

How and for Whom? Asking Questions About the Utility of Psychosocial Interventions for Individuals Diagnosed With Cancer

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A recent review revealed 155 randomized controlled trials of psychological interventions for cancer patients published through 1998,¹ and many additional trials have been published since that time. Even a quick examination of the literature on the effects of psychosocial interventions on outcomes related to quality of life, such as psychological adjustment and fatigue in cancer patients, reveals that some randomized controlled trials are impressive in their positive outcomes, some produce mixed results, and some yield null findings. In recent qualitative and quantitative meta-analytic reviews of the relevant body of intervention research, the reviewers draw disparate conclusions, suggesting that the existing evidence demonstrates the utility of psychological interventions,^{2,3} yields a mixed picture,⁴⁻⁷ or supports no strong recommendations for their effectiveness.¹ Just as the intervention studies included within the reviews differ dramatically on a number of dimensions, so do the reviews themselves on such factors as criteria for inclusion, outcomes examined, and approaches to the data. In this issue of the *Journal of Clinical Oncology*, Chan et al⁸ provide an example of a randomized controlled trial that yielded negative effects. Rather than continuing to ask the omnibus question of whether psychological interventions are effective for cancer patients and chalking up the trial by Chan et al as one for the “loss” column, posing questions that address the issues of how and for whom specific interventions do or do not carry positive effects might better illuminate directions for this important domain of psychosocial oncology.

Asking how an intervention produces its effects involves an exploration of mechanisms or explanations for a trial's findings. Characterizing the pathways through which an intervention produces positive effects can shed light on how the intervention might be refined further, and how

seemingly distinct treatments might produce similar effects through common mechanisms. Asking how an intervention might have yielded disappointing findings also can be revealing, both in providing information on how much weight should be accorded to the findings and in helping researchers learn which paths not to pursue in developing interventions in the future.

For both positive and negative trials, explanations for results are likely to lie in such factors as the nature of the sample studied, the intervention implemented, and the outcomes examined. For example, Chan et al⁸ acknowledge the high baseline functioning of the patient sample as a potential explanation for the lack of significant effects. If a sample of cancer patients reports low distress and otherwise high functioning at the outset of a trial, then it is statistically impossible for a significant intervention effect to emerge on those outcomes, at least without a very large sample. A related issue, particularly for trials that target patients during or shortly after medical treatment, is that many individuals tend to recover over time without psychological intervention,⁹ as also occurred in the trial by Chan et al,⁸ again working against the likelihood of detecting significant intervention effects over a standard care control.

With regard to the nature of the intervention, it is important to note that the intervention by Chan et al⁸ was multimodal, encompassing such multiple core components as psychoeducation, supportive care, stress management, relaxation, and pain management. Furthermore, the intervention was individually tailored to each participant, with the specific content left to the discretion of the treating psychologist. Although many published psychological interventions also are multimodal and some include individual tailoring, the reader is left with a number of questions

regarding the intervention by Chan et al. Among others, these include whether all trial participants received each core treatment component, such as documentation of treatment fidelity through independent ratings of audio-taped sessions for delivery of intervention components, as well as the intended and actually administered dose of the intervention for trial participants. For example, it would be instructive to examine data on number of sessions attended, total contact time, and primary content of the individually tailored intervention, as well as whether these indicators predicted intervention outcomes.

The outcomes selected for psychological intervention trials also warrant consideration. Although there is ready theoretical justification for the expectation by Chan et al⁸ that cancer-specific intrusive thoughts should be responsive to their specific intervention, which components of their intervention, if any, should influence the outcomes of satisfaction with the medical provider or global self-esteem, for example? Reviewers of the psychological intervention literature have suggested that cancer-specific assessments, such as treatment-related fatigue, cancer-specific distress, and sexual functioning, often demonstrate larger intervention effects than do more global psychological and quality-of-life indices.¹⁰ It is important to note, however, that Chan et al also found no significant effect on cancer-specific intrusive thoughts.

In addition to asking how an intervention carries its effects, posing questions of for whom and under what conditions (such as a point in the cancer trajectory) an intervention is useful can contribute to the development of more effective therapeutic approaches. Although Chan et al⁸ reports insufficient statistical power to test such moderated effects, one wonders whether the intervention might have been effective relative to the control condition for a subsample that evidenced more marked psychological disturbance or low self-efficacy at baseline compared with more highly functioning participants. Accumulating evidence suggests that psychological interventions may be more effective for individuals who are in greater distress or who have fewer psychosocial resources, such as low social support,¹¹ low optimism,¹² or low education,¹³ and that discrete interventions may be useful for cancer patients with particular characteristics such as high or low cancer-related avoidance.¹⁴ Moreover, recent meta-analyses^{3,7} have produced heterogeneous effect sizes for psychological interventions, also suggesting that the utility of psychological interventions varies as a function of important attributes of the interventions themselves and the targeted participant samples.

The next generation of psychological intervention research requires increasingly careful a priori consideration of the nature of the samples, interventions, and outcomes involved, as well as theory-guided examinations of mechanisms for the obtained effects. The observations that many individuals diagnosed with cancer report relatively minimal

psychological disruption and that they improve over time without psychological intervention suggest that trials might be targeted most productively toward those who stand to benefit most from interventions.^{5,15,16} Inclusion criteria can be crafted to select individuals or caregivers who are in distress or who possess few psychosocial resources, with appropriate ethical safeguards implemented for patients randomly assigned to a control group. The approach of offering intervention to those in most need also potentially maximizes the efficient use of scarce resources. Another approach is to identify attributes of the patient population that theoretically are likely to moderate the effects of the intervention, and to build inspection of these moderators into the data analytic plan.

Thorough attention to the nature of the intervention and its most theoretically and empirically justifiable outcomes also is essential. Evidence suggests that psychoeducational approaches may be more effective than peer discussion or supportive care,^{3,17} and that interventions that include components designed to enhance self-regulation and increase self-efficacy with regard to cancer-related issues produce larger effect sizes than do interventions with few or no such components.¹⁸ Specification of the most central facets of treatment content and demonstration that the intervention is delivered as intended are crucial elements in psychological intervention research. Efforts to identify the most potent ingredients of multimodal therapeutic approaches also are warranted. Careful specification of outcomes that should be influenced by a particular therapeutic approach will increase the opportunity to detect significant intervention effects, if they indeed exist.

Recommendations by such bodies as the National Cancer Policy Board of the Institute of Medicine¹⁹ and the Central European Cooperative Group²⁰ that psychosocial care be integrated into oncology care render it imperative that methodologically rigorous investigations set the standard for evidence-based practice. Both in designing psychosocial intervention trials for those diagnosed with cancer and their loved ones, and in evaluating the findings of those trials, considering questions of how and for whom the intervention does or does not work promises to move the field forward in producing maximally effective interventions.

Author's Disclosures of Potential Conflicts of Interest

The author indicated no potential conflicts of interest.

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