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Meta-analysis of moderators of psycho-oncology therapy effectiveness:

"It’s the sick who need a doctor".

A thesis presented in partial fulfillment of the requirements for the degree of

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Abstract

Reviews conflict regarding the effectiveness of psycho-oncological therapies at reducing patient anxiety, depression and general distress, suggesting that unknown factors are moderating trial results. This meta-analysis investigates the moderating impact of a large range of socio-demographic, psychological, medical and therapy factors using published and unpublished data from 146 prospective controlled trials, including non-random designs.

Preliminary analyses of trial design quality features exposed 2 moderators: recruit screening for psychological distress or history, and the nature of the control condition. These structured a 2 x 2 matrix used to conduct substantive analyses. Admitting only recruits with established baseline distress was found to predict greater effect size, as was excluding patients with a history of distress. Main effects for patients with baseline distress compared with untreated controls, were medium-strong at $g = 0.52 - 0.70$. Evidence of varying strengths indicated that patients who were older, of lower income, male, single, or suffering from cancer sited elsewhere than breast produced higher effect sizes. Data also highlighted particular stages in the cancer journey: re-entry to normal life at the end of medical treatment, recurrence, and distant disease spread.

Findings suggest that risk and distress screening should be employed by both clinicians and researchers. Researchers should also re-direct attention away from unscreened middle class early stage breast cancer patients, towards more vulnerable socio-demographic and medical groups. The potential of using survivors and indirect therapies to effectively and efficiently reach vulnerable groups deserves exploration. Reviewers need to take into account the 2 trial design moderators discovered, and should include non-random controlled trials which may have more access to particularly vulnerable groups because some past conclusions were confounded by the co-variation of study design with sampling characteristics.
Preface

The subtitle, “It’s the sick who need a doctor” is drawn from the gospel of Matthew 9:12 where Jesus says that His attentions are for the needy rather than for those who consider themselves invulnerable. It was chosen to reflect the theme that emerges from this research that therapy effectiveness tends to be moderated by deficit – medical, social, economic and psychological need – and the call for more focus on these factors in research and practice.

I came to the study of psychology late, having originally trained in law and then ‘retired’ to raise a family and help my mother cope with the advanced stages of Parkinson’s disease. I suffered an episode of depression, and later another, during my care-giving interlude, and learned about the multi-generational causes and effects of family dysfunction. Having ‘done the practical’, when my children were older, I enrolled in a university course in psychology.

My depression-lowered immunity levels exposed me to glandular fever, which took me out of study for six months, but on my return I was thrilled to be given the opportunity to do this piece of research. However, my weakened system invited more illness, and seven months into it, the research ‘went live’ when I was diagnosed with early stage breast cancer. I now had the opportunity to ‘do more practical’, but this time I was greatly assisted by what I had learned about the trajectory of emotional experience for cancer patients and about the medical treatment of the disease. I shed few tears as I faced my new identity as a cancer patient, a mastectomy, and the trials of chemotherapy, and kept on with the research between medical appointments and as ‘chemo-brain’ allowed.

Through the series of diagnostic tests, surgery and more surgery, chemotherapy and its side effects, oncology appointments, mammograms, heart scans and blood tests…. I became very aware of how privileged my personal circumstances were and how they buffered me from much of the stress that others suffer with this disease. I was in a loving marriage, and my children were now in their late teens – quality social support. My husband had a good job and my research work could flex around the needs of my treatment – financial security, occupation, a bolster to my self-esteem. I had a reasonable lay person’s understanding of the disease, its treatment and hospital structures and procedures, plenty of brochures were available as well as ready access to a specialist nurse, and I knew about the emotional side of the disease – information. I knew how to press for the strategic advice and services I needed in order to reduce stressful uncertainty and make well informed treatment choices – advocacy. I had caught the disease early – favourable prognosis. I lived near a well equipped hospital in an OECD welfare state – comprehensive free and timely medical treatment. I had long attended to the existential issues of life – the existential crisis posed by this life threat was minimised. And I did not have close personal experience of the toll that the disease can take on those that die from it – no fear-filled memories.

I could not imagine anyone better placed to deal with the experience than me. I was bolstered and buffered on every side. Despite my history of depression, I was not distressed by the experience, other than in quickly passing moments of fear and grief as I adjusted to my new identity, body image, and expectations of the future. I felt no need
for psycho-oncological support, but that too would have been available to me – free of charge - if I had. Ultimately, the experience boosted my appreciation and enjoyment of life and sharpened my focus on what matters.

There can’t be many cancer patients who are so well supported. My comparative wealth and education set me apart from the majority of people in my own country, let alone those in lower and middle income countries. Many of the supports that I enjoyed turned upon this socio-economic position. Most cancer patients are battered by a succession of losses, practical difficulties and decisions for which they are ill-equipped.

In designing interventions, psychologists often do not realise how fundamentally important socio-demographic and economic factors are. The focus is on the type of therapy and how it is delivered rather than who it is delivered to and what their life circumstances are. I hope that the present research helps correct that focus, turning attention away from middle class people with favourable prognoses like me – where the majority of research has been directed in the past - to those who have gaps and pressures where they need supports.

The writer and her supervisors, Dr Don Baken, left, and Dr Shane Harvey, right, when research started mid 2007. Don is a psycho-oncologist and researcher, and Shane directs the Massey psychology clinic. This photo was taken for the funder, the Cancer Society of New Zealand, but was then used in requesting unpublished data from primary study authors…and to apparent great effect as half of them responded. “A good looking team”, one author said!
Acknowledgements

My supervisors, Dr Shane Harvey, Director of the Psychology Clinic here at Massey Palmerston North, and Dr Don Baken, lead researcher with the Massey / MidCentral Health Psycho-oncology Service. I have awarded you ‘best supervisors ever’ presents the last two Christmas’s for good reason: competent, reliable, direct but kind, generous teachers. If wise teachers make learning a joy, then excellent teachers make their students want to be like them. Your input has caused me to alter the direction of my career and you have modeled for me the attitudes and standards that I would like to take into it. This research has been a fabulous life and learning experience for me, and it all started when you were willing to take a punt on someone whose health was not one hundred percent and who didn’t measure up to the requirements of others. Thanks. I hope to ‘pay it forward’ in due course. Let me know if you ever need a reference!

Dr Kevin Ronan, former head of the Massey Psychology Clinic, since moved to Australia, mentor. Another who loyally supported me regardless of the ‘downs’ of my failures and health adventures. I’ve said it before but will say it again, Kevin: Your encouragement has been a lifeline without which I may have given it away long ago.

My husband, David. You have paid the bills faithfully for the many years that it has taken to get to this point with my studies – lets not count them - and I haven’t finished yet. Then there has been all the technical support and the times that you have encouraged me to stay with it when I felt like quitting. Big hug. Promise to stick by you if you ever lose your marbles.

Harvey Jones, technical support, Massey School of Psychology. You are a patient and generous man Harvey!

Anne Hall and the team at Massey Library Document Supply, detectives extraordinaire! It is the primary study search that undergirds the quality of this research, and it was you who assiduously ferreted reports out from all over the world. What fabulous people to have on the team!

Thanks also to the many primary study researchers who generously provided additional effect size data. I hope you find the results useful. And to Dr Borenstein of CMA in the US for his generosity in statistical support.

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