

Exploring the role of motivational interviewing in cardiovascular diseases

Giulia Locatelli ^{1*} and Paolo Iovino²

¹Department of Medicine and Surgery, University of Milan-Bicocca, via Cadore 48, 20900 Monza, Italy; and ²Department of Health Sciences, University of Florence, Florence, Italy

Received 6 December 2023; accepted 6 December 2023; published 12 January 2024

This invited commentary refers to ‘The feasibility of motivational interviewing on adherence to care practices, emotional intelligence, and dispositional optimism among patients with permanent pacemakers’, by MA Khedr et al. <https://doi.org/10.1093/eurjcn/zvad113>

The study by Khedr et al.¹ aimed to assess the impact of a six-session motivational interviewing intervention on adherence to pacemaker-specific care practices, emotional intelligence, and dispositional optimism in patients with a permanent pacemaker. The authors reported that the intervention improved all three outcomes.

The European guidelines on cardiovascular disease prevention have highlighted the potential of behavioural change interventions, such as motivational interviewing, to promote lifestyle changes to address the needs of individuals with cardiovascular diseases.² Khedr et al. found that such three variables improved after 1 month from the intervention, but this improvement somehow lessened over time. The authors argued that this might be due to the short duration of the programme (i.e. six sessions). However, studies that implemented an even shorter motivational interviewing intervention (i.e. three sessions) found that it was effective in patients with heart failure to improve symptom burden after 9 months³ and self-care behaviours even after 1 year.⁴ This may be due to treatment fidelity reasons, which, in the case of motivational interviewing, can be assessed with the Motivational Interviewing Treatment Integrity Scale.⁵ Indeed, although the authors stated that the researchers attended a 6-week academic training course on the motivational interviewing technique and were supervised by an experienced psychologist, there was no mention of the systematic use of a coding scheme assessing the technical and relational quality of the delivered intervention. If the delivered intervention does not have high quality, it may not produce the desired effect. Furthermore, this study adopted a relatively short follow-up time (i.e. 2 months), which may have hindered the chance to observe the trajectory of changes over a longer period. Adopting follow-up periods that are long enough to capture outcomes changes are important.⁶

Another potential explanation of the discontinued effectiveness of the motivational interviewing in this sample may be related to different levels of readiness to change in the participants, as suggested by the transtheoretical model of behavioural change.⁷ The model postulates that different stages of change are associated with different degrees of readiness to change and that, as the individual moves through the stages, the therapeutic relationship also deepens.⁸ When the cons of change are perceived as bigger than the pros, the person will presumably be unmotivated to change. Instead, when the pros are perceived as

bigger than the cons, the person will be more motivated to engage in the behaviour and change.⁹

The results of the Khedr study should also be considered in light of the demographic characteristics of the sample. Participants in this study were relatively young (i.e. age range: 30–50): age impacts routine formation and, thus, adherence. Thus, the results of this study regarding adherence to pacemaker practices may be considered as related to the relatively young age of the participants. An older sample may exhibit different outcomes; thus, future studies may assess similar outcomes on a sample that is older or more age heterogeneous. Studies have shown that despite age-related decline in cognitive functions, older adults may better adhere to daily practices such as pill intake routine than younger adults.¹⁰ Furthermore, there is evidence suggesting that motivational interviewing is more effective on older adults than on younger counterparts.¹¹ Thus, the limited effect of motivational interviewing in the study of Khedr et al. may be related, to some extent, to the young age of the sample.

Some authors also found motivational interviewing to be more effective in males,¹² and that men have higher self-care confidence than women despite the fact that men have more than quadruple the risk of poor self-care than women.¹³ In light of that, it would have been interesting to understand how the effect of motivational interviewing differed among men and women in this study.

The authors also found that motivational interviewing was effective to improve emotional intelligence and dispositional optimism. In future studies, it would be relevant to further explore the potential mediating or moderating role exerted by these two constructs between the motivational interviewing intervention and other patient outcomes, to better understand how they interact and influence the intervention. Indeed, some studies found that emotional intelligence moderated the relationship between personality and creativity¹⁴ as well as between self-esteem and symptoms.¹⁵ It would also be relevant to explore if the intervention was more effective on those with higher emotional intelligence and dispositional optimism before the intervention. Indeed, the intervention may have higher a probability to be effective on this subsample.

Conflict of interest: None declared.

Data availability

No new data were generated or analysed in support of this research.

References

1. Khedr MA, Ali EA, Sanhoury MI, Hussein RM. The feasibility of motivational interviewing on adherence to care practices, emotional intelligence, and dispositional optimism

*Corresponding author. Email: giulia.locatelli@students.uniroma2.eu

© The Author(s) 2024. Published by Oxford University Press on behalf of the European Society of Cardiology. All rights reserved. For permissions, please e-mail: journals.permissions@oup.com

- among patients with permanent pacemakers. *Eur J Cardiovasc Nurs* 2023. doi:10.1093/eurjcn/zvad113
2. Mifsud JL, Galea J. Motivational interviewing and outcomes in primary preventive cardiology. *Br J Cardiol* 2021;**28**:47.
 3. Caggianelli G, Iovino P, Rebora P, Occhino G, Zeffiro V, Locatelli G, et al. A motivational interviewing intervention improves the burden of physical symptoms in patients with heart failure: a secondary outcome analysis of a randomized clinical trial. *Eur J Cardiovasc Nurs* 2021;**20**:106.
 4. Vellone E, Rebora P, Ausili D, Zeffiro V, Pucciarelli G, Caggianelli G, et al. Motivational interviewing to improve self-care in heart failure patients (MOTIVATE-HF): a randomized controlled trial. *ESC Heart Fail* 2020;**7**:1309–1318.
 5. Moyers TB, Rowell LN, Manuel JK, Ernst D, Houck JM. The Motivational Interviewing Treatment Integrity Code (MITI 4): Rationale, preliminary reliability and validity. *J Subst Abuse Treat* 2016;**65**:36–42. doi:10.1016/j.jsat.2016.01.001
 6. Hannan EL. Randomized clinical trials and observational studies: guidelines for assessing respective strengths and limitations. *JACC Cardiovasc Interv* 2008;**1**:211–217.
 7. Prochaska JO, Velicer WF. The transtheoretical model of health behavior change. *Am J Health Promot* 1997;**12**:38–48.
 8. Prochaska JO, Norcross J. Stages of change. *Psychother Theory Res Pract Train* 2001;**38**:443–448.
 9. Arkowitz H, Westra HA, Miller WR, Rollnick S. *Motivational interviewing in the treatment of psychological problems*. New York: THE GUILFORD PRESS; 2008.
 10. Van de Vijver IBL, De Wit S. Age differences in routine formation: the role of automatization, motivation, and executive functions. *Front Psychol* 2023;**14**:1140366. <https://www.frontiersin.org/articles/10.3389/fpsyg.2023.1140366/full>
 11. Kuerbis A, Behrendt S, Morgenstern J. Age as a moderator of motivational interviewing and nondirective client-centered psychotherapy for alcohol use disorder: an exploratory study. *Alcohol Clin Exp Res (Hoboken)* 2023;**47**:527–539.
 12. Berger G, Brunmayr F, Muehlechner M, Waldhoer T, Wondratsch C, Koenig M, et al. Gender differences in the effect of motivational interviewing and cognitive behavioural therapy in Austrian adolescents with type 1 diabetes. *Diabetologia* 2013;**56**:190–197.
 13. Dellafiore F, Arrigoni C, Pittella F, Conte G, Magon A, Caruso R. Paradox of self-care gender differences among Italian patients with chronic heart failure: findings from a real-world cross-sectional study. *BMJ Open* 2018;**8**:e021966.
 14. Jafrri MH. Moderating role of emotional intelligence on personality—employee creativity relationship. *Manag Labour Stud* 2020;**45**:15–30.
 15. Peláez-Fernández MA, Romero-Mesa J, Franco-Paredes K, Extremera N. The moderating role of emotional intelligence in the link between self-esteem and symptoms of eating disorders. *Int J Eat Disord* 2023;**56**:778–782.