



A Healthcare Study for Long COVID Persisting Symptoms (HELPS): Empowering Patients through Health Literacy

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Introduction

- Approximately 1.4 million Canadians have had or currently have Long COVID (i.e., Post-COVID-19 condition).¹
- Associated health care costs amount to approximately \$9000 per person annually.²
- The complex and diverse symptoms may necessitate comprehensive care, but resource constraints leave many without access, negatively impacting their recovery and quality of life.^{3,4}
- Early Education and Skills-based** approaches have conferred value in conditions with similar clinical presentation to Long COVID.⁵
- Therefore, we developed a novel *Education & Strategies* program and compared it to a *Mindfulness Skills* group in a randomized control trial (RCT)

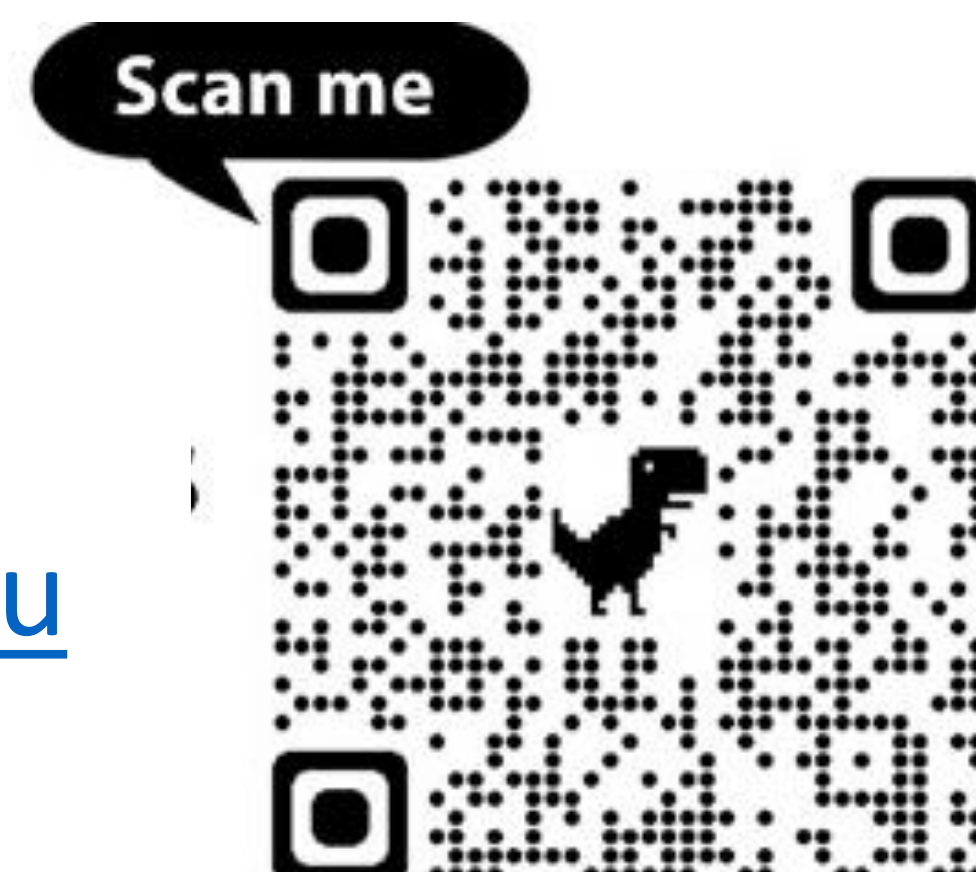
Aim

Determine feasibility & efficacy (confidence to self-manage symptoms) of a group-based, remotely delivered Long COVID *Education & Strategies* intervention as compared to a *Mindfulness Skills* control group.

Interested in learning more or enrolling?

Check-out our webpage and sign-up here:

<https://external.redcap.uhn.ca/surveys/?s=DFCN44YJ4ADHDM43>



Methods

Design & Procedures

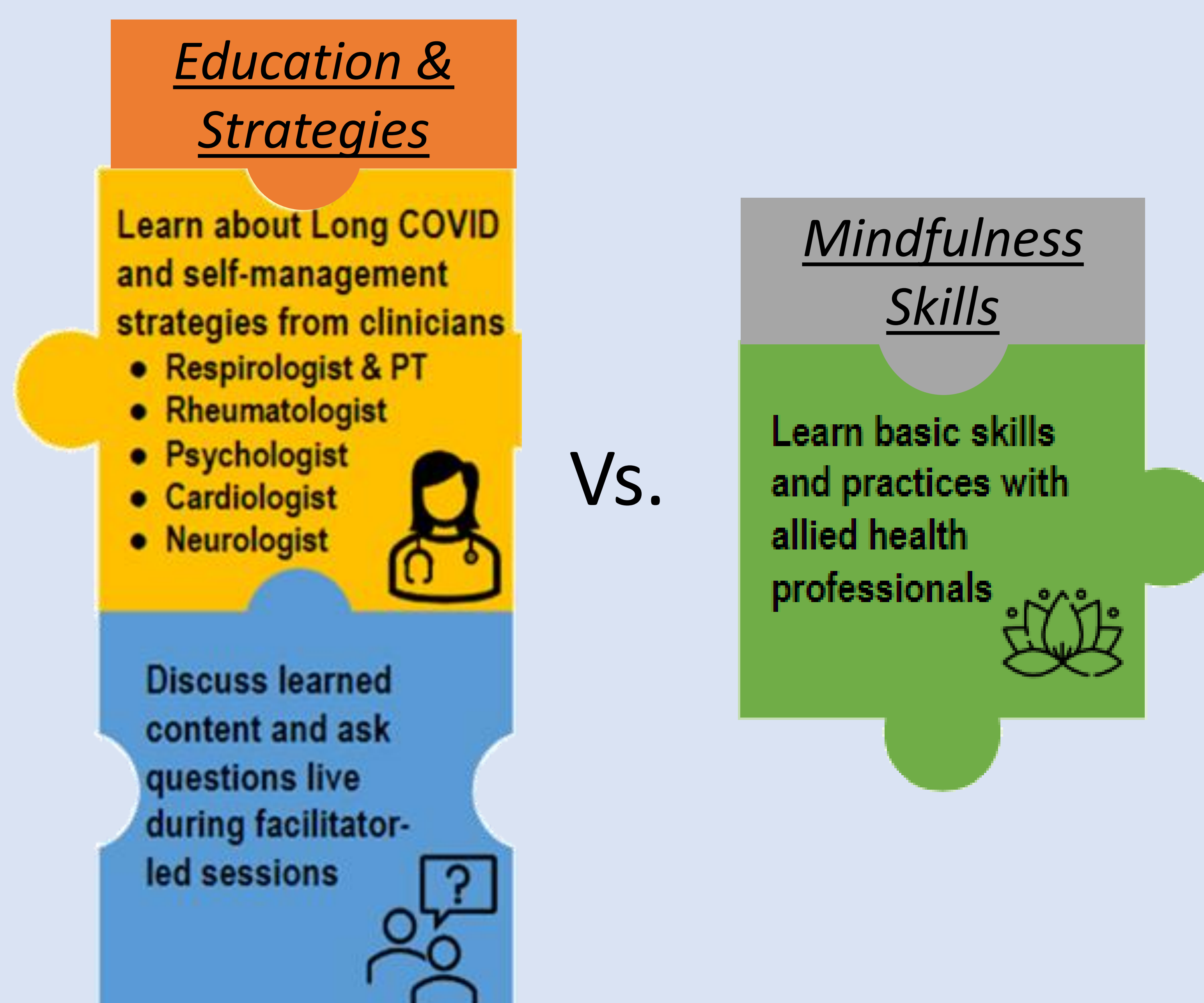
N=90 people randomized to an 8-week *Education & Strategies* group or an 8-week *Mindfulness Skills* group (1.5 hours/week for each group; ~10 participants/group); outcomes collected at baseline, post-intervention and 1-month follow-up

Outcome measures

- Recruitment, retention & adherence rates
- Primary outcome: perceived ability to self manage symptoms (PMCSMS)⁷
- Secondary outcome: quality of life (Q-LES-Q-SF)⁸, mood (DASS-21)⁹
- Post-intervention qualitative interview (N=24 in *Education and Strategies* group only)

Protocols

Remotely delivered at home by facilitators.



Results

Feasibility: Recruitment, Retention, Adherence

N=86 have completed the study to-date

- Consented 58.3% of eligible participants
- Retention: Education = 85.7%; Mindfulness = 86.3%
- Adherence: Education & Strategies = 96.4%; Mindfulness = 88.6% of sessions attended

Preliminary Efficacy

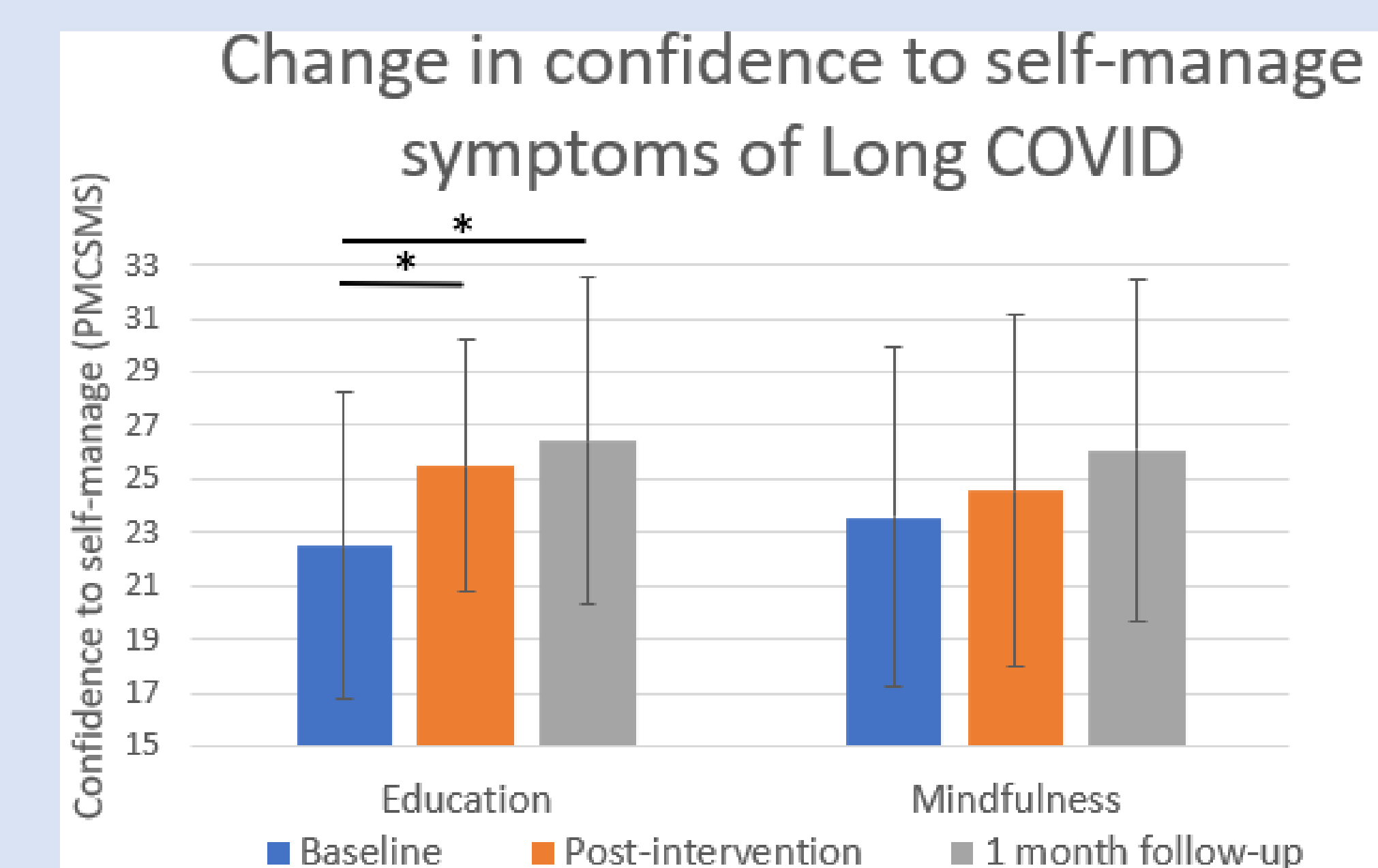


Fig 1. * $p < 0.05$, Cohen's d effect size > 0.56

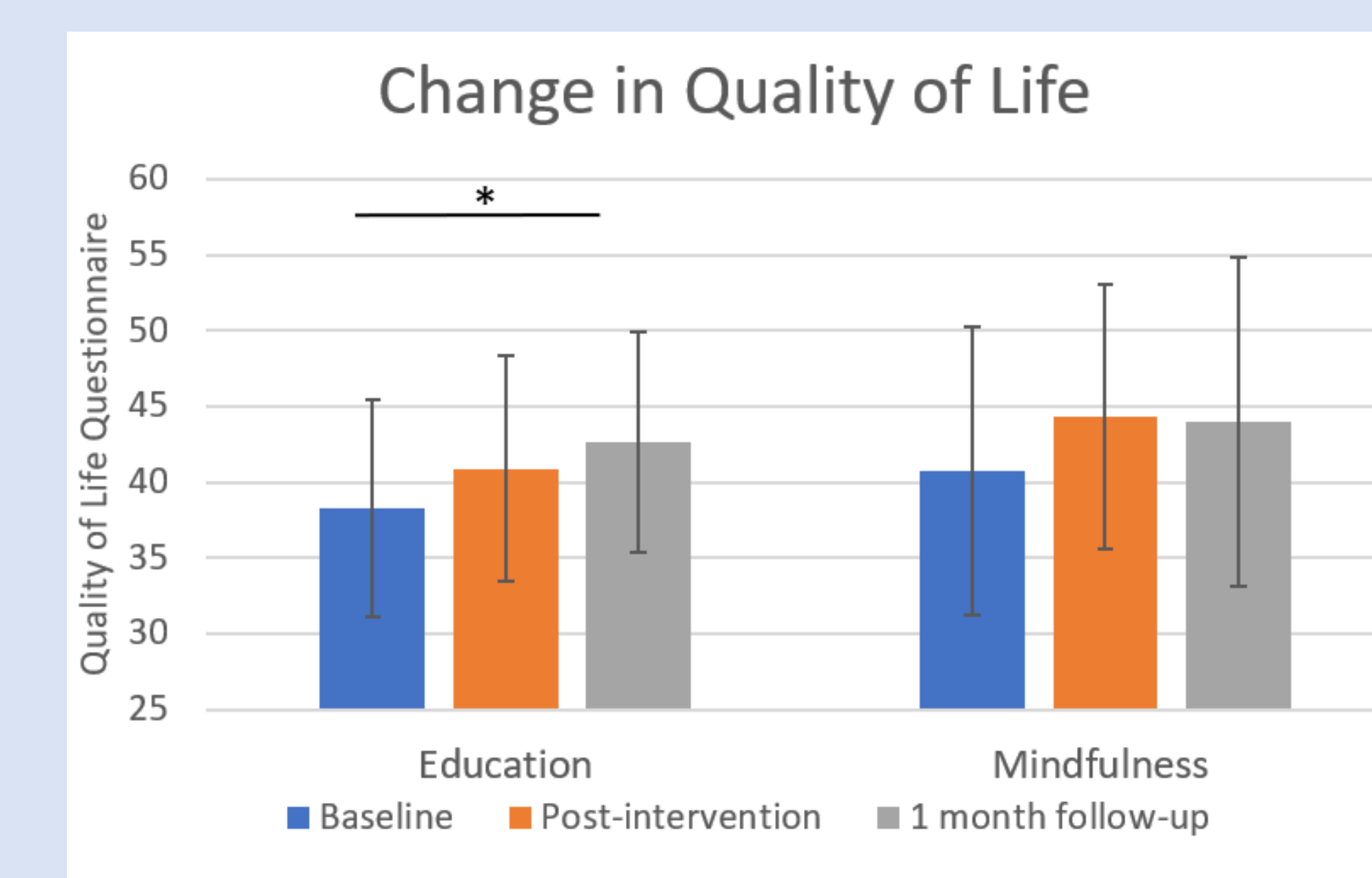


Fig 2. * $p < 0.05$ Cohen's d effect size > 0.6

Key findings

- Significant PMCSMS differences pre to post and pre to follow-up for Education & Strategies but not Mindfulness; ANCOVA did not elicit significant findings
- Significant QoL pre to follow-up for Education & Strategies but not Mindfulness
- Mindfulness (but not Education & Strategies) significantly reduced symptoms of stress from pre to follow-up
- In qualitative interviews, participants reported the intervention was beneficial, accessible, and validating of their condition. Barriers included lack of novelty with content, symptom flare-up, competing life priorities & hindered access to healthcare.

Conclusions

Our novel Education & Strategies protocol can empower patients to manage their symptoms at home and better navigate the healthcare system

This **feasible, cost-effective and scalable** intervention will be available to any licensed therapist and can help regardless of patient geographic location or mobility restrictions

References: 1. Ballering et al. (2022). The Lancet, 400, 452-461. 2. Cutler. (2022). JAMA 3(5):e221809. 3. Macpherson et al. (2022). BMJ open, 12(1), e050979. 4. Ali-Aly et al. (2023). Nat Rev Nephrol, 19(1):1-2. 5. Bernstein, et al. (2018) Support Care Cancer, 26(8):2851-59. 6. Wild et al., 2018. 7. Endicott et al., 1993. 8. Henry & Crawford, 2005.