a residential care facility in Auckland were randomised to a robot intervention group or to a normal activities group (controls). A resident Jack Russell dog was sometimes available to each group. Paro sessions took place for an hour, twice a week over a 12-week period. Loneliness, depression, and quality of life were assessed by questionnaire at baseline and again at follow-up. Residents who interacted with the robot had significant reductions in loneliness over the time of the trial compared with controls. Both the resident dog and the robot made an impact on the social environment, but residents talked to and touched the robot significantly more than the resident dog. In conclusion, a companion robot has benefits for older people in nursing home care.

**Comment:** This NZ study investigated the effect of a companion seal robot in an elderly care rest home and found decreases in loneliness in residents who interacted with the robot. There is now considerable research activity going on in how robots can be introduced into health care settings. Robots are becoming cheaper to manufacture and a number of studies have shown that they can add to the care being provided to patients in hospital and rest homes. There is natural resistance to robots from staff who feel their jobs may be threatened and by the public who feel robots will replace the human care so important in health interactions. However, patients generally find them useful and there is considerable potential to increase the use of robots. They should be seen very much like any other piece of medical technology to assist care.

**Reference:** *J Am Med Dir Assoc* 2013; Mar 29 [online advanced publication]

<http://dx.doi.org/10.1016/j.jamda.2013.02.007>

## Conscientiousness and medication adherence

**Authors:** Molloy G et al

**Summary:** This meta-analysis estimated the role of conscientiousness in medication adherence. A literature search identified 16 studies (n=3,476) that met the study eligibility criteria. Overall, a higher level of conscientiousness was associated with better medication adherence, and associations were stronger in younger patients. The small association between conscientiousness and medication adherence may have clinical significance, especially in situations where small differences in adherence may have clinically important effects.

**Comment:** The relationship between the personality dimension of conscientiousness and adherence has been investigated in a number of studies and this evidence is gathered together here in this meta-analysis. As you would expect from a personality dimension that is linked to planning, perseverance and orderliness, there is a significant but relatively low relationship with medication adherence (r=0.15). There are also other consistent data that show that higher levels of conscientiousness are related to a longer life span. The difficulty with personality variables is that they are hard to change and adherence interventions are likely to have more success when focused on more immediate beliefs about medication and illness.

**Reference:** *Ann Behav Med* 2013; Jun 20 [online advanced publication]

<http://dx.doi.org/10.1007/s12160-013-9524-4>

## Separating emotions from consequences in muscle disease: comparing beneficial and unhelpful illness schemata to inform intervention development

**Authors:** Graham D et al

**Summary:** Psychological interventions that help patients with muscle disease to modify their illness perceptions may improve their quality of life (QoL) and mood even as the disease progresses. This study determined helpful and unhelpful illness perceptions (illness schemata) in patients with untreatable muscle diseases. After a cluster analysis of 217 people with muscle disease, a between-cluster comparison of QoL and mood identified the clusters associated with better and worse outcomes. Three stable clusters holding distinct illness schemata were identified. One cluster was characterised by greater functional impairment, but worse QoL and mood. The other two clusters did not differ in functional impairment but differed in QoL and mood. The cluster with better outcomes had realistic views of timeline, greater coherence, reduced emotional representation and identity, and a lack of association between emotional representation and consequences. In conclusion, detailed comparison of beneficial and unhelpful illness schemata can help inform both the content and composition of an intervention.

**Comment:** This study used a cluster analysis to isolate the pattern of illness beliefs that was associated with better mood and quality of life in patients with muscle disease. Patients with the beneficial pattern of perceptions attributed fewer symptoms to their muscle disease, had a more accurate chronic timeline perception of the disease and had a greater understanding of their illness. The paper shows how a finer analysis of illness perceptions can provide pointers to the types of perceptions that could be targeted in an intervention to improve overall psychological outcome.

**Reference:** *J Psychosom Res* 2013;74:320-326

<http://dx.doi.org/10.1016/j.jpsychores.2012.09.012>

## Test of a web-based program to improve adherence to HIV medications

**Authors:** Hersch R et al

**Summary:** This study evaluated the effectiveness of a web-based version of the Life-Steps intervention to improve medication adherence in people with HIV infection. 168 HIV+ adults were randomised to undergo the Life-Steps programme or remain on the waiting list for the programme until after completion of the study. All participants completed a baseline assessment and provided a 2-week electronic pill (MEMS) cap baseline reading. Follow-up data were collected at 3, 6 and 9 months. Patients randomised to the web-based Life-Steps programme had significantly higher antiretroviral medication adherence rates than controls over the 9-month period, and a significant decrease in viral load. In conclusion, a web-based Life-Steps programme can help patients living with HIV maintain medication adherence.

**Comment:** This study showed that a web-based programme based on Life-Steps – a cognitive behavioural HIV medication adherence programme developed by Steven Safren – in combination with a stress management and mood management programme was successful in improving adherence in patients with HIV infection attending an urban health clinic. The Life-Steps programme includes information on understanding medication adherence, communicating with your treatment team, coping with side effects and managing a medication schedule. The programme improved adherence to antiretroviral medication over a 9-month period. Web-based interventions are attractive due to the ability to scale the programmes to large populations for a relatively low cost. However, more research is needed to work out the most useful structure, length and content in order to maximise their potential and scalability in illnesses such as HIV infection.

**Reference:** *AIDS Behav* 2013; Jun 29 [online advanced publication]

<http://dx.doi.org/10.1007/s10461-013-0535-8>

## 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.

For full bio [CLICK HERE](#).



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## How distressing is it to participate in medical research? A calibration study using an everyday events questionnaire

**Authors:** Petrie K et al

**Summary:** This study investigated the distress involved in participating in medical research compared to everyday events. An anonymous questionnaire was completed by 100 members of the Scottish general public, 94 students at the University of Auckland and 22 New Zealand Ministry of Health ethics committee members. Distress associated with everyday events and common medical research procedures was rated on a scale of 0–10. The general population and student samples generally rated the distress caused by participating in various medical research procedures as low or very low (mostly lower than the distress caused by not being able to find a car park at a supermarket). However, the ethics committee members rated the distress caused by most of the medical research procedures at a significantly higher level than the student and general population samples. They also overestimated the distress caused by interview or questionnaire assessments.

**Comment:** This study compared public ratings of how distressing it is participating in various research procedures such as having a blood sample, completing an in depth interview about your health, having an x-ray and so forth compared to everyday events such as not being able to find a parking place at the supermarket, traffic on the way to an appointment, burglary or a long queue at the bank. We found members of the public and student samples routinely rated research procedures as low compared to other everyday events. We also asked similar questions of ethics committee members in terms of how they believed the public would rate the items. Mostly, ethics committee members systematically overestimated the distress caused by minor research procedures such as completing questionnaires. The study suggests ethics committees may be adopting a more protective view of participation in questionnaire or interview-based research than is necessary.

**Reference:** *J R Soc Med Sh Rep* 2013 [online advanced publication]

## Parsing the peanut panic: the social life of a contested food allergy epidemic

**Authors:** Waggoner M

**Summary:** Peanut allergies are potentially fatal but actually affect very few children at the population level. This report examined how peanut allergies transformed from a rare medical malady into a contemporary public health problem. Medical literature were compared with other textual sources, including media reports, legislation and advocacy from 1980–2010. The peanut allergy 'epidemic' may have been created through interactions between experts, the public, biomedical categories, and institutions; social reactions expanded the sphere of surveillance and awareness of peanut allergy risk. The peanut allergy problem being an 'epidemic' was shaped by mobility across social sites.

**Comment:** Peanut allergy is a rare condition but has become a topic of wide social concern and discussion. This excellent paper charts the relatively recent history of how fear of peanut allergy has grown to the stage where schools have banned peanut butter and evacuated schools when peanuts have been found. The fact is seafood allergies are almost twice as common and the number of deaths in children and adults dying from all food allergies is extremely low. The paper raises important questions about the media's role in how this risk amplification has taken place.

**Reference:** *Soc Sci Med* 2013;90:49-55

<http://dx.doi.org/10.1016/j.socscimed.2013.04.031>

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