EJOP Europe's Journal of Psychology PsychOpen GOLD

Research Reports

Check for updates

Exploring Social Identity as a Mediator of the Relationship Between Personality and Wellbeing Using Latent Profile Analysis

Robert M. Portman[1], Sarah F. Allen[2], Christopher J. Wilson[1], Heather Clements[1], Judith Eberhardt[1], Andrew R. Levy[3]

[1] *Department of Psychology and Social Work, School of Social Sciences, Humanities & Law, Teesside University, Middlesbrough, United Kingdom.* **[2]** *School of Psychology, Faculty of Health and Wellbeing, Northumbria University, Newcastle upon Tyne, United Kingdom.* **[3]** *Health Research Institute and Department of Psychology, Edge Hill University, Ormskirk, United Kingdom.*

Europe's Journal of Psychology, 2026, Vol. 22(4), 559–579, https://doi.org/10.5964/ejop.19869

Received: 2025-09-19 • **Accepted:** 2026-04-20 • **Published (VoR):** 2026-11-23

Handling Editor: Johannes Karl, Stanford University, Stanford, USA

Corresponding Author: Robert M. Portman, School of Social Sciences, Humanities & Law, Teesside University, Middlesbrough, Tees Valley, TS1 3BX, United Kingdom. E-mail: r.portman@tees.uk

Supplementary Materials: Code, Data, Materials [see Index of Supplementary Materials]

Abstract

Objective: The well-established link between personality and wellbeing has been rarely explored using a social identity approach. This is despite social support typically mediating the association between personality and wellbeing, and the foundational importance of social identity to the provision and receipt of social support.

Methods: This study employed a cross-sectional online survey research design with 308 adult participants (mean age = 25.31 ± 9.69, 82.4% female, 87.7% white). Latent profile analysis was performed based on participants' Interpersonal Sensitivity, Dispositional Optimism, Type D personality and Big-5 personality scores. Data were analysed using a combination of MANOVA, ANOVA and mediation analysis to explore between-profile differences in wellbeing and social identity, and the mediating role of social identity within these associations.

Results: Latent profile analysis identified four personality profiles that differed in wellbeing and social identification. Mediation analyses indicated a partial, modest indirect association for social identification linking profile membership and wellbeing when contrasting profiles characterised by higher versus lower optimism, emotional stability, and extraversion.

This is an open access article distributed under the terms of the Creative Commons Attribution 4.0 International License, CC BY 4.0, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Conclusions: These exploratory findings support social identification as a theoretically relevant pathway linking personality profile typology and wellbeing. Future research could examine whether interventions designed to strengthen social identification can be adapted to reflect differences in personality profiles.

Keywords

personality, wellbeing, social identity, Big-5, Latent Profile Analysis, optimism, interpersonal sensitivity, Type D

Personality represents the unique combinations of superordinate traits that explain individual differences in relation to thoughts, feelings and behaviours. Personality is relatively enduring across adulthood (Kinnunen et al., 2012), systematically varies across individuals (Zilberman et al., 2018) and positively and negatively associated with wellbeing (e.g., Wedgeworth et al., 2017). Moreover, individual personality traits are positively and negatively correlated with each other, clustering together to form discrete profiles (Eley et al., 2016). Understanding these profiles, as well as their underlying mechanisms and mediators, is critical for addressing poor wellbeing (Strickhouser et al., 2017). Social identity, the extent to which individuals define themselves as belonging to a group(s), represents a fruitful, though underexplored, mediator for understanding the link between personality typology and wellbeing.

Differences in wellbeing are explained by personality (Huang et al., 2024) and social identification (Haslam et al., 2012). From a personality perspective, wellbeing is predicted by variations in Interpersonal Sensitivity (Sapmaz, 2023), Dispositional Optimism (Batool et al., 2020), Type-D personality (Williams & Wingate, 2012) and the Big-5 (Anglim et al., 2020). Most typically, the link between these traits and wellbeing is explained by the extent to which each supports the development and maintenance of supportive social networks (Interpersonal Sensitivity: Huang et al., 2024; Dispositional Optimism: Rius-Ottenheim et al., 2012; Type-D personality: Dehghani, 2018; Big-5: Tan et al., 2018). The Social Identity Approach (Tajfel et al., 1979; Turner et al., 1987) explains the psychological processes by which group memberships form (Turner et al., 1987) and the positive effects these groups can have on wellbeing (Cruwys et al., 2015). Social identities develop via individuals collectively perceiving themselves as similar due to shared characteristics, beliefs or ideals (Turner et al., 1987), leading to a shift in self-concept from thinking in terms of 'I and me' to 'us and we' (Haslam et al., 2012). Social identities promote wellbeing (Steffens et al., 2021) as they provide individuals with an increased sense of agency and purpose (Wakefield et al., 2011), and reduce anxiety, depression and loneliness via companionship with other group members (Cruwys et al., 2015). From a social identity perspective, stronger identification and access to a greater number of compatible group memberships are associated with enhanced wellbeing (Jetten et al., 2017).

PsychOpen GOLD

Personality and social identity approaches are rarely integrated due to long-standing debate surrounding their perceived theoretical (in)compatibility (Reysen et al., 2015). Social identity theorists traditionally reject the assertion that stable underlying traits' underlie behavioural consistency (Turner & Onorato, 1999), instead indicating that behaviour is inherently variable depending on the demands of the immediate social environment (Jenkins et al., 2012). Notwithstanding, recent work has promoted a more dynamic integration of personality and social identity perspectives (Fino et al., 2025). For example, Fino et al. (2025) found that Big-5 personality differences—principally emotional stability, extraversion and openness— influence how individuals perceive the availability of social support. In this vein, both individual-differences and social identity approaches converge on social–cognitive processes as being central to understanding wellbeing, with personality differences and social identification shaping how individuals interpret social relationships and perceive available support. Accordingly, focusing on social identification rather than social support is salient, as identification determines whether social resources are perceived as supportive and internalised in ways that benefit wellbeing (Jetten et al., 2017).

The Current Study

The underlying mechanisms linking personality, social identification and wellbeing remain insufficiently understood. This study adopted an integrated person-centered approach using latent profile analysis to examine how specific combinations of traits relate to wellbeing, both directly and through their influence on social identification. While trait-level analyses are useful, they may also overlook the complex ways in which traits co-occur within individuals (Merz & Roesch, 2011). This study's latent profile analysis approach enabled the identification of meaningful personality typologies based on how multiple traits cluster together (Laursen & Hoff, 2006). This approach enables a more comprehensive and ecologically valid understanding of personality by recognising that individuals may exhibit consistent combinations of personality traits that interact to influence wellbeing and social identification.

This study seeks to fill a previously underexplored gap by directly examining social identification as a mediator between personality typology and wellbeing. Specifically, we tested the following exploratory hypotheses: (H1) Personality traits comprising Interpersonal Sensitivity, Dispositional Optimism, Type D personality, and Big-5 will cluster into distinct, interpretable profile typologies; (H2) Personality typologies will differ meaningfully in their expression of key outcomes: (H2a) Wellbeing will vary across personality typologies, (H2b) Social identification will vary across personality typologies; and (H3) Social identification will mediate the relationship between personality profile typology and wellbeing.

PsychOpen GOLD

Method

Design

A cross-sectional online survey was employed to explore profile structures derived from interrelations between interpersonal sensitivity, dispositional optimism, Type D personality, the big-5 personality traits and their associations with wellbeing and social identification.

Participants

Sample size was informed by prior exploratory latent profile research in personality psychology (e.g., Wall et al., 2019: n ~ 300). This sample size also provided adequate power to detect medium-sized effects in subsequent ANOVA and mediation analyses (Cohen, 1988). Convenience and snowball sampling were used to recruit N = 308 participants via social networking sites (LinkedIn and Facebook) and University course participation schemes at three universities in North England, UK between February and October 2022. The sole exclusion criterion was being under 18 years of age. The dataset was screened for duplicate responses based on matching IP addresses (none were identified), and responses were inspected for completeness prior to analysis. N = 301 respondents (mean age = 25.31 ± 9.69, range 18–60, 82.4% female, 87.7% white) provided complete data to be entered into analysis. This study was approved by Teesside University's Research Ethics Committee (ref: 2022 Jan 6702 Portman), and all participants provided informed consent prior to data collection. Students who requested course credit received it upon completion of the study.

Materials

Data were collected via an online survey hosted by the Joint Information Systems Committee (JISC v2) platform. Participants provided demographic information regarding age, gender, ethnicity, and level of education, and completed the following measures:

Profiling Variables

Interpersonal Sensitivity — Boyce and Parker's (1989) 36-item Interpersonal Sensitivity Measure assessed participants' sensitivity to others' social behaviour. Participants responded to statements such as, 'I always notice if someone doesn't respond to me' using a 4-point Likert-scale ranging from 1: 'very like me' to 4: 'very unlike me'. The total scale score was used in the current study, demonstrating excellent internal consistency (α = 0.93). Low scores represent poor ability to accurately interpret others' behaviour and negatively predict wellbeing (Sapmaz, 2023).

PsychOpen GOLD

Dispositional Optimism — Dispositional optimism was measured using Scheier, Carver and Bridges (1994) Life Orientation Test-Revised. Respondents rated their agreement with each item, such as 'In uncertain times, I usually expect the best', on a 5-point scale from 0 = 'strongly disagree' to 4 = 'strongly agree'. Pessimistically worded items, e.g., 'If something can go wrong for me, it will', were reverse scored. Good internal consistency of the scale was demonstrated in the present sample (α = 0.81).

Type D Personality — Type D personality was assessed using the Type D Scale-14 (DS14) (Denollet, 2005). The DS14 assesses constituent Type D personality traits: social inhibition (SI) and negative affectivity (NA). The instrument comprises two 7-item subscales measuring each trait and uses a 5-point Likert-type scale ranging from 0 = 'false' to 4 = 'true', enabling the scoring of SI (e.g., 'I find it hard to start a conversation') and NA (e.g., 'I am often down in the dumps') as separate continuous variables. Internal consistency was good for both subscales in the present study (α = 0.88; α = 0.85 for NA and SI, respectively).

The Big-5 — The Big Five personality traits were assessed using the International Personality Item Pool (IPIP-Big-5, Goldberg et al., 2006), a 50-item measure comprising 10 items for each trait: Extraversion, Emotional Stability, Conscientiousness, Openness, and Agreeableness. Participants responded using a 7-point scale, ranging from 1 (Extremely Inaccurate) to 7 (Extremely Accurate) based on how well they believed the statement described them. In the current study, each subscale demonstrated good internal consistency (extraversion α = .90, agreeableness α = .82, conscientiousness α = .81, emotional stability α = .85, openness α = .77).

Outcome Variables

Wellbeing — Wellbeing was assessed using the Mental Health Continuum Short-Form (Keyes, 2009), a 14-item scale assessing the frequency with which respondents experienced positive mental health during the previous month. Participants were asked how often they felt 'happy', 'satisfied with life', and 'that people are basically good' using a 6-point Likert scale ranging from 0 'never' to 5 'everyday'. The scale demonstrated excellent internal consistency in the current sample (α = 0.92).

Social Identification — Social identification was measured using Sani et al.'s (2015) Group Identification Scale, a 4-item measure of participants' group belonging. Participants were asked to self-select a group from the following options: Sports team/class/club (n = 18, 6%), Hobby/interest group (n = 27, 9%), Support group (n = 7, 2%), Voluntary/charity group (n = 6, 2%), Workplace group (n = 43, 14%), Reading/study group (n = 9, 3%), Friendship group (n = 179, 58%), Religious group (n = 3, 1%) or Other (n = 16, 5%). Thinking of this group membership, participants rated their agreement with statements

PsychOpen GOLD

such as 'I have a sense of belonging to [my group]' using a seven-point Likert scale: 1 = 'strongly disagree' to 7 'strongly agree'. Participants self-selected their group and completed the Group Identification Scale only after completing the personality measures to avoid responses being potentially biased by participants thinking of themselves in terms of their chosen social identity (Reysen et al., 2015). Allowing participants to self-select their group helped mitigate potential differences in identification that might arise from assigning a predefined group. Total scores were treated as a continuous variable in the current study, with the scale demonstrating excellent internal consistency ($\alpha = 0.90$).

Procedure

Upon responding to the online study advert, participants were directed to the survey landing page. Participants were presented with a participation information sheet, indicated their informed consent by answering a yes/no response item and created a unique alphanumeric code to enable data withdrawal. Participants then proceeded to the demographic questions and measures. Participants had the right to withdraw from the survey at any time by closing their browser. A debrief sheet was presented on study completion.

Data Analysis

A LPA using JAMOVI ('snowRMM' module implementing R' based packages 'tidyLPA' and 'mclust') classified participants based on clustering of responses to the nine profiling variables. Missing data (< 0.1%) were treated using listwise deletion as the maximum likelihood estimation technique is not available in mclust. The optimal model was determined by considering smaller Bayesian information criterion (BIC), sample size-adjusted BIC (*Adj*BIC) and Akaike information criterion (AIC) values (Tein et al., 2013) in combination with the highest number of profiles, a low and significant p value for a bootstrap likelihood ratio test (BLRT), and entropy values exceeding 0.8 (Nyland et al., 2007). All profiling variables were converted to standardised Z-scores (with a mean of 0 and standard deviation of 1) to facilitate between-profile comparisons. MANOVAs were conducted to determine significant differences between profiling variables, and One-way Analysis of Variance (ANOVA) assessed differences in wellbeing and social identification. Multi-categorical mediation analysis using the GLM mediation model in the JAMOVI 'medmod' module was used to assess the mediating role of social identification in the association between participants' personality profile typology and wellbeing. Personality profile typology was a four-level categorical independent variable and was dummy coded using indicator (k–1) coding. Social identification was specified as the continuous mediator variable and wellbeing as the continuous outcome variable.

PsychOpen GOLD

Results

Descriptive Statistics

Table 1 (below) displays bivariate correlations, means, and standard deviations of the relationships between the variables of interest.

> H1: Personality traits will cluster into distinct, interpretable profile typologies.

A LPA investigated profiles based on combinations of interpersonal sensitivity, dispositional optimism, Type D personality (SI & NA) and the Big-5. Table 2 (below) provides a summary of the model fit indices for 2- through 5-profile solutions. Results of the LPA demonstrated preference for a 4-profile solution. Figure. 1 (below) shows the standardised mean scores of the latent variables included in each profile, which were labelled "Confident", "Measured", "Reserved" and "Avoidant". These profile labels are interpretative and reflect patterns of scores across the profiling variables. They are included to aid readability and facilitate comparison across profiles; however, they should be analytically considered as Profile 1 through Profile 4.

Posterior probabilities ranged from .83 to .94 across classes, indicating good classification accuracy. The entropy value for the chosen model was 0.84, reflecting good certainty in class assignments and distinct profiles.

The "Confident" profile (n = 20, 6.6% of the sample), demonstrated high emotional stability, dispositional optimism, interpersonal sensitivity, extraversion, conscientiousness and openness, and low negative affectivity and social inhibition. The "Measured" profile (n = 94, 31.2%), reported moderately high emotional stability and dispositional optimism, below-average Type D personality, above-average interpersonal sensitivity, and average other personality traits. The "Reserved" profile (n = 134, 44.5%) had above-average Type D personality, marginally below-average emotional stability, and average other personality traits. The "Avoidant" (n = 53, 17.6%) profile exhibited high Type D personality traits, and below average on all other traits. These data are represented visually in Figure 1 below.

PsychOpen GOLD

Europe's Journal of Psychology
2026, Vol. 22(4), 559–579
https://doi.org/10.5964/ejop.19869

Table 1

Means, Standard Deviations and Bivariate Correlations Between Profiling Variables, Wellbeing and Social Identification

	1	2	3	4	5	6	7	8	9	10	11
1. Extraversion	—										
2. Agreeableness	.218**	—									
3. Conscientiousness	-.017	.090	—								
4. Emotional Stability	.194**	-.064	.299**	—							
5. Openness	.142*	.220**	.176*	0.067	—						
6. Dispositional Optimism	.335**	.129*	.287**	.519**	.262**	—					
7. Negative Affectivity (D)	-.274*	-.069	-.289**	-.770**	-0.147*	-.640**	—				
8. Social Inhibition (D)	-.436**	-.153*	-.105	-.332**	-.053	-.338**	.523**	—			
9. Interpersonal Sensitivity	.330**	-.292**	.154*	.562**	.096	.426**	-.482**	-.261**	—		
10.Wellbeing	.307**	.149*	.373**	0.521**	.242**	.638**	-.620**	-.375**	.428**	—	
11. Social Identification	.181*	.217**	.188*	0.212**	.105	.195**	-.263**	-.241**	.086	.322**	
Mean	38.17	53.34	45.45	32.72	46.91	16.76	21.91	21.52	79.60	21.59	49.83
SD	10.93	7.97	8.84	9.90	7.30	5.03	6.29	3.64	17.41	5.16	13.17

*$p < .05$. **$p < .001$.

PsychOpen GOLD

Table 2

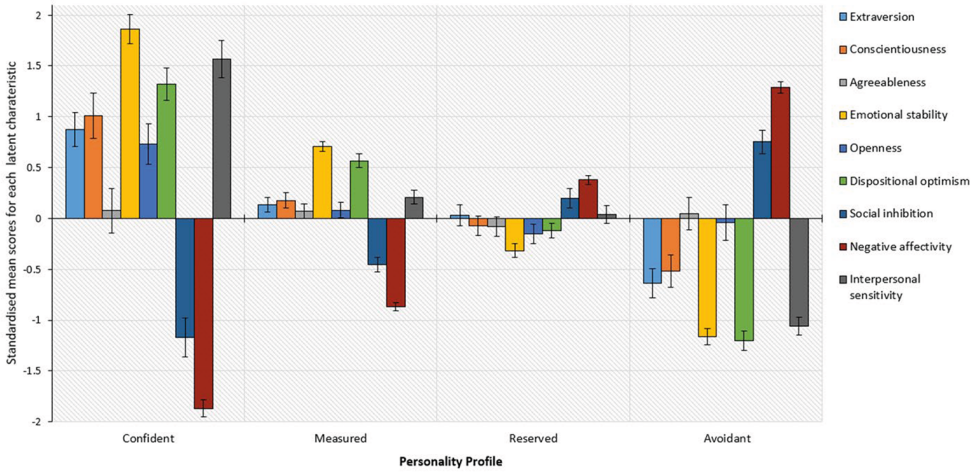
Summary of the Model Fit Indices

Profiles	AIC	BIC	Adj BIC	BLRT	Entropy
2	7282.04	7385.84	7297.04	< .001	0.82
3	7128.93	7269.80	7149.29	< .001	0.81
4	**7057.98**	**7235.92**	**7083.69**	**< .001**	**0.84**
5	7032.56	7247.58	7063.63	< .001	0.80

Note. Bold indicates values for the optimal four profile model

Figure 1

Standardized Mean Scores (M = 0, SD = 1) of the Different Characteristics Across the Four Profiles



One-way MANOVA found significant between-profile differences, $F(24, 842) = 41.99$, $p < .001$; Wilk's $\lambda = 0.10$; partial $\eta^2 = 0.37$. The "Confident" profile had higher extraversion, conscientiousness, emotional stability, openness, dispositional optimism and interpersonal sensitivity, and lower Type D traits compared to "Measured" "Reserved", and "Avoidant" (ps<.05). The "Measured" profile had higher extraversion, conscientiousness, emotional stability, dispositional optimism, and interpersonal sensitivity, and lower Type D traits compared to "Avoidant", and vice versa in comparison to "Confident" (ps < .05). The "Reserved" profile had higher extraversion, conscientiousness, emotional stability, dispositional optimism, and interpersonal sensitivity scores, and lower Type D traits compared to "Avoidant", and lower emotional stability and dispositional optimism and higher Type D traits compared to "Measured" (ps < .05). Finally, the "Avoidant" profile

PsychOpen GOLD

had lower extraversion, conscientiousness, emotional stability, interpersonal sensitivity, and dispositional optimism than the other profiles and higher type D traits (*p*s < .05).

> H2: Personality typologies will differ meaningfully in their expression of key outcomes.

> H2a: Wellbeing will vary across personality typologies.

One-way ANOVA revealed a significant association between profile membership and wellbeing, $F(3,288) = 70.89$, $p < .001$, partial $\eta^2 = 0.42$ (large effect size). Post-hoc comparisons with Bonferroni correction demonstrated significant differences in wellbeing between all profiles. "Confident" (66.00 [± 2.01]: mean ± SE) participants reported the highest wellbeing, followed by those categorised as "Measured" (57.36 [± 1.09]), "Reserved" (47.48 [± 0.92]) and "Avoidant" (35.35 [± 1.20]).

> H2b: Social identification will vary across personality typologies.

One-way ANOVA revealed a significant association between profile membership and social identification, $F(3,297) = 6.89$, $p < .001$, partial $\eta^2 = 0.07$ (medium effect size). Post-hoc comparisons with Bonferroni correction indicated that "Confident" (24.7 [± 0.72]) participants reported significantly higher social identification than those categorised as "Reserved" (21.19 [± 0.43]) or "Avoidant" (19.60 [±0.79.41]). "Avoidant" participants also had significantly lower social identification than "Measured" (22.61 [± 0.49]) participants.

> H3: Social identification will mediate the relationship between personality profile typology and wellbeing.

We followed Hayes and Preacher's (2014) multi-categorical mediation analysis procedure to explore the mediating role of social identification in the association between personality profile typology and wellbeing. Personality profile typology was a four-level categorical independent variable comprising Confident, Measured, Reserved, and Avoidant profiles. The multi-categorical variable was dummy coded using indicator (k−1) coding. The "Reserved" profile ($n = 134$) was used as the reference category, as it made up the largest proportion of the sample, and three dummy variables were created to facilitate the analysis: D1(Confident v Reserved), D2 (Measured v Reserved), and D3 (Reserved v Avoidant). All three dummy variables were simultaneously entered into the mediation model to estimate their unique effects. Social identification and Wellbeing were both entered into the mediation model as continuous variables. The mediation model was estimated within a general linear modelling (GLM) framework using the medmod module (JAMM package) in Jamovi. In this framework:

The a paths were estimated via a linear regression model predicting the continuous variable social identification from the three dummy variables. The b path was estimated via a linear regression model predicting wellbeing from social identification while simultaneously including the three dummy variables. The c′ (direct) effects represent the

PsychOpen GOLD

regression coefficients for each dummy variable predicting wellbeing while controlling for social identification. The c (total) effects represent the regression coefficients for each dummy variable predicting wellbeing without the mediator in the model. Because the independent variable was multi-categorical, the model simultaneously estimated three relative indirect effects (one for each contrast with the reference group). Each indirect effect was computed as the product of the corresponding a and b paths (a × b). Indirect effects were tested using nonparametric bootstrapping with 5,000 bias-corrected resamples. For each resample, path coefficients were re-estimated and the empirical sampling distribution of the product term (a × b) was generated. Bonferroni corrections were applied and adjusted 98.3% CIs are presented. The results of the mediation analysis are presented below in Table 3 and Figure 2. As indicated in Table 3, the D1 contrast (Confident v Reserved) was significantly associated with social identification (a = 3.5 2, 98.3% CI [1.36, 5.52]) whereas the D2 and D3 contrasts were not (D2: a = 1.51, 98.3% CI [-0.003, 1.87]; D3: a = -1.06, 98.3% CI [-3.16, 1.00]). The analyses indicated that there was a significant effect of social identification on wellbeing (b = 0.47, 98.3% CI [0.17, 0.79]). For each of the three contrasts, the relative direct effects on wellbeing were significant: D1: c' = 16.86, 98.3.5% CI [11.56, 22.08]; D2: c' = 9.17, 98.3% CI [5.85, 12.42], D3: c' = -11.63, 98.3% CI [-15.17, -8.11]. The relative total effects on wellbeing were also significant for all three profile contrasts: D1: c = 18.52, 98.3% CI [12.96, 23.67]; D2: c = 9.88, 98.3% CI [6.40, 13.26]; D3:c = -12.13, 98.3% CI [-15.66, -8.40]. With regards to the relative indirect effects represented by path a*b, the association between D1 and wellbeing via social identification was significant (D1: $a*b$ = 1.65, 98.3% CI [0.50, 3.55], indicating that social identification mediated the association between the Confident v Reserved contrast and wellbeing, with a small effect (β = .03). The association between both D2 and D3 and wellbeing via social identification was not statistically significant.

Table 3

Path Estimates for Mediation Analyses Showing Relative Direct and Indirect Effects of Profile Contrasts on Wellbeing via Social Identification

				98.3% CI[a]				
Path	**Effect**	**Estimate**	**SE**	**Lower**	**Upper**	**β[b]**	***z***	***p***
a*b	D1 ⇒ Social identification ⇒ Wellbeing	1.65	0.69	0.50	3.55	0.03	2.41	.016
	D2 ⇒ Social identification ⇒ Wellbeing	0.71	0.36	0.00	1.87	0.03	1.99	.047
	D3 ⇒ Social identification ⇒ Wellbeing	-0.50	0.40	-1.74	0.43	-0.01	-1.24	.216
a	D1 ⇒ Social identification	3.52	1.17	1.36	5.53	0.18	3.01	.003
	D2 ⇒ Social identification	1.51	0.66	-0.11	3.08	0.14	2.28	.023

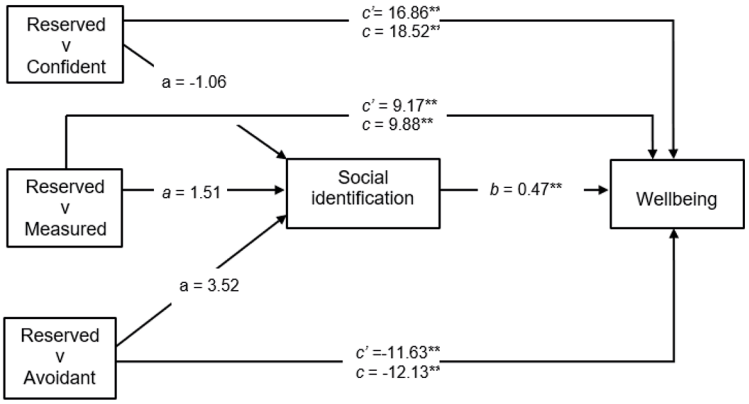
PsychOpen GOLD

Path	Effect	Estimate	SE	98.3% CI[a] Lower	98.3% CI[a] Upper	β[b]	z	p
	D3 ⟹ Social identification	-1.06	0.82	-3.16	1.00	-0.08	-1.30	.194
b	Social identification ⟹ Wellbeing	0.47	0.12	0.17	0.80	0.18	4.04	< .001
c'	D1 ⟹ Wellbeing	16.86	2.37	11.56	22.09	0.32	7.13	< .001
	D2 ⟹ Wellbeing	9.17	1.33	5.85	12.42	0.32	6.88	< .001
	D3 ⟹ Wellbeing	-11.63	1.63	-15.17	-8.11	-0.33	-7.14	< .001
c	D1 ⟹ Wellbeing	18.52	2.40	12.96	23.68	0.35	7.72	< .001
	D2 ⟹ Wellbeing	9.88	1.67	6.40	13.27	0.35	7.27	< .001
	D3 ⟹ Wellbeing	-12.13	2.37	-15.67	-8.40	-0.34	-7.25	< .001

[a]Bias-corrected bootstrap 98.3% confidence interval. [b]Standardized regression coefficient (β).

Figure 2

Results of Mediation Analysis Examining Relative Indirect Effect of Personality Profiles on Wellbeing via Social Identification



Note. n = 301. Estimated coefficients from a bias corrected bootstrap procedure are presented on each path. $^{*}p < .025$. $^{**}p < .001$.

Discussion

This study aimed to examine how individual differences in personality traits cluster to form distinct personality typologies, and whether these typologies are associated with wellbeing and social identification. A further aim was to explore whether social identification mediates the relationship between personality typology and wellbeing. Using latent profile analysis, we identified a four-profile structure reflecting meaningful combinations of core traits. Participants were categorised as 'Confident', 'Measured', Reserved', or 'Avoidant", with Personality typology membership was positively associated with

PsychOpen GOLD

higher wellbeing, with the association between typology membership and wellbeing partially mediated by social identification levels.

Personality Typologies

Emotional stability was consistently inversely related to Type D personality and interpersonal sensitivity and positively related to optimism. This is in line with previous literature to have identified neuroticism—the inverse of emotional stability—as being associated with high feelings of ill-will and excessive worry (Ozer & Benet-Martinez, 2006) and commonly positively associated with Type D personality (de Fruyt & Denollet, 2002) and interpersonal sensitivity (Wilhelm, Boyce & Brownhill, 2004). The interrelationships between extraversion and conscientiousness were also largely consistent across profiles, supporting the previously identified positive correlation between these traits (Dumfart & Neubauer, 2016). These findings support the application of dimensional approaches to personality measurement, providing further evidence of how traits interact.

Personality Typology Membership, Wellbeing and Social Identification

'Confident' participants reported the highest levels of wellbeing, likely because the traits characterising this profile, such as optimism, emotional stability, and extraversion, are each independently positively associated with wellbeing (e.g., Sapmaz, 2023). Our findings support the importance of these characteristics for wellbeing and extend previous research by demonstrating a progressive decline in wellbeing across profiles. Specifically, wellbeing decreased as participants' personality typologies diverged from the trait pattern associated with the 'Confident' profile. The link between individual differences characteristics and wellbeing has been attributed to their role in establishing social support (Dehghani, 2018). Given the facilitatory role of social identification in linking social support to wellbeing (Jetten et al., 2017), we extended this argument to explore differences across personality typologies. 'Confident' participants reported the highest levels of social identification, with levels progressively decreasing through the 'Measured' and 'Reserved' profiles, and lowest among 'Avoidant' participants. Moreover, compared to "Reserved" participants, the higher wellbeing reported by those in the "Confident" profile was partially mediated by their levels of social identification.

These findings offer useful theoretical insight into how social identity processes may relate to the association between personality and wellbeing. Nevertheless, the indirect effect for the "Confident" *vs.* "Reserved" contrast was small in magnitude, and conclusions about practical importance should remain conservative. Moreover, mediation effects were non-significant when comparing across all profiles, suggesting that other factors may have contributed to the lower wellbeing reported among 'Avoidant' participants. Notably, as we assessed social identification with one self-selected group, we may

PsychOpen GOLD

have under-captured the broader identity resources associated with multiple meaningful and compatible group memberships (Jetten et al., 2017), limiting sensitivity to detect identity-related pathways across profiles. This is particularly relevant for "Avoidant" participants if they hold fewer meaningful group memberships overall, or alternatively, if they deem their multiple memberships as having poor compatibility which is associated with lower wellbeing (Manzi et al., 2024). Thus, depth of identification with a single group, as measured in the current study, may capture meaningful differences in identity-based resources; however, further consideration of breadth of group memberships (i.e., multiple group memberships) may clarify identity-related pathways linking personality and wellbeing.

Implications for Practice

In explaining the interplay between personality and social identity, the personality traits characterising "Avoidant" participants' profiles may be linked to challenges in adopting meaningful social identities, with potential implications for their wellbeing. Our findings indicate there may be value in exploring additional approaches to fostering social identity among "Avoidant" individuals.

These findings are practically relevant for diverse organisations, such as businesses and universities, whose members vary in personality profile membership. Prior work highlights the importance of delivering identity-confirming messages and social norms through leaders who are perceived as being "like us" (Neville et al., 2021), and a growing body of evidence demonstrates that social identity–based leadership enhances perceived leader prototypicality, team engagement, and inclusive team climates (Steffens et al., 2018; Haslam et al., 2023). Our findings raise the possibility that personality-related differences in social communication preferences and capacities (Dehghani, 2018; Denollet, 2005) may influence individuals' readiness to engage with identity-based interventions, such as the 5R program (Haslam et al., 2017). This highlights the potential value of integrating personality considerations into social identity–informed leadership practices. For example, opportunities to engage in social support that require high confidence in one's interpersonal skills, e.g., joining a large group, may support "Confident" individuals but dissuade "Avoidant" ones (Anglim et al., 2020). This distinction is particularly relevant for social identity–building interventions such as the 5R program, which may rely on active member participation in discussions about "who we are" and "what we want" as a group (Haslam et al., 2017). If "Avoidant" team members feel less comfortable contributing to such identity-defining discussions, collective processes of goal setting and identity enactment may be less effective. Thus, our findings indicate that uniform, "one size fits all", approaches to social identity-building may be less accessible across personality profile typologies. Interventions that incorporate lower-intensity or less socially demanding entry points to group engagement—such as anonymous online discussion

PsychOpen GOLD

boards—may help foster social identification, consistent with evidence that online peer support communities can support belonging and wellbeing (Tan et al., 2020).

Limitations and Future Directions

The cross-sectional design of the present study means it was not possible to infer causal relationships between individual differences, wellbeing, and social identification. Although mediation analysis can highlight potential mechanisms, it cannot determine the direction of effects. Notwithstanding, our study contributes valuable exploratory insights into the associations between these constructs and offers a foundation for future longitudinal or experimental research to test causal pathways more robustly. Moreover, the "Confident" profile was small (n = 20), warranting cautious interpretation of profile-specific estimates and replication in larger samples, while recognizing that minority profiles can be substantively meaningful.

A second limitation is the potential lack of generalisability, as our sample consisted primarily of white British female university students based in the North of England. This raises questions about the extent to which the findings can be applied to more diverse populations in terms of age, gender, ethnicity, and cultural background. However, the person-centred, profile-based approach used here helps to mitigate this limitation. Rather than assuming participants possess fixed, singular personality types, our latent profile analysis allows for meaningful differentiation based on trait combinations. This approach captures heterogeneity within the sample and supports exploratory generalisability by focusing on patterns of co-occurring traits rather than demographic uniformity. Nevertheless, personality typology distributions and self-selected identity groups may differ in more diverse populations; for example, traits such as openness to experience—and friendship-based identity selections—may be overrepresented in predominantly university student samples relative to community populations. Future research should replicate these findings in more diverse and representative samples to determine whether similar personality typologies and patterns of group memberships emerge. In addition, as the present study assessed identification with one self-selected group, subsequent research should extend the current design by measuring multiple group memberships to offer a broader assessment of social identity-related processes linking personality and wellbeing. A further point to note is that emotional stability, negative affectivity, and dispositional optimism were moderately to strongly intercorrelated. Although these constructs are theoretically distinguishable and were retained to capture naturally co-occurring trait configurations, it is possible that parts of the profile solution reflect a broader emotionality- or neuroticism-related dimension. Future research could examine the robustness of the present profile structure using alternative model specifications, including residualised or reduced sets of indicators.

PsychOpen GOLD

Conclusion

This study demonstrated that personality profile typologies, identified through combinations of trait characteristics, are meaningfully associated with both wellbeing and social identification. Although observed effects were modest, the findings provide preliminary evidence that personality profile typologies may relate to wellbeing partly through social identification, supporting the integration of trait-based personality models with the social identity approach. By recognising that some personality profiles may be associated with lower levels of social identification, this study and future work may support the development of targeted, personality typology-informed strategies to promote group belonging and improve mental health outcomes.

Future intervention efforts in universities, workplaces, or community settings, could benefit from considering whether and how social identity-building strategies can be tailored to align with individuals' personality profile typologies. Doing so can foster more inclusive environments that support wellbeing, particularly for those less inclined to engage in conventional social support structures.

Funding: The authors have no funding to report.

Acknowledgments: The authors have no additional (i.e., non-financial) support to report.

Competing Interests: The authors have declared that no competing interests exist.

Author Contributions: Robert M. Portman: Conceptualization; Project administration; Writing – original draft; Writing - review and editing; Formal analysis. Sarah F. Allen: Project administration; Formal analysis (lead); Writing – original draft; Writing - review and editing. Christopher J. Wilson: Formal analysis; Writing – review and editing. Heather Clements: Writing – review and editing. Judith Eberhardt: review and editing. Andrew R. Levy: Conceptualization; Project administration; Writing - review and editing.

Ethics Statement: Ethical approval was provided by the host institution (Teesside University: 2022 Jan 6702 Portman) prior to data collection. Informed Consent was provided by participants prior to undertaking the study via responding to a yes/no question hosted on the survey platform.

Data Availability: The dataset generated by the survey research and analysed during the current research are available via the Open Science Framework data repository (see Portman & Allen, 2025).

Supplementary Materials

For this article, the following Supplementary Materials are available: Data, R code, study materials, and data dictionary (see Portman & Allen, 2025).

PsychOpen GOLD

Index of Supplementary Materials

Portman, R. M., & Allen, S. F. (2025). *Personality* [Data, Code, Materials]. OSF. https://osf.io/kbfzc

References

Anglim, J., Horwood, S., Smillie, L. D., Marrero, R. J., & Wood, J. K. (2020). Predicting psychological and subjective well-being from personality: A meta-analysis. *Psychological Bulletin, 146*(4), 279–323. https://doi.org/10.1037/bul0000226

Batool, I., Malik, G., Fatima, S., & Manzoor, I. (2020). Investigation of dispositional optimism, psychological resilience, coping strategies and quality of life among burn survivors. *Khyber Medical University Journal, 12*(4), 310–314.

Boyce, P., & Parker, G. (1989). Development of a scale to measure interpersonal sensitivity. *The Australian and New Zealand Journal of Psychiatry, 23*(3), 341–351. https://doi.org/10.1177/000486748902300320

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Lawrence Erlbaum Associates.

Cruwys, T., South, E. I., Greenaway, K. H., & Haslam, S. A. (2015). Social identity reduces depression by fostering positive attributions. *Social Psychological & Personality Science, 6*(1), 65–74. https://doi.org/10.1177/1948550614543309

de Fruyt, F., & Denollet, J. (2002). Type D personality: A five-factor model perspective. *Psychology & Health, 17*(5), 671–683. https://doi.org/10.1080/08870440290025858

Dehghani, F. (2018). Type D personality and life satisfaction: The mediating role of social support. *Personality and Individual Differences, 134*, 75–80. https://doi.org/10.1016/j.paid.2018.06.005

Denollet, J. (2005). DS14: Standard assessment of negative affectivity, social inhibition, and Type D personality. *Psychosomatic Medicine, 67*(1), 89–97. https://doi.org/10.1097/01.psy.0000149256.81953.49

Dumfart, B., & Neubauer, A. C. (2016). Conscientiousness is the most powerful noncognitive predictor of school achievement in adolescents. *Journal of Individual Differences, 37*(1), 8–15. https://doi.org/10.1027/1614-0001/a000182

Eley, D. S., Leung, J., Hong, B. A., Cloninger, K. M., & Cloninger, C. R. (2016). Identifying the dominant personality profiles in medical students: Implications for their well-being and resilience. *PLoS One, 11*(8), Article e0160028. https://doi.org/10.1371/journal.pone.0160028

Fino, E., Morris, S. M., Stevenson, C., Shuttleworth, I., Finell, E., & Bjarnason, Þ. (2025). Personality and the "Social Cure": The role of ego-resilience in the social identity approach to health. *Social Psychological & Personality Science, 17*(1), 103–119.

Goldberg, L. R., Johnson, J. A., Eber, H. W., Hogan, R., Ashton, M. C., Cloninger, C. R., & Gough, H. G. (2006). The international personality item pool and the future of public-domain personality measures. *Journal of Research in Personality, 40*(1), 84–96. https://doi.org/10.1016/j.jrp.2005.08.007

PsychOpen GOLD

Haslam, S. A., Reicher, S. D., & Levine, M. (2012). When other people are heaven when other people are hell: How social identity determines the nature and impact of social support. In J. Jetten, C. Haslam, & S. A. Haslam (Eds.), *The social sure: Identity, health and well-being* (pp. 157–174). Psychology Press.

Haslam, S. A., Reutas, J., Bentley, S. V., McMillan, B., Lindfield, M., Luong, M., Peters, K., & Steffens, N. K. (2023). Developing engaged and 'teamful'leaders: A randomized controlled trial of the 5R identity leadership program. *PLoS One, 18*(5), Article e0286263. https://doi.org/10.1371/journal.pone.0286263

Haslam, S. A., Steffens, N. K., Peters, K., Boyce, R. A., Mallett, C. J., & Fransen, K. (2017). A social identity approach to leadership development: The 5R program. *Journal of Personnel Psychology, 16*, 113–124. https://doi.org/10.1027/1866-5888/a000176

Hayes, A. F., & Preacher, K. J. (2014). Statistical mediation analysis with a multicategorical independent variable. *The British Journal of Mathematical & Statistical Psychology, 67*, 451–470. https://doi.org/10.1111/bmsp.12028

Huang, H., Zhang, L., Dong, W., Tu, L., Tang, H., Liu, S., Chen, H., Xie, N., & Chen, C. (2024). Stigma and loneliness among young and middle-aged stroke survivors: A moderated mediation model of interpersonal sensitivity and resilience. *Journal of Psychiatric and Mental Health Nursing, 31*(4), 596–606. https://doi.org/10.1111/jpm.13016

Jenkins, S. T., Reysen, S., & Katzarska-Miller, I. (2012). Ingroup identification and personality. *Journal of Interpersonal Relations, Intergroup Relations and Identity, 5*(1), 9–16.

Jetten, J., Haslam, S. A., Cruwys, T., Greenaway, K. H., Haslam, C., & Steffens, N. K. (2017). Advancing the social identity approach to health and well-being: Progressing the social cure research agenda. *European Journal of Social Psychology, 47*(7), 789–802.

Keyes, C. L. M. (2009). *Atlanta: Brief description of the mental health continuum short form (MHC-SF)*. http://www.sociology.emory.edu/ckeyes/

Kinnunen, M. L., Metsäpelto, R. L., Feldt, T., Kokko, K., Tolvanen, A., Kinnunen, U., Leppänen, E., & Pulkkinen, L. (2012). Personality profiles and health: Longitudinal evidence among Finnish adults. *Scandinavian Journal of Psychology, 53*(6), 512–522. https://doi.org/10.1111/j.1467-9450.2012.00969.x

Laursen, B., & Hoff, E. (2006). Person-centered and variable-centered approaches to longitudinal data. *Merrill-Palmer Quarterly, 52*(3), 377–389. https://doi.org/10.1353/mpq.2006.0029

Manzi, C., Paderi, F., & Benet-Martinez, V. (2024). Multiple social identities and well-being: Insights from a person-centred approach. *The British Journal of Social Psychology, 63*(2), 792–810. https://doi.org/10.1111/bjso.12704

Merz, E. L., & Roesch, S. C. (2011). A latent profile analysis of the Five Factor Model of personality: Modeling trait interactions. *Personality and Individual Differences, 51*(8), 915–919. https://doi.org/10.1016/j.paid.2011.07.022

Neville, F. G., Templeton, A., Smith, J. R., & Louis, W. R. (2021). Social norms, social identities and the COVID-19 pandemic: Theory and recommendations. *Social and Personality Psychology Compass, 15*(5), Article e12596. https://doi.org/10.1111/spc3.12596

PsychOpen GOLD

Nyland, K. L., Asparouhov, T., & Muthén, B. O. (2007). Deciding on the number of classes in latent class analysis and growth mixture modeling: A Monte Carlo simulation study. *Structural Equation Modeling, 14*(4), 535–569. https://doi.org/10.1080/10705510701575396

Ozer, D. J., & Benet-Martinez, V. (2006). Personality and the prediction of consequential outcomes. *Annual Review of Psychology, 57*(1), 401–421. https://doi.org/10.1146/annurev.psych.57.102904.190127

Reysen, S., Plante, C. N., Roberts, S. E., & Gerbasi, K. C. (2015). A social identity perspective of personality differences between fan and non-fan identities. *WORLD, 2*(1), 91–103. https://doi.org/10.22158/wjssr.v2n1p91

Rius-Ottenheim, N., Kromhout, D., Mast, R. C., Zitman, F. G., Geleijnse, J. M., & Giltay, E. J. (2012). Dispositional optimism and loneliness in older men. *International Journal of Geriatric Psychiatry, 27*(2), 151–159. https://doi.org/10.1002/gps.2701

Sani, F., Madhok, V., Norbury, M., Dugard, P., & Wakefield, J. R. (2015). Greater number of group identifications is associated with healthier behaviour: Evidence from a Scottish community sample. *British Journal of Health Psychology, 20*(3), 466–481. https://doi.org/10.1111/bjhp.12119

Sapmaz, F. (2023). Predictors of subjective well-being: Interpersonal sensitivity, close relationship experiences and academic self-concept. *The Universal Academic Research Journal, 5*(4), 390–405. https://doi.org/10.55236/tuara.1355458

Scheier, M. F., Carver, C. S., & Bridges, M. W. (1994). Distinguishing optimism from neuroticism (and trait anxiety, self-mastery, and self-esteem): A reevaluation of the Life Orientation Test. *Journal of Personality and Social Psychology, 67*(6), Article 1063. https://doi.org/10.1037/0022-3514.67.6.1063

Steffens, N. K., LaRue, C. J., Haslam, C., Walter, Z. C., Cruwys, T., Munt, K. A., Haslam, S. A., Jetten, J., & Tarrant, M. (2021). Social identification-building interventions to improve health: A systematic review and meta-analysis. *Health Psychology Review, 15*(1), 85–112. https://doi.org/10.1080/17437199.2019.1669481

Steffens, N. K., Peters, K., Haslam, S. A., & Platow, M. J. (2018). One of us… and us… and us: Evidence that leaders' multiple identity prototypicality (LMIP) is related to their perceived effectiveness. *Comprehensive Results in Social Psychology, 3*(2), 175–199. https://doi.org/10.1080/23743603.2019.1624156

Strickhouser, J. E., Zell, E., & Krizan, Z. (2017). Does personality predict health and well-being? A metasynthesis. *Health Psychology, 36*(8), 797–810. https://doi.org/10.1037/hea0000475

Tajfel, H., Turner, J. C., Austin, W. G., & Worchel, S. (1979). An integrative theory of intergroup conflict. In M. J. Hatch & M. Schultz (Eds.), *Organizational identity: A reader* (pp. 56–65). https://doi.org/10.1093/oso/9780199269464.003.0005

Tan, C. S., Low, S. K., & Viapude, G. N. (2018). Extraversion and happiness: The mediating role of social support and hope. *PsyCh Journal, 7*(3), 133–143. https://doi.org/10.1002/pchj.220

Tan, E., Small, A., & Lewis, P. (2020). Have a question? Just ask it: Using an anonymous mobile discussion platform for student engagement and peer interaction to support large group teaching. *Research in Learning Technology, 28*, Article 2323. https://doi.org/10.25304/rlt.v28.2323

PsychOpen GOLD

Tein, J. Y., Coxe, S., & Cham, H. (2013). Statistical power to detect the correct number of classes in latent profile analysis. *Structural Equation Modeling, 20*(4), 640–657. https://doi.org/10.1080/10705511.2013.824781

Turner, J. C., Hogg, M. A., Oakes, P. J., Reicher, S. D., & Wetherell, M. S. (1987). *Rediscovering the social group: A self-categorization theory*. Blackwell.

Turner, J. C., & Onorato, R. S. (1999). Social identity, personality, and the self-concept: A self-categorizing perspective. In T. R. Tyler & R. M. Kramer (Eds.), *The psychology of the social self* (pp. 11–46). Lawrence Erlbaum Associates.

Wakefield, J. R., Hopkins, N., Cockburn, C., Shek, K. M., Muirhead, A., Reicher, S., & van Rijswijk, W. (2011). The impact of adopting ethnic or civic conceptions of national 298 belonging for others' treatment. *Personality & Social Psychology Bulletin, 37*(12), 1599–1610. https://doi.org/10.1177/0146167211416131

Wall, H. J., Campbell, C. C., Kaye, L. K., Levy, A., & Bhullar, N. (2019). Personality profiles and persuasion: An exploratory study investigating the role of the Big-5, Type D personality and the Dark Triad on susceptibility to persuasion. *Personality and Individual Differences, 139*, 69–76.

Wedgeworth, M., LaRocca, M. A., Chaplin, W. F., & Scogin, F. (2017). The role of interpersonal sensitivity, social support, and quality of life in rural older adults. *Geriatric Nursing, 38*(1), 22–26. https://doi.org/10.1016/j.gerinurse.2016.07.001

Wilhelm, K., Boyce, P., & Brownhill, S. (2004). The relationship between interpersonal sensitivity, anxiety disorders and major depression. *Journal of Affective Disorders, 79*(1-3), 33–41. https://doi.org/10.1016/S0165-0327(02)00069-1

Williams, L., & Wingate, A. (2012). Type D personality, physical symptoms and subjective stress: The mediating effects of coping and social support. *Psychology & Health, 27*(9), 1075–1085. https://doi.org/10.1080/08870446.2012.667098

Zilberman, N., Yadid, G., Efrati, Y., Neumark, Y., & Rassovsky, Y. (2018). Personality profiles of substance and behavioral addictions. *Addictive Behaviors, 82*, 174–181. https://doi.org/10.1016/j.addbeh.2018.03.007

About the Authors

Robert M. Portman received his PhD from Edge Hill University, UK. His research interests focus on furthering understanding of the social psychology of social mobility. Predominantly, his research investigates factors that shape group attraction, cohesion, and social identification, and how these processes influence beliefs about opportunity and upward mobility.

Sarah F. Allen received her PhD from Northumbria University, UK. Her research interests include the exploration of factors underpinning the development of mental health issues in students, the bidirectional relationship between poor sleep and mental health disorders, and the use of creative and compassionate interventions for improving psychological well-being.

PsychOpen GOLD

Christopher J. Wilson obtained his PhD from the National University of Ireland, Maynooth. He is an experimental psychologist who researches attention, perception and decision-making in relation to gambling and gambling-related harms.

Heather Clements received her PhD from the University of the West of Scotland. Heather's research interests are largely within the field of interspecies relations and green/blue spaces. She is currently working on developing a programme of research regarding social identification with animals.

Judith Eberhardt received her PhD from Teesside University. Her research focuses on health psychology and public health, covering preventative health behaviours, health in ethnic minority populations, and psychosocial aspects of long-term conditions. Through her work, she aims to contribute to helping people lead healthier, longer, and happier lives.

Andrew R. Levy received his PhD from the University of Hull. His research focuses on how behaviour change theory can be translated into practical approaches that help people living with and beyond illness, with a particular emphasis on head and neck cancer. He works in multidisciplinary teams to ensure that behaviour change strategies are not only grounded in theory but also shaped by the experiences and needs of those who deliver and receive care.

PsychOpen GOLD