



Psychological interventions in prostate cancer: a farewell to mind–body dualism

Sarah-Jeanne Salvy ¹

Received: 12 February 2021 / Revised: 24 February 2021 / Accepted: 8 March 2021 / Published online: 5 April 2021
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If we want to prioritize evidence-based psychological interventions in prostate cancer, we need to move away from thinking of these approaches as “soft” in comparison to other “hard” treatments. It is time to abandon the sterile Cartesian dualism of mind–body distinction.

More than 10 years ago, the Agency for Health Care Research and Quality, the National Cancer Institute (NCI), and experts in the field concluded that interventions targeting psychosocial issues were of vital importance in cancer care [1]. Nonetheless, interventions targeting the psychological and emotional burden of cancer continue to be marginalized in NCI’s scientific priorities. A review of the current 68 NCI funding announcements highlights this gap, with only three opportunities focusing on biopsychosocial factors and affect.

Mundle, Afenya, and Agarwal’s systematic review in this issue of *Prostate Cancer and Prostatic Diseases* [2] provides a sobering summary of the scarce data available on psychological interventions for patients undergoing prostate cancer treatment. Using the PRISMA-checklist, Mundle et al. reviewed prostate cancer trials published in the last 20 years and identified 22 randomized clinical trials including comparisons of psychological interventions and usual care. The authors operationalized effectiveness as percent change in pre- and post-trial mean scores for depression, anxiety, and distress, and compared change scores in targeted interventions and usual care. Their findings indicate that patients receiving psychological interventions have greater improvement in depression, anxiety, and in general and cancer-specific distress compared to patients who received usual care. The effectiveness of intervention was retained in subgroup analyses of studies using a single assessment tool

($n = 7$), and those focusing on localized prostate cancer ($n = 14$).

Mundle et al.’s review is a commendable step in the development and refinement of evidence-based psychological treatment. The significance of the review further lies in highlighting important gaps in knowledge and in suggesting future directions.

First, the effectiveness of psychological interventions can only be measured in reference to the diagnoses and symptoms they are intended to cure or alleviate. Hence, demonstrating effectiveness requires precise labeling of diagnoses and symptoms. The International Statistical Classification of Diseases and Related Health Problems (ICD) and the Diagnostic and Statistical Manual of Mental Disorders (DSM) include dozens of anxiety and depression-related diagnoses. Yet, as highlighted by Mundle et al., trials often reference anxiety, depression, and distress as homogeneous categories. Similarly, the effectiveness of a given intervention depends on whether instruments reliably and accurately capture changes in targeted outcomes. In this regard, the vague concept of “distress” used colloquially and as a marker of functional impairment in the DSM and ICD systems (but *not* as a diagnosis), is only marginally useful to scientifically appraise intervention effectiveness due to the subjectivity in ratings and questionable psychometric properties of instruments used to differentiate general distress from normal responses to stress [3].

Second, meaningful conclusions about the effects of psychological interventions further require an understanding of how interventions work, and which components drive their effectiveness. The first step in this process is to clearly label and define intervention components used in trials to maximize transparency, comparability, and reproducibility. The work of Susan Michie and others is useful in this regard in providing a prototype for the taxonomy of behavioral interventions [4]. Similar frameworks and taxonomies are needed to organize and standardize interventions in prostate cancer in particular, and in cancer survivorship more generally. The transparent reporting and systematic testing of

✉ Sarah-Jeanne Salvy
sarah.salvy@cshs.org

¹ Cancer Research Center for Health Equity, Cedars-Sinai Medical Center, West Hollywood, CA, USA

treatment components is essential to inform the development and refinement of evidence-based interventions.

Rigorous research is also needed to understand mechanisms accounting for the relationships between psychosocial health and cancer morbidity and mortality. Aside from identifying biomarkers and androgen-related mechanistic pathways, more work is needed to understand whether anxiety and depression are moderators, or even proximal causes of disease severity, or whether other hereditary and environmental factors (or their interaction) concurrently account for both psychological distress and cancer severity. Longer-term follow-ups are also needed to evaluate the sustainability and longitudinal effects of psychological interventions on prognoses, recurrence, and/or prevention of new cancers.

A final consideration relates to heterogeneity in treatment outcomes and the need to systematically consider moderators of effectiveness. The question of “what works [best] for whom” has preoccupied psychologists since the 70s and was recently popularized with the ascension of preventive medicine. For example, evidence-based interventions that address fear of recurrence may only be marginally beneficial among men with a prior history of psychiatric comorbidities; and strategies beneficial for White heterosexual men may carry adverse consequences among Black gay men. The goodness-of-fit between diagnosis, therapy, and individual and cultural characteristics has implications for the selection of treatment delivery modality, setting, and duration. The extensive literature in psychology and psychiatry in other areas can begin to inform these decisions.

Mundle and colleagues’ findings are encouraging in detecting an efficacy signal from the scarce literature. The usefulness of a therapy is evaluated in reference to the significance or societal impact of the condition addressed, its comparative effectiveness against other therapies, and utility in producing changes outside other treatments’ purview. As pointed out by Mundle et al., the significance of comorbid mood disorders lies in worsening the severity of other diseases and independently increasing the risk of mortality if they remained unaddressed. Research in immunology and other disciplines further unveiled how subjective sleep, pain, and perceived social isolation are often stronger predictors of morbidity and mortality than objective indicators [5–9]. In regard to comparative effectiveness, cognitive-behavioral therapy is equally or more

effective than pharmacotherapy for many anxiety and depression disorders, without adverse side effects and lingering health consequences. In terms of non-overlapping utility, the very effectiveness of “hard” treatments depends on patients’ adherence to recommendations, which is under the scope of behavioral and psychological interventions. The limited evidence supporting the effectiveness of psychological interventions in prostate cancer suggests that the scientific rigor used in other fields of oncology needs to be applied when developing and refining evidence-based psychological interventions; not that the field is unworthy of scientific inquiry.

Compliance with ethical standards

Conflict of interest The author declares no competing interests.

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