A Systematic Literature Review of Mindfulness-based Interventions for Psychological Wellbeing and Quality of Life in Men with Prostate Cancer

Daniel A. Nnate & Ukachukwu O. Abaraogu.
School of Health and Life Sciences, Glasgow Caledonian University, United Kingdom.

INTRODUCTION

❖ Prostate cancer is the most frequently diagnosed malignancy in men with a global prevalence of over 1 million cases every year.

❖ A diagnosis of prostate cancer, its prognosis and issues related to available treatment options often raises significant physiological dysfunctions and psychological distress in the form of anxiety and depression which further impacts on the individual's quality of life.

❖ Mindfulness-based interventions (MBIs) are increasingly being encouraged for managing treatment-related symptoms and psychological burden of cancer progression.

❖ In this current study, we explored available literature to suggest if MBIs can enhance psychological wellbeing and improve the quality of life in men diagnosed with prostate cancer.

MINDFULNESS IN LITERATURE

❖ Most literature on MBIs incorporates a variety of malignancy. However, women with breast cancer accounts for over 75% of participants.

❖ It is unclear if the claims made by the authors accurately reflects men with prostate cancer.

❖ The uneven distribution of participants suggests a lack of clarity in the study design.

❖ Much less is known about the extent to which mindfulness is effective in relieving the psychosocial distress experienced by men with prostate cancer.

METHOD – Eligibility criteria

❖ PARTICIPANTS – Men (age≥40) with a diagnosis of prostate cancer at any time in their life.

❖ INTERVENTION – Mindfulness-based intervention (Group-based or individual consultation).

❖ CONTROL – Usual care and other active controls.

❖ OUTCOMES – Psychological distress (anxiety, depression, cancer-specific distress); quality of life and post-traumatic growth.

❖ STUDY TYPE – Quantitative research: randomised controlled trials (RCTs), non-randomised studies (NRS).
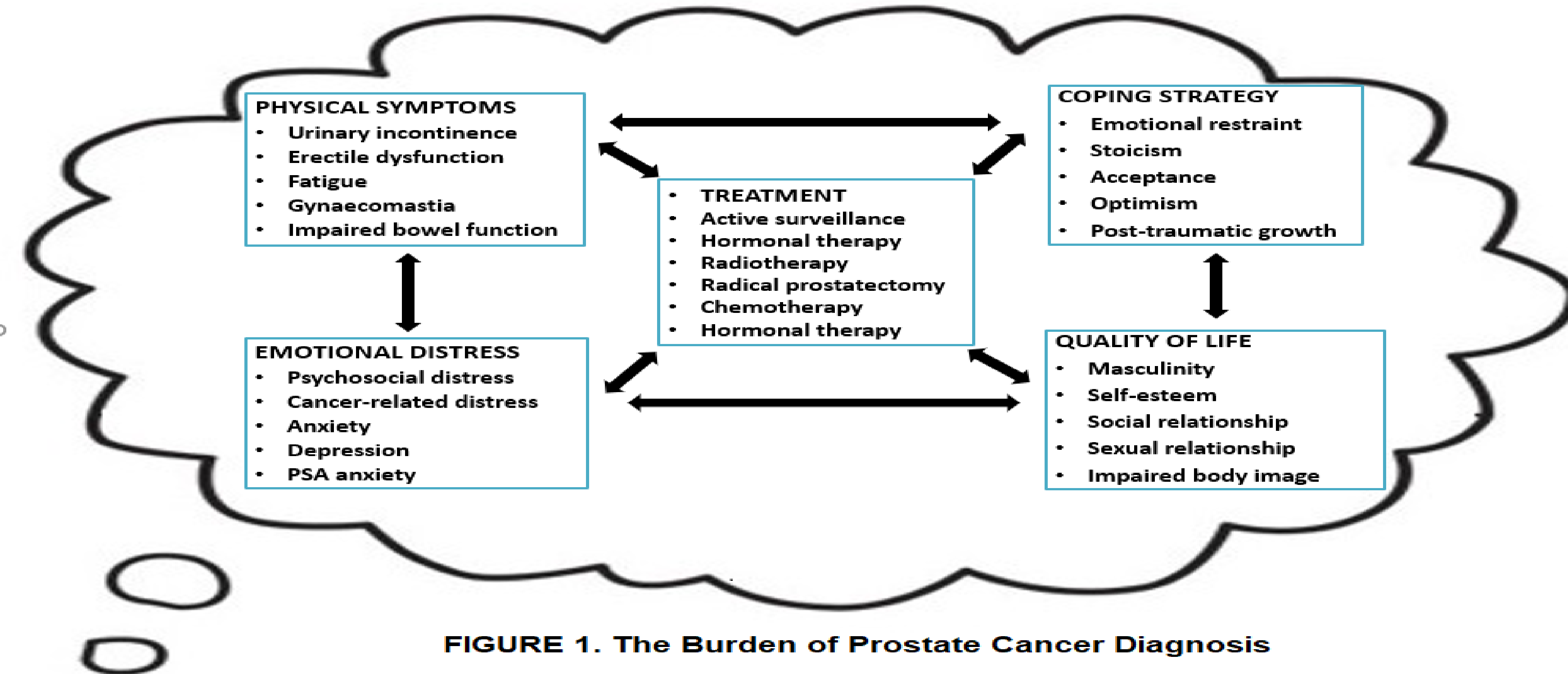
BURDEN OF PROSTATE CANCER DIAGNOSIS

FIGURE 1. The Burden of Prostate Cancer Diagnosis

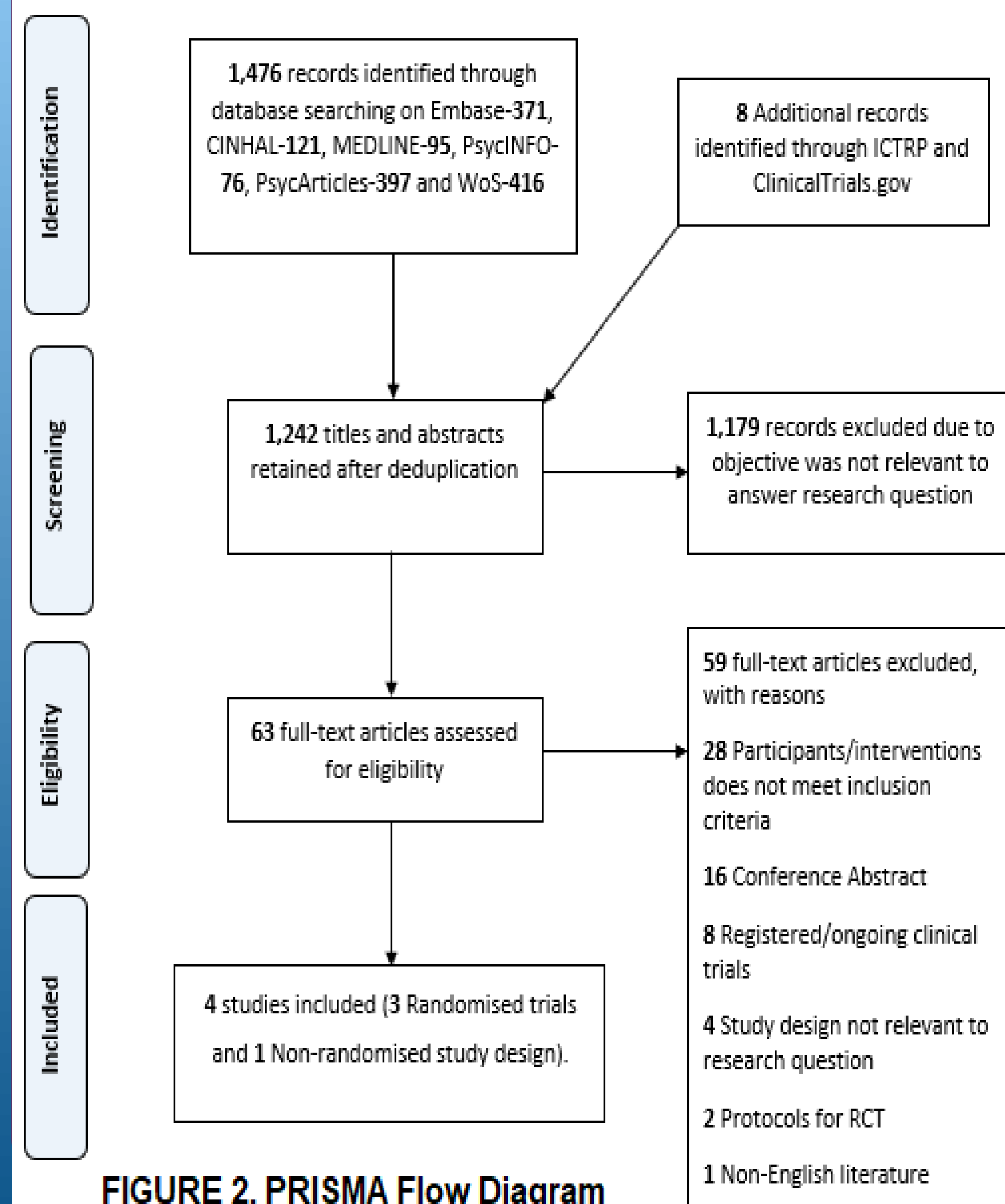## METHOD cont. – Study selection

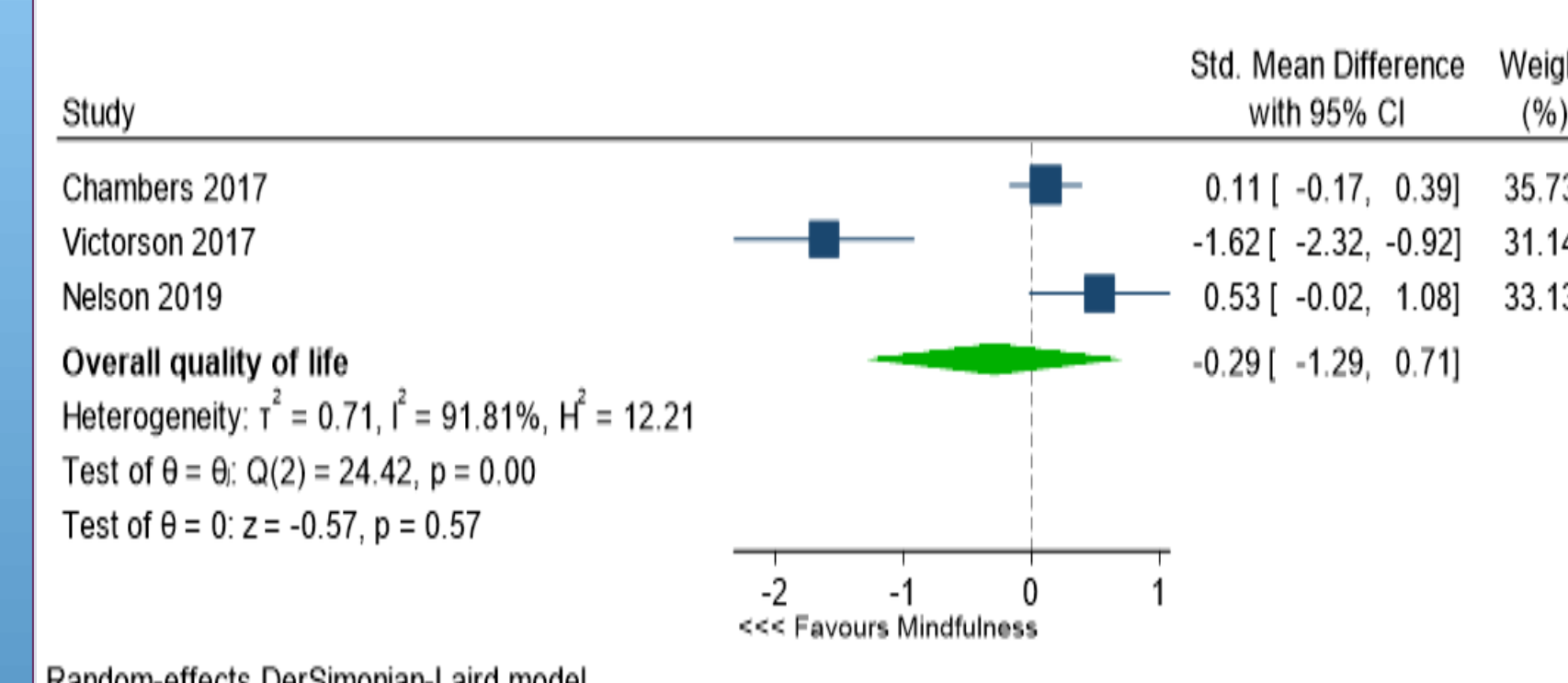FIGURE 2. PRISMA Flow Diagram

RESULTS

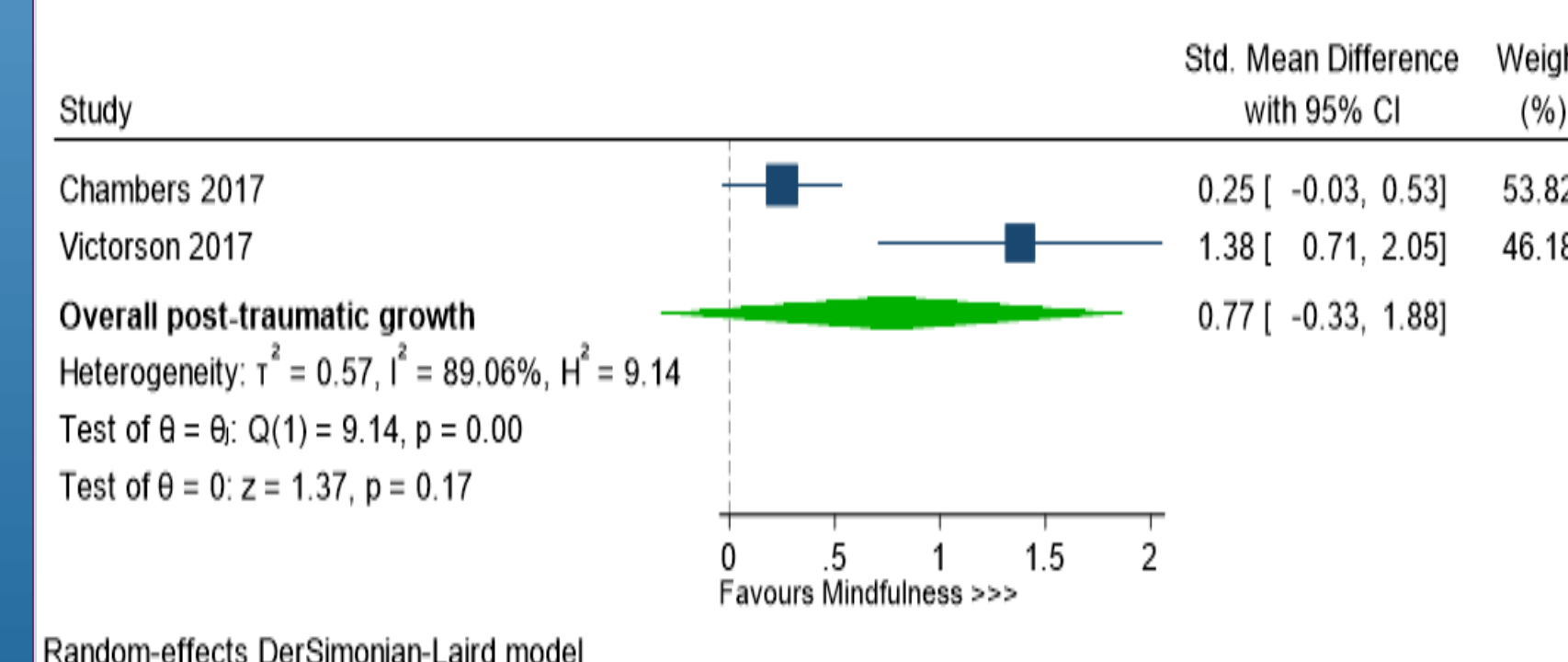FIGURE 3. Forest plot of pooled effect estimate for quality of life

FIGURE 4. Forest plot of pooled effect estimate for post-traumatic growth

Note: p, level of statistical significance (p<0.05); [95% CI], 95% confidence intervals around the effect size; I², measure of inconsistency due to heterogeneity (less than 50% = low, greater than 50% = substantial).

RESULTS cont.

PROs	Authors	Effect size	p-value	Place
Psychological distress	Chambers et al., 2017	-0.090	0.536	Australia
Anxiety	Chambers et al., 2012	-0.330	0.312	Australia
Depression	Chambers et al., 2012	-0.130	0.688	Australia
	Nelson et al., 2019	-0.060	0.828	USA
Cancer-related distress	Chambers et al., 2012	-0.460	0.162	Australia
	Chambers et al., 2017	-0.330	0.023	Australia
PSA anxiety	Chambers et al., 2012	0.470	0.153	Australia
	Chambers et al., 2017	0.100	0.492	Australia
Prostate cancer anxiety	Chambers et al., 2012	-0.290	0.371	Australia
	Victorson et al., 2017	-2.140	0.000	USA
Quality of life	Chambers et al., 2012	-0.340	0.298	Australia

NB: Effect size (Cohen's d) < 0.2 = small; 0.2 < d < 0.5 = moderate; d > 0.5 = large effect size.
Statistical significance, $p \leq 0.05$. Results in RED text indicates non-randomised studies.
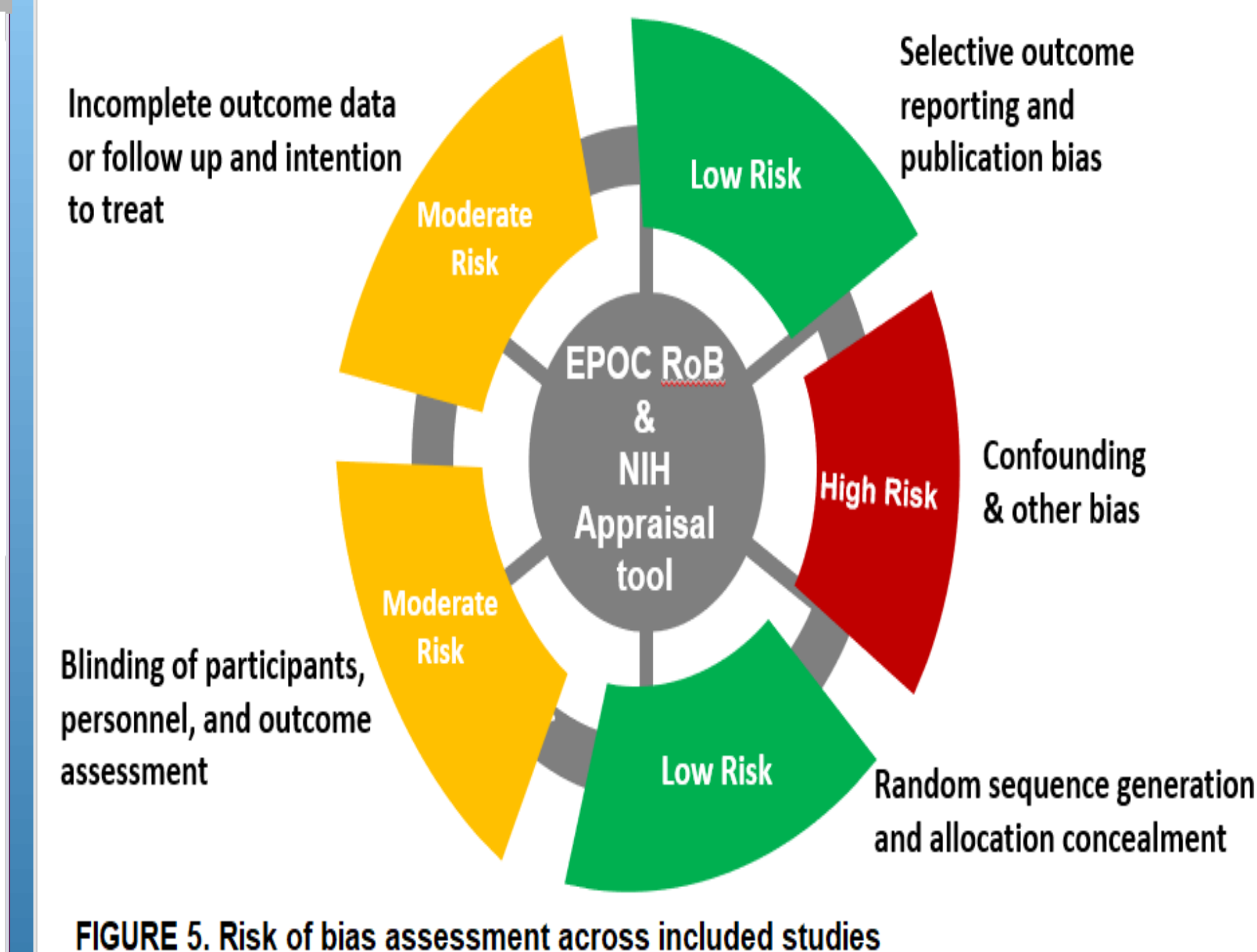
RESULTS cont. – Risk of bias

FIGURE 5. Risk of bias assessment across included studies

QUERIES RAISED IN CURRENT STUDY

❖ Inadequate methodological rigour of published literature.
❖ Positive effect on men with localized prostate cancer.
❖ The impact of comorbidity in advanced disease.
❖ Sufficiency of research evidence.
❖ Stability of the overall effect estimate with the addition of new studies.

STUDY LIMITATIONS

❖ Three of the included literature were preliminary studies.
❖ Although there was no language restriction in the search strategy, the limited resources for translation led to the inclusion of only studies published in English language.

CONCLUSION

❖ Mindfulness skills may not be sustainable over a long period where comorbid conditions exist.
❖ There is lack of credible information to understand the prognostic stage when mindfulness intervention could be most effective.
❖ Solid recommendations on MBIs for men with prostate cancer cannot be made based on current research evidence.

SUGGESTIONS FOR FUTURE RESEARCH

❖ Studies that consider the different prognostic stages (localized and advanced).
❖ Further investigation on whether mindfulness is influenced by comorbid health condition.
❖ Controlling confounding by assigning propensity scores to participants.
❖ More robust RCTs with larger sample sizes.
❖ There is need for prospective longitudinal studies and trials with long follow-up time.

REFERENCE

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