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The roles of personality and resilience in associations between combat experiences and posttraumatic stress disorder among Canadian Armed Forces Veterans

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ABSTRACT

Canadian Armed Forces (CAF) Veterans encounter unique challenges associated with their service. Exposure to service-related traumatic events places them at risk for developing adverse mental health outcomes, including posttraumatic stress disorder (PTSD). Our research aimed to assess whether the HEXACO personality model and resilience impacted associations between combat experiences and PTSD symptomatology in CAF Veterans in the past month. We recruited a sample of 245 CAF Veterans (81 % men; $M_{age} = 48.47$, $SD_{age} = 10.34$) to complete a battery of questionnaires. PTSD symptoms were significantly associated with more combat experience, lower resilience, lower extraversion, higher emotionality, and lower agreeableness. However, personality traits did not moderate the relationship between combat experiences and PTSD symptoms. Overall, this research can be used to enhance researchers' and clinicians' understanding of personality traits as risk and protective factors for PTSD symptoms.

1. Introduction

Canadian Armed Forces (CAF) Veterans are exposed to a number of unique stressors associated with their deployments. For example, Veterans often encounter such challenging situations as exposure to atrocities, engaging in active combat, and proximity to injury or death (e.g., Sudom et al., 2016). Exposure to these and other deployment-related experiences places them at high risk for developing symptoms of mental health disorders, including symptoms of posttraumatic stress disorder (PTSD), depression, and anxiety (Hall et al., 2022; Sareen et al., 2021; Thompson et al., 2016). For example, population-level data from the 2016 Life After Service Survey showed that 16.6 % of male and 14.9 % female CAF Veterans reported a PTSD diagnosis, whereas the prevalence of PTSD in the general Canadian population was reported as only 1.1 % for males and 2.8 % for females (Hall et al., 2022).

Given the high prevalence of PTSD among CAF Veterans, there is an urgent need for military organizations, clinicians, and researchers to prioritize the identification of risk and protective factors in Veterans and CAF members to enhance their well-being, including individual difference variables.

1.1. Risk and protective factors for PTSD among CAF Veterans

Despite the high prevalence of mental health conditions among CAF members and Veterans, it is evident that there is variability in the psychological functioning of these individuals and that not all exposed to occupational stressors go on to develop symptoms of a mental health disorder. This suggests that individual differences play a role in the development of PTSD among military Veterans. Some sociodemographic risk factors associated with PTSD in CAF Veteran and military personnel

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have been identified, including, for example, younger age (Rebeira et al., 2017), military branch (i.e., land; Mota et al., 2021; Rebeira et al., 2017), military rank (i.e., junior noncommissioned member relative to officer; Mota et al., 2021; Rebeira et al., 2017), and gender, with women being more likely to report PTSD symptomatology (Oakley et al., 2020). Deployment experiences have also been reported as robust risk factors for the development of PTSD among CAF Veterans and personnel (e.g., King et al., 2020; Nazarov et al., 2018; Watkins et al., 2016). For example, Nazarov et al. (2018) and Watkins et al. (2016) reported that being unable to help injured or ill women or children, feeling responsible for the death of military allies or Canadians, and difficulty distinguishing combatants from non-combatants were significantly associated with meeting PTSD diagnostic criteria. On the other hand, higher levels of problem-focused coping mechanisms, social support, and social network size were negatively associated with various PTSD diagnostic courses relative to no lifetime PTSD (Mota et al., 2021).

Although extant studies have helped to enhance researchers' and clinicians' understanding of risk and protective factors associated with PTSD in the military, past empirical research has not yet considered the impact of individual differences in personality on associations between combat experiences and PTSD symptom severity among deployed CAF Veterans.

1.2. Personality traits as risk and protective factors in the associations between combat experiences and PTSD

A particularly salient model of personality known to capture a breadth of personal attributes and predict relevant behavioral outcomes is the HEXACO model (Ashton & Lee, 2009). The HEXACO model comprises honesty-humility, emotionality, extraversion, agreeableness, conscientiousness, and openness to experience (see Lee & Ashton, 2004 for trait descriptions). In addition to the HEXACO model, resilience, defined broadly as one's ability to function adaptively across various life situations and conditions (e.g., Connor & Davidson, 2003; Liu et al., 2017) plays an important role in the context of overcoming adverse events (Prince-Embury et al., 2016).

Personality traits, including the HEXACO model and resilience, predict important outcomes spanning several contexts, including vocational, educational, interpersonal, and clinical domains (e.g., Lee et al., 2008; Weinberg et al., 2021). For example, individuals with high levels of "adaptive" traits, including extraversion, resilience, agreeableness, honesty-humility, and conscientiousness, as well as low levels of "maladaptive" traits, such as some elements of emotionality, tend to experience greater well-being and life satisfaction (e.g., Aghababaei, 2014; Aghababaei & Arji, 2014; Smith et al., 2016). More recent meta-analytic findings have indicated that HEXACO extraversion strongly predicted various domains of well-being (e.g., satisfaction with life; positive affect; personal growth), whereas conscientiousness was a "fairly strong" predictor, and emotionality, honesty-humility, agreeableness, and openness to experience were modest predictors (Anglim et al., 2020). In the context of mental health conditions, higher levels of HEXACO traits including emotionality, as well as lower levels of extraversion and honesty-humility were also significantly associated with PTSD symptoms following trauma exposure in a civilian sample (Weinberg et al., 2021).

Importantly, studies have also shown positive associations between high levels of neuroticism and low levels of emotional stability and PTSD symptom severity among military Veterans in the United States (Clark & Owens, 2012; James et al., 2013; Mattson et al., 2018). However, no studies to date have examined these associations among CAF Veterans, nor have they employed the contemporary HEXACO personality model. Given the fundamental differences between the United States and Canadian militaries, including, for example, distinct service cultures in Canada (i.e., Canadian Navy, Army, Air Force vs. American Navy, Army, Air Force, Marine Corps, Space Force, and Coast Guard), as well as Canada's involvement in peacekeeping roles, it is plausible that these

associations may differ across countries. Additionally, no studies to date have evaluated the impact of the HEXACO personality traits and resilience on relations between combat experiences and PTSD symptom severity among military Veterans. However, Caska and Renshaw (2013) examined the Big Five personality traits as moderators in the relationship between deployment risk and aftermath items (e.g., *I went on combat patrols and missions*) and PTSD symptoms in United States Veterans. High levels of extraversion, openness to experience, conscientiousness, and agreeableness, and low levels of neuroticism attenuated the associations between the aftermath of battle experiences and PTSD (Caska & Renshaw, 2013). Based on these findings, it is plausible that individual differences in personality may serve as "buffers" or protective factors against the development of PTSD symptoms following exposure to combat experiences in our CAF sample. On the other hand, higher levels of traits such as emotionality may place CAF Veterans at greater risk of developing PTSD symptoms following exposure to combat experiences. Despite the plausibility that the HEXACO personality traits and resilience contribute to mental health outcomes among CAF Veterans, one cannot draw conclusions regarding these associations prior to testing them empirically.

1.3. Objective

The primary objective of this research is to determine whether associations between combat experiences and PTSD symptom severity are moderated by personality traits, such that they are weaker for those higher in "adaptive" traits (e.g., resilience) and stronger for those higher in potentially less adaptive traits (e.g., emotionality).

Based on past research reflecting associations between personality traits and well-being outcomes (e.g., Aghababaei, 2014; Aghababaei & Arji, 2014; Anglim et al., 2020; Smith et al., 2016; Weinberg et al., 2021), we hypothesize that CAF Veterans with higher levels of openness to experience, agreeableness, extraversion, honesty-humility, conscientiousness, and resilience, as well as lower levels of emotionality, will experience lower PTSD symptom severity. Based on findings in United States Veterans (Clark & Owens, 2012; James et al., 2013; Mattson et al., 2018), we anticipate the strongest effect sizes will emerge for emotionality, followed by extraversion in terms of their associations with PTSD symptom severity. Based on findings by Caska and Renshaw (2013), we also hypothesize that the associations between combat experiences and PTSD symptom severity will be stronger for those higher in emotionality, and weaker for those higher in openness to experience, agreeableness, extraversion, honesty-humility, conscientiousness, and resilience.

1.4. Method

1.4.1. Participants and procedure

A total of 257 CAF Veterans who had previously deployed were recruited to participate via ParticipAid.co, social media, and email distributions within professional networks. Consenting participants completed the online study via the survey-hosting platform, Research Electronic Data Capture (REDCap). Participants received a gift card worth 6.50CAD for their time. This research was approved by the ethical review board at Western University.

Following removal of duplicate entries, currently serving CAF members, those who failed attention checks, and those with 90–100 % missing data on each measure of interest, 245 (199 men, 43 women, 3 missing gender) CAF Veterans' data were analyzed. Participants ranged in age from 23 to 65 ($M_{\text{age}} = 48.48$, $SD_{\text{age}} = 10.34$), and their years of service in the CAF ranged from 3 to 42 ($M_{\text{years}} = 21.05$, $SD_{\text{years}} = 9.53$). Additional military and sociodemographic characteristics are available in Supplemental Materials Table S1.

1.4.2. Measures

1.4.2.1. HEXACO personality traits. Personality traits were evaluated using mean scores on the HEXACO-60 (Ashton & Lee, 2009). The HEXACO-60 comprises 60 items and is measured on a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Past research has indicated that the HEXACO-60 possesses high reliability (e.g., Cronbach's $\alpha = .73-.80$) and strong validity (Ashton & Lee, 2009).

1.4.2.2. Resilience. Trait resilience was assessed using summed scores on the 25-item Connor-Davidson Resilience Scale (CD-RISC; Connor & Davidson, 2003). The CD-RISC comprises items measured on a 5-point scale ranging from 0 (*rarely true*) to 4 (*true nearly all of the time*). Past findings have indicated that the CD-RISC has strong reliability (e.g., Cronbach's $\alpha = .89$) and validity (Connor & Davidson, 2003).

1.4.2.3. Posttraumatic stress disorder. We assessed past-month PTSD symptom severity using summed responses on the 20-item self-report PTSD Checklist for DSM-5 (PCL-5; Weathers et al., 2013). Participants responded to items on a 5-point scale ranging from 0 (*not at all*) to 4 (*extremely*). Past research has shown that the PCL-5 has strong reliability (e.g., Cronbach's $\alpha = .94$) and validity (Blevins et al., 2015).

1.4.2.4. Combat experiences. Combat experiences were evaluated using the 30-item Combat Experiences Scale (CES; Sudom et al., 2016) derived from the original long-form CES (Killgore et al., 2008). Participants indicated whether they experienced the events during their last deployment on a dichotomous *yes/no* scale. In accordance with past research (Born & Zamorski, 2019; King et al., 2020; Plouffe et al., 2021), item responses were summed. The validity of the CES has been established in past studies (e.g., Sudom et al., 2016).

1.4.2.5. Data analytic strategy. Descriptive statistics and bivariate correlations were first calculated for all study variables using SPSS Version 26.0 (IBM Corp, 2021). Next, a series of structural equation models were conducted to assess whether personality traits moderated the associations between combat experiences and PTSD symptoms using MPlus Version 8.0 (Muthén & Muthén, 1998-2017). We employed the maximum likelihood robust estimator to correct standard errors for data non-normality, as well as full information maximum likelihood to estimate missing data (missing data pattern $n_{\max} = 2$). We specified combat experiences as an indicator variable because exposure to personal experiences reflect a formative (cf. reflective) model of measurement, and thus, it is not appropriate to specify that these events occurred due to latent combat experiences (Coltman et al., 2008). We regressed latent PTSD on the combat experiences indicator variable, the latent personality trait variables (separately for each model), and the combat experiences \times personality trait interaction. The indicator predictor variable was grand-mean centered. Following any significant interactions, simple slopes would be computed at one standard deviation below and above the mean of the moderator (personality) variable (Aiken et al., 1991). We conducted separate moderation models to reduce model complexity (i.e., the number of interaction terms per model) and potential multicollinearity between personality variables, as well as to delineate the amount of variance in PTSD symptom severity accounted for by each personality variable. To reduce Type I error, we used a Bonferroni correction, such that only p values $< .007$ were considered significant.

To ensure adequate sample size, we conducted a Monte Carlo simulation in MPlus Version 8.0 (Muthén & Muthén, 1998-2017) for a structural equation model with latent PTSD regressed on the observed variable representing combat experiences, a latent personality variable, and the latent variable representing the interaction between combat experiences and personality. Effect sizes were generated based on past empirical investigations of associations between PTSD, personality, and combat experiences (e.g., Plouffe et al., 2021; Weinberg et al., 2021).

With 200 observations across 500 repetitions, significant effects were detected 87.80 % - 98.20 % of the time. Thus, our sample size of 245 was adequate in terms of statistical power.

2. Results

2.1. Descriptive statistics

Descriptive statistics for total scale scores are reported in Table 1. For all variables, skewness and kurtosis values were within the recommended cut-off range of ± 2.00 (George & Mallery, 2010). Cronbach's alphas and McDonald's omegas were high across all scales. Honesty-humility demonstrated the lowest reliability values; however, this is consistent with past research using the HEXACO in a sample who had experienced at least one traumatic life event (Taku & McLarnon, 2018).

Bivariate correlations are reported in Table 2. Number of combat experiences was only significantly related to PTSD with a small effect size. PTSD was also significantly and positively related to emotionality, and significantly and negatively related to extraversion, agreeableness, and resilience, with effect sizes ranging from medium-to-large.

2.2. Structural equation models: impact of personality traits on associations between combat experiences and PTSD

Overall models, including emotionality, extraversion, and resilience models, accounted for a significant proportion of variance in PTSD symptom severity ($R^2 = 0.35-0.61$, $ps < .001$; see Table 3). The agreeableness model accounted for a marginally significant proportion of variance ($R^2 = 0.16$, $p = .007$). Across all models, combat experiences significantly and positively predicted levels of PTSD symptom severity. However, only extraversion, agreeableness, and resilience significantly and negatively predicted PTSD symptom severity, and emotionality significantly and positively predicted PTSD symptom severity. No interaction terms were significant. Regression coefficients and 95 % confidence intervals are reported in Table 3.

3. Discussion

Given the high prevalence of mental health conditions encountered by CAF Veterans, it is important to identify risk and protective factors associated with PTSD symptom severity. As anticipated, exposure to combat experiences was significantly and positively correlated with PTSD symptom severity. This is consistent with past findings reflecting a dose-response relationship between exposure to combat-related events and PTSD symptoms (Born & Zamorski, 2019; King et al., 2020). Also consistent with hypotheses, lower levels of agreeableness, extraversion, and resilience, as well as higher levels of emotionality, were related to higher levels of PTSD symptom severity, and significantly predicted levels of PTSD in the structural equation models. These findings are not surprising, given that individuals higher in these traits, which reflect such attributes as cooperation, flexibility, sociability, and optimism, tend to experience positive well-being outcomes, whereas those who are more anxious tend to score lower on well-being (Aghababaei, 2014; Aghababaei & Arji, 2014; Anglim et al., 2020; Smith et al., 2016) and higher on symptoms of mental health conditions (Weinberg et al., 2021). Interestingly, the negative association between extraversion and PTSD was the strongest of all variables. Given tendencies for those high in extraversion to exhibit characteristics such as expressiveness, sociability, and cheerfulness (Lee & Ashton, 2004), these individuals may develop closer social connections (Lee et al., 2008) and experience higher interpersonal relationship satisfaction than those lower in extraversion (Tov et al., 2016). This may prompt them to seek out social support, reducing their likelihood of developing PTSD.

Unexpectedly, however, honesty-humility, openness to experience, and conscientiousness were unrelated to PTSD symptom severity. Although these adaptive traits have been positively linked with positive

Table 1
Descriptive statistics.

Scale	Mean (SD)	Skewness	Kurtosis	Cronbach's α	McDonald's Ω
Combat exposure	7.61 (6.39)	0.79	0.12	.91	.92
Honesty-humility	3.92 (0.53)	-0.16	-0.47	.68	.65
Emotionality	2.86 (0.67)	0.10	-0.30	.76	.75
Extraversion	2.88 (0.69)	0.09	-0.24	.82	.80
Agreeableness	2.81 (0.63)	-0.13	-0.20	.81	.80
Conscientiousness	3.81 (0.51)	-0.36	0.50	.75	.74
Openness	3.38 (0.68)	-0.27	-0.44	.80	.80
Resilience	63.27 (14.48)	0.05	-0.26	.92	.92
PTSD	30.70 (21.12)	0.18	-1.09	.97	.97

Note. SD = standard deviation; PTSD = posttraumatic stress disorder. Combat exposure scores range from 0 to 30; HEXACO scores range from 0 to 5; resilience scores range from 0 to 100; PTSD scores range from 0 to 80.

Table 2
Bivariate correlations between observed study variables.

Variable	1	2	3	4	5	6	7	8
1. Honesty-humility								
2. Emotionality	-0.05							
3. Extraversion	-0.02	-0.33**						
4. Agreeableness	.18*	-0.13	.21**					
5. Conscientiousness	.26**	-0.13	.14	-0.05				
6. Openness to experience	.08	-0.01	.23**	.21**	.16			
7. Resilience	.14	-0.41**	.59**	.18	.32**	.26**		
8. Combat exposure	.06	-0.11	-0.15	-0.15	.03	.05	-0.02	
9. PTSD	.03	.33**	-0.60**	-0.29**	-0.10	-0.07	-0.53**	.29**

Note. Bonferroni correction applied ($p_{sig} = .005$). PTSD = posttraumatic stress disorder.

** $p < .001$.

* $p < .005$.

life outcomes in past empirical research (Anglim et al., 2020), it is plausible that characteristics associated with these traits, including, for example, lack of interest in luxury goods, sincerity, aesthetic appreciation, inquisitiveness, diligence, or organization may not be as important in protecting Veterans from PTSD symptoms following their experiences in the military.

Contrary to hypotheses, although agreeableness, extraversion, resilience, and emotionality were related to PTSD symptom severity, none of the personality variables examined significantly moderated associations between combat experiences and PTSD. Thus, our findings revealed that despite the overall protective capacity of adaptive personality traits, exposure to the combat environment (e.g., seeing dead bodies or human remains; being attacked or ambushed) has strong effects on one's mental health outcomes, and following exposure to combat, predispositions to be resilient and extraverted do not protect against adverse outcomes. This is inconsistent with previous findings that demonstrated a buffering effect of agreeableness, extraversion, conscientiousness, and neuroticism in associations between battle aftermath and PTSD in US Veterans (Caska & Renshaw, 2013). Interestingly, Caska and Renshaw's (2013) study revealed that these moderation models were only significant when the aftermath of battle was considered, which included such items as *I observed homes or communities that had been destroyed* (King et al., 2003). However, authors reported that only extraversion moderated the association between combat exposure and PTSD (Caska & Renshaw, 2013). The authors surmised that individual differences in personality may play a greater role in reducing the symptom severity of PTSD when the situation at hand is less personally threatening (Caska & Renshaw, 2013). Specifically, items reflecting aftermath of battle pertain less to life-threatening experiences, whereas combat experience items potentially reflect more dangerous and personally threatening situations (e.g., shooting or directing fire at the enemy; Sudom et al., 2016). Thus, given the strong severity of threat associated with exposure to combat experiences, it is plausible that any potential protective impact of the personality traits on PTSD was reduced or eliminated.

Lastly, it is possible that the use of summed combat scores confounded our findings, specifically because a larger number of combat experiences encountered may not equate to greater severity of combat experiences. Specifically, it is plausible that combat experiences have a distinct impact on PTSD symptom severity depending on how the exposures are subjectively perceived by the Veteran. Thus, there are potential difficulties in measuring the impact of combat experiences, which may have influenced our findings.

To date, no research has investigated whether the HEXACO personality traits and resilience impact the associations between combat experiences and PTSD in CAF Veterans. Overall, our results indicated that individual differences in personality traits, including agreeableness, extraversion, emotionality, and resilience, may benefit CAF Veterans, such that high levels of these traits (and low levels of emotionality) are related to reduced PTSD symptom severity. Our results may contribute to the well-being of Veterans and military members by enhancing military organizations', researchers', and policymakers' understanding of personality traits as risk or protective factors in the development of mental health disorders. Based on our findings, it is important for clinicians to understand the impact of individual differences in personality on the development of PTSD symptoms. This may lead to the development of custom-tailored and personalized early interventions aimed at reducing the risk of adverse mental health outcomes.

3.1. Limitations and future directions

Our study findings should be interpreted with consideration for their limitations. First, our sample comprised mainly male CAF Veterans, limiting potential for examination of gender differences in associations between personality traits, combat experiences, and PTSD. Future research should aim to collect a representative sample of CAF Veterans to determine whether our results are consistent across studies.

Second, as mentioned above, there are limitations associated with employing summed scores based on event exposures. Future research should consider both the frequency and perceived severity of

Table 3
Structural equation models with PTSD regressed on personality traits, combat experiences, and personality trait × combat experiences interactions.

Predictor	Model estimates		
	b (95 % CI)	SE	p
Model 1			
Honesty-humility	2.22 (−3.00, 7.43)	2.66	.405
Combat experiences	0.24 (0.14, 0.34)	0.05	<.001
Honesty-humility × combat experiences	−0.36 (−0.92, 0.21)	0.29	.214
$R^2 = 0.11, p = .009$			
Model 2			
Emotionality	5.14 (2.58, 7.70)	1.31	<.001
Combat experiences	0.28 (0.19, 0.37)	0.05	<.001
Emotionality × combat experiences	0.09 (−0.10, 0.27)	0.09	.353
$R^2 = 0.35, p < .001$			
Model 3			
Extraversion	−4.42 (−5.10, −3.73)	0.35	<.001
Combat experiences	0.14 (0.07, 0.22)	0.04	<.001
Extraversion × combat experiences	−0.04 (−0.11, 0.03)	0.04	.255
$R^2 = 0.61, p < .001$			
Model 4			
Agreeableness	−3.01 (−4.91, −1.10)	0.97	.002
Combat experiences	0.21 (0.10, 0.31)	0.05	<.001
Agreeableness × combat experiences	0.06 (−0.14, 0.25)	0.10	.567
$R^2 = 0.16, p = .007$			
Model 5			
Conscientiousness	−1.32 (−2.90, 0.25)	0.80	.099
Combat experiences	0.24 (0.14, 0.35)	0.05	<.001
Conscientiousness × combat experiences	−0.04 (−0.25, 0.17)	0.11	.703
$R^2 = 0.12, p = .016$			
Model 6			
Openness	−0.64 (−1.822, 0.55)	0.61	.293
Combat experiences	0.24 (0.14, 0.35)	0.05	<.001
Openness × combat experiences	0.08 (−0.11, 0.28)	0.10	.412
$R^2 = 0.11, p = .015$			
Model 7			
Resilience	−0.68 (−0.80, −0.56)	0.06	<.001
Combat experiences	0.23 (0.15, 0.31)	0.04	<.001
Resilience × combat experiences	0.01 (−0.01, 0.02)	0.01	.659
$R^2 = 0.43, p < .001$			

Note. Bonferroni correction applied ($p_{sig} = 0.007$); CI = confidence interval; SE = standard error.

experiences when evaluating links between combat, personality traits, and PTSD symptom severity.

Lastly, our study was cross-sectional in nature, and CAF Veterans were requested to respond to items based on their last deployment. It is plausible that participants may have been impacted by events prior to their last deployment, which were not captured. Thus, future research should consider evaluating combat experiences spanning multiple deployments. It is also possible that responses were impacted by skewed memories. However, over half of participants returned from deployments between 2009 and 2021, and all participants were aged 65 and younger, thus reducing potential for memory effects. Future

research should longitudinally examine the moderating effects of pre-deployment personality traits on the relations between pre-deployment combat experiences and post-deployment PTSD symptom severity.

CRediT authorship contribution statement

Rachel A. Plouffe was responsible for study conceptualization, data collection, data analysis, and manuscript writing.

Anthony Nazarov was responsible for study conceptualization, data collection, supervision, manuscript writing, review, and editing.

Callista A. Forchuk was responsible for study conceptualization, manuscript writing, review, and editing.

Julia Gervasio was responsible for study conceptualization, manuscript writing, review, and editing.

Tri Le was responsible for data collection, manuscript writing, review, and editing.

Jenny J. W. Liu was responsible for study conceptualization, manuscript writing, review, and editing.

Maede S. Nouri was responsible for data cleaning, analysis, and manuscript review and editing.

Cassidy Trahair was responsible for manuscript writing, review, and editing.

Deanna L. Walker was responsible for manuscript writing, review, and editing.

J. Don Richardson was responsible for supervision, manuscript writing, review, and editing.

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Declaration of competing interest

As the co-founder of the ParticipAid study listing platform, A.N. owns shares in ParticipAid Inc., which creates free-to-use digital participant recruitment and engagement tools for researchers. No person or organization received any financial remuneration for the use of this platform in this research study. No other authors have conflicts of interest.

Data availability

Study data are available from the corresponding author upon reasonable request. Code is available via Open Science Framework at <https://osf.io/cta4q/>.

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