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REVIEW
Cardiac rehabilitation

Bridging minds and hearts: why psychological distress must be central to global coronary heart disease secondary prevention

Lisa Newson [1,2] **and Ian D Jones** [2,3]*

[1]School of Psychology, Faculty of Health, Innovation, Technology and Science, Liverpool John Moores University, Liverpool L3 3AF, UK; [2]Liverpool Centre for Cardiovascular Science, Liverpool John Moores University, University of Liverpool, and Liverpool Heart & Chest Hospital, Liverpool L7 8TX, UK; and [3]School of Nursing and Advanced Practice, Faculty of Health, Innovation, Technology and Science, Liverpool John Moores University, Liverpool L2 2ER, UK

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Coronary heart disease (CHD) remains the leading global cause of premature mortality, and secondary prevention represents the most powerful mechanism for improving long-term outcomes. Despite clear, evidence-based international guidelines, marked variability persists across health systems and regions. Explanations typically focus on resource limitations or uneven implementation of cardiometabolic risk management. Yet an often-overlooked barrier lies in the inadequate recognition and management of psychological distress, specifically symptoms of depression and anxiety, as core determinants of secondary prevention.

Psychological distress is not a peripheral concern. It is a well-established predictor of recurrent events, hospitalization, mortality, suboptimal treatment adherence, and reduced participation in cardiac rehabilitation.[1,2] A strong body of behavioural medicine evidence reinforces the impact of distress on prevention behaviour. Qualitative studies highlight how distress, identity disruption, and fragmented care pathways undermine individuals' ability to engage with lifestyle modification and self-management.[3] Systematic reviews of cardiac rehabilitation similarly document that psychological wellbeing strongly influences perceived capability, confidence, and long-term behavioural maintenance.[4] Structured psychological interventions, including acceptance and commitment therapy, improve emotional regulation and health-related behaviours.[5] Social dynamics also matter: family support for physical activity is often disrupted by fear, anxiety, or uncertainty after myocardial infarction.[6] Collectively, this evidence positions psychological distress as a behavioural barrier central to secondary prevention success.

Its influence operates partly through behavioural pathways: lowering motivation, impairing decision-making, reducing capacity for self-regulation, and disrupting routines central to medication concordance, diet, physical activity, self-management, and follow-up. Although international scientific statements increasingly highlight these mechanisms,[1,7] psychological distress remains insufficiently integrated into many secondary prevention pathways. Against this backdrop, the INTERASPIRE study[8] makes a timely and significant contribution.

What INTERASPIRE contributes

The INTERASPIRE study[8] provides one of the most comprehensive international examinations to date of how anxiety and depression relate to the achievement of secondary prevention standards in CHD. Building on the EUROASPIRE programme,[9] historically focused on Europe, INTERASPIRE expands the lens to 14 countries across six WHO regions, incorporating low-, middle-, and high-income settings across differing cultural landscapes. This breadth is scientifically important: it enables researchers to determine whether psychosocial influences on prevention are consistent across differing cultures, healthcare systems, and socioeconomic contexts.

The study's methodology strengthens its contribution. Patients were included 6–24 months after hospitalization for incident or recurrent CHD, a time when cardiac rehabilitation should be completed and secondary prevention should be well established. Standardized interviews and clinical examinations were conducted by trained personnel using harmonized protocols, reducing measurement variability and facilitating meaningful cross-country comparison. Unlike datasets relying solely on administrative records, INTERASPIRE combines objective clinical

* Corresponding author. Tel: 0151 231 4152, Email: i.d.jones@ljmu.ac.uk

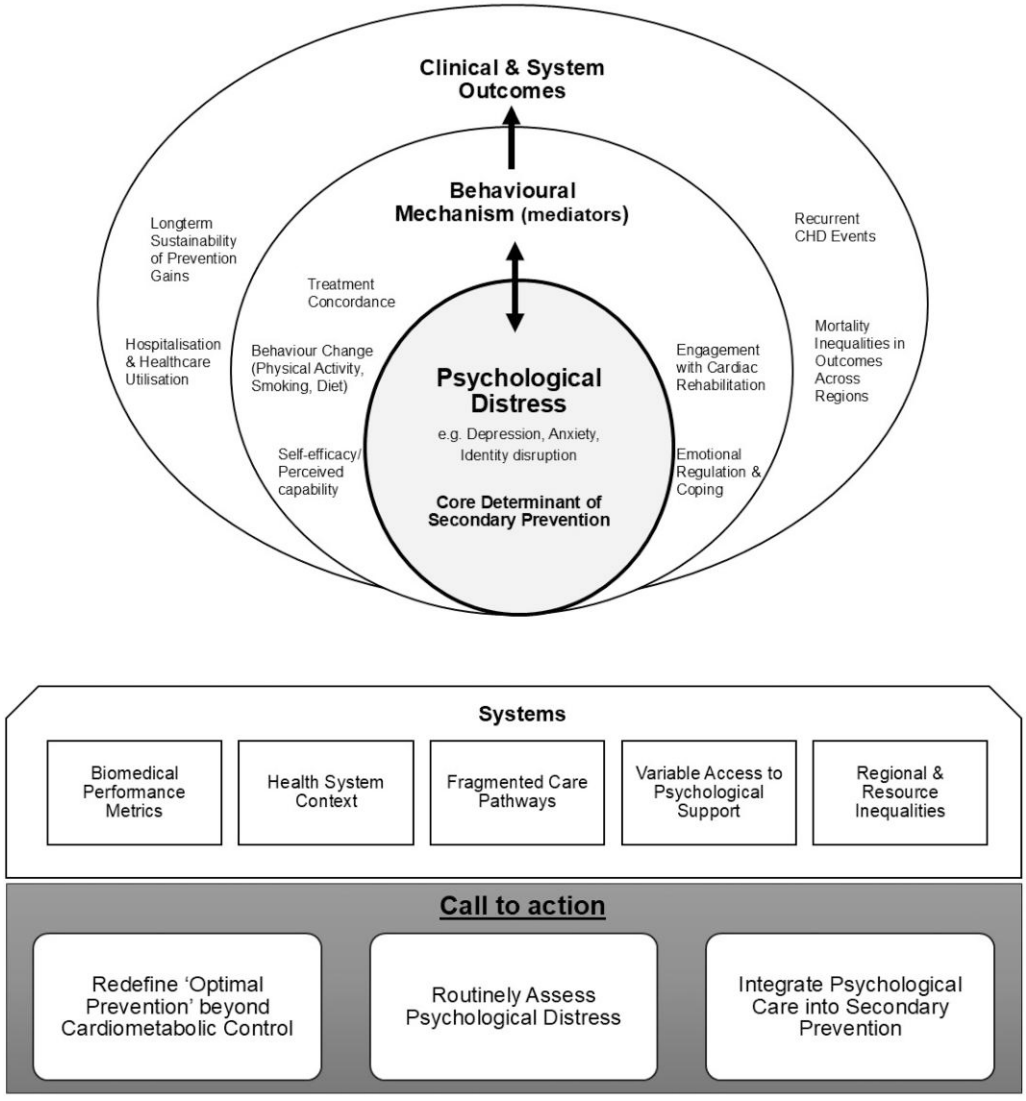

Figure 1 Psychological distress as a core determinant of secondary prevention in coronary heart disease. Footnote: Psychological distress is positioned as a core determinant of secondary prevention effectiveness in coronary heart disease. Central symptoms of depression, anxiety, and identity disruption interact bidirectionally with key behavioural mechanisms, including treatment adherence, engagement with cardiac rehabilitation, lifestyle behaviour change, self-efficacy, and emotional regulation. These behavioural processes mediate downstream clinical and system outcomes, such as recurrent coronary events, hospitalization and healthcare utilization, mortality, and persistent inequities in outcomes across regions. The model is situated within a broader health-system context.

measures (e.g. blood pressure, lipids, anthropometry) with validated symptom assessments for anxiety and depression.

A major strength lies in the INTERASPIRE Guideline Target Score (GTS), a 10-point composite incorporating lifestyle behaviours, risk-factor control, and uptake of cardioprotective pharmacotherapies. This holistic measure reflects the clustering of lifestyle and clinical factors, precisely the domains most susceptible to behavioural disruption from psychological distress.

Among 4546 participants (mean age 60 years; 21% women), symptoms of depression and/or anxiety were common, with substantially higher prevalence in women, a gender gradient consistent with existing CVD behavioural evidence.[2] A clear dose–response relationship was evident: compared with individuals without symptoms, those with depressive symptoms, possible comorbid symptoms, or probable combined anxiety and depression exhibited progressively higher odds of suboptimal GTS. Participants with co-occurring elevated symptoms of both depression and anxiety (possible symptomatic comorbidity) had more than double the likelihood of failing to meet guideline standards. This pattern is unlikely to arise from random variation. The gradient persisted after adjustment for sociodemographic, lifestyle, and clinical predictors, supporting the interpretation that psychological distress exerts an independent behavioural impact. Importantly, the consistency of this association across six WHO regions extend the evidence beyond EUROASPIRE (European) and beyond single-country studies, where findings may be shaped by local system features. INTERASPIRE demonstrates that psychological distress is a

universal behavioural barrier, even in markedly different cultural and healthcare contexts.

The authors conclude that secondary prevention programmes should integrate risk-stratified management for individuals with anxiety or depression. This mirrors international recommendations calling for the systematic identification and management of psychological symptoms in cardiovascular care.[1,7] However, screening alone is insufficient; management strategies must be embedded within ongoing prevention support.

Implications for global practice and policy

Psychological screening must be a core element of secondary prevention

Routine use of validated measures (HADS, PHQ-9, GAD-7) at key secondary prevention touchpoints aligns with AHA and ESC guidance[1,7] and with the BACPR Standards and Core Components.[10] Screening enables early identification of distress, which is closely linked to poorer engagement and adherence.[3,4]

Risk-stratified management must extend beyond assessment

Building on INTERASPIRE's recommendation, risk stratification should prompt targeted behavioural and psychological support. Behaviour change frameworks including the COM-B model[11] and the Behaviour Change Technique taxonomy[12] provide evidence-based methods for addressing capability, opportunity, and motivation. Integrating behavioural strategies within rehabilitation improves quality of life and supports sustainable behaviour change.[2,4] Additional training will be required for cardiac rehabilitation staff to achieve this goal.

Equity considerations are essential

Women in INTERASPIRE exhibited higher psychological symptom burden. Socioeconomic adversity, caregiving roles and gender-based expectations intersect with distress to constrain behavioural capacity. Ethnicity and culture which are related to increased disease burden should be more closely examined to understand the role of psychological distress in different groups. Models of care must therefore be sensitive to social context and structural inequalities.

Scalable behavioural support models are needed globally

INTERASPIRE highlights the urgency of scalable, low-resource solutions. Digital psychological interventions, peer-support models, and co-produced prevention programmes show promise across diverse settings.[4,5]

A refined view on behavioural medicine's role

Behavioural medicine offers frameworks suited to understanding the mechanisms identified in INTERASPIRE, drawing on psychological, social, and behavioural sciences to address barriers to prevention adherence. Rather than privileging a single discipline, integrated cardiovascular teams, including health psychologists, occupational therapists, dieticians, pharmacists, exercise physiologists, nurses, and physicians, can all contribute to supporting behaviour change and emotional wellbeing.

This interdisciplinary emphasis aligns with the principles of the International Society of Behavioral Medicine, which advocates for collaborative approaches to chronic disease care. INTERASPIRE strengthens the case for embedding these approaches within cardiovascular prevention worldwide.

A global call to action

INTERASPIRE provides compelling evidence that psychological distress significantly limits attainment of secondary prevention standards across diverse regions. Depression and anxiety shape the behaviours on which prevention depends, and failing to address them systematically compromises outcomes. While the study's call for risk-stratified management provides a clear foundation, the next step is ensuring that screening leads to accessible, evidence-based behavioural and psychological support.

Achieving international guideline targets requires treating both disease and distress. Integrating psychological assessment, behavioural science, and interdisciplinary collaboration is not an adjunct; it is central to delivering effective, equitable, and sustainable secondary prevention globally.

Figure 1 illustrates our conceptual summary of this editorial position.

Author contribution

Lisa Newson (DProf (Writing—original draft [lead]; Writing—review & editing [equal])) and Ian D Jones (PhD (Conceptualization [lead]; Writing—original draft [supporting]; Writing—review & editing [equal]))

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