

Beliefs, attitudes and intentions towards environmental issues: The role of self-compassion and wellbeing

Abstract

The aim of this study was to explore the role of self-compassion and wellbeing in relation to global warming as a core environmental issue. A total of 490 emerging adults, (221 male and 269 female) aged from 18-22 ($M=19.06$, $Sd=1.36$), took part in an online survey measuring attitudes, beliefs, and intentions regarding global warming, self-compassion and wellbeing. Results showed those with more positive beliefs, attitudes and intentions towards the environment scored higher on self-compassion and wellbeing. It is suggested that self-compassion and wellbeing are linked to positive attitudes, beliefs and intentions towards the environment in a relationship of reciprocal causality. In conclusion this research suggests that this relationship could be exploited as part of changing environmental behaviour.

Keywords: self-compassion, wellbeing, global warming, attitudes, beliefs, intentions

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Introduction

Anthropocene is the name given to the present period of time in which humans have had a significant impact on the earth's systems, by increasing greenhouse gases, ocean acidification and biodiversity loss.^{1,2} One of the main problems for the environment, caused by humans, is the increasing use of plastic. Worldwide yearly consumption of plastic has reached 320 million tonnes, with only a small portion being recycled or incinerated, as most of it will likely be discarded into landfill sites or littered into the natural environment.³ Famously reported on the news is the Great Pacific Garbage Patch, which is essentially where all the waste from littering or dumping has collected together. Not only does this plastic waste negatively impact the environment, but also the economy and human health. It is important that we work to save our planet so that we can secure the planet's future, and our own future.

In order to solve this problem, political, economic and scientific interventions need to be put in place.⁴ To help the planet it is crucial that individuals recognise that it is their actions that can help or destroy the planet. The more people reduce their energy demand and move towards sustainable energy sources, as well as consciously reducing their plastic use, the more we will help the planet.⁵

Within the field of psychology, Environmental Psychology is tackling the problem of environmental change by carrying out studies and developing frameworks to understand why people act pro-environmentally, and how to get more people to do so.⁶

Some of the key areas of research include a focus on the relationship between attitudes and knowledge on environmental issues. According to research conducted by Christensen and Knezek⁷ the first step to acting pro-environmentally is to believe in environmental change. In their study they carried out research on students based on the Theory of Planned Behaviour. They found that an individual's belief in climate change had a positive impact on their intention to act positively towards the environment. This suggests that in order to promote pro-environmental behaviours, people must believe that the threat we pose on our planet is real. Kollmuss and Agyeman⁸ argued that environmental knowledge is important in shaping emotional involvement, awareness and attitude. Furthermore, Le Hebel⁹ conducted

a study which found that those who had more awareness/education of environmental issues showed more support to environmental preservation.

Landry¹⁰ found that those who had a concern for the environment but chose not to act on these concerns had the trait of learned helplessness. This suggests that learned helplessness is a barrier to people behaving pro-environmentally, despite concerns for the environment. The implication of these findings is that fear-inducing tactics intended to promote pro-environmental behaviour may instead promote learned helplessness, thereby decreasing the likelihood of pro-environmental behaviour.

As well as research on the relationship between attitudes and knowledge on environmental issues when behaving pro-environmentally, another key research area is the relationship between individual's values and their actions. Schultz et al.,¹¹ found that people's actions towards the environment varied based on their values, that is, whether they were egotistic (concern for self), altruistic (concern for other people) or biospheric (concern for plants and animals). They found that egotistic individuals performed less pro-environmental behaviours, whereas those who were biospheric performed the most pro-environmental behaviours. These results suggest that altruistic and biospheric individuals are more likely to act positively towards the environment.¹² Research conducted by De Dominicis¹³ found that egotistic individuals could be motivated to engage in pro-environmental behaviours.

In relation to whether a person considers themselves to be egotistic, altruistic or biospheric, previous research has suggested that altruistic behaviour promotes mental well-being, and those who are considered to be more biospheric reduce anxiety and depressive levels by carrying out positive actions towards the environment.^{14,15} If altruistic and biospheric individuals are more likely to act positively towards the environment, perhaps a way of encouraging these behaviours would be to promote the effect they have on mental well-being. In fact, promoting the positive effect doing something good for the environment can have on mental well-being could also encourage egotistic individuals, who wish to improve their mental well-being, to act pro-environmentally.

If behaving pro-environmentally can have a positive effect on mental well-being, it is also worth considering if being more self-compassionate is a mediator in this behaviour. Self-compassion is a relatively new concept is not to be confused with being egotistic.¹⁶ Neff states that self-compassion is treating yourself with the care and support you need when/ if you are suffering. Self-compassion consists of three central components; self-kindness versus self-judgment, common humanity versus isolation, and mindfulness versus overidentification. These three components then interact and combine with one another to create a self-compassionate frame of mind when we encounter difficulties in life.¹⁶ Studies have suggested that self-compassion is related to positive mental well-being. Those who score higher on the Self-Compassion Scale (SCS) have been linked to higher levels of happiness, optimism, life satisfaction, body appreciation, perceived competence, and motivation.¹⁷

A self-compassionate individual is seeking to have positive mental wellbeing and may therefore behave pro-environmentally in order to do so. On the other hand, a self-compassionate individual seeks common humanity, therefore motivating them to behave pro-environmentally. Basically, a self-compassionate individual may behave pro-environmentally in order to reach positive mental well-being, or they may already have reached their positive mental well-being potential and are behaving pro-environmentally because it is a part of their self-compassionate identity of being mindful.

Many interventions that are already in place to promote pro-environmental behaviour use informational or structural strategies. Informational strategies aim to increase an individual's knowledge on environmental issues so as to make them more aware of the seriousness of the threat, thereby hoping to motivate pro-environmental behaviours. They also aim at changing motivations, perceptions and norms. However, despite a multitude of messages the effect on behaviour has been disappointing. Structural strategies aim at changing actual external barriers which can ultimately prevent an individual from behaving pro-environmentally. This can be through changing the availability and costs of things such as plastic bags, or through promoting the benefits of alternatives such as reusing better quality bags when shopping. Structural strategies also aim at making more environmentally harmful choices less feasible, such as pedestrianising town centres to reduce the amount of motor traffic; they reward 'good' behaviour and punish 'bad' behaviour.¹⁸

Rewarding good behaviour has been shown numerous times to increase the likelihood of that behaviour being repeated, and people want to perform behaviours they know they will reward from.¹⁹ As mentioned previously, behaving pro-environmentally has been shown to increase mental well-being;^{14,15} it would therefore seem that promoting pro-environmental behaviours as beneficial to mental well-being could also be used alongside other informational strategies as an intervention to motivate people to help the environment.

The argument herein presented is that informational and structural approaches have an impact on environmental attitudes and behaviour, but they are limited. An overload of information can result in messages being ignored, or in 'compassion fatigue'. Compassion fatigue is defined as reduced capacity of interest in being empathic and is generally applied to health care givers.²⁰ The construct is not without difficulty as the literature often fails to distinguish it from burnout, secondary traumatic stress, and vicarious traumatisation.²¹ It has been applied also in the area of attitudes towards homelessness²² and in relation to communications about social problems,²³ and would seem to be usefully applied to attitudes towards the environment. Self-compassion has been shown to mediate compassion fatigue.²⁴ Based on

the research reviewed the aim of this study was to explore the role of self-compassion and wellbeing in relations to attitudes and concerns about environmental issues. Specifically, a model of the relationships is proposed as shown in Figure 1.

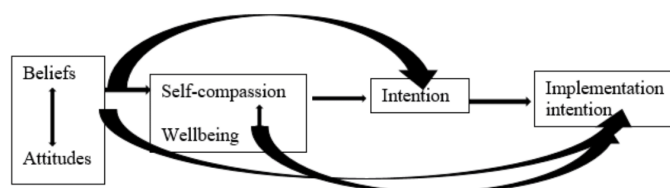


Figure 1 Path Model of the relationship between self-compassion and wellbeing, and environmental concern.

Methods

Participants: A total of 490 emerging adults, 221 male, 269 female ages ranged from 18-22 ($M=19.06$, $Sd=1.36$), took part in this survey. Of these 200 were students and 290 were non-students. In terms of location, 216 were urban dwellers and 274 lived in a rural area.

Materials: Participants completed a demographic section on age, sex and area of dwelling, before going on to complete the following standard measures. The Climate Change Attitude Survey (CCAS;⁷): This is a 15-item measure composing two dimensions, beliefs (9 items) about climate change, and intentions (6 items) to act on climate change. In this data the Cronbach Alphas were, beliefs ($\alpha = .78$), and Intentions ($\alpha = .77$). All items were scored on a 5-point Likert scale from strongly agree to strongly disagree. Examples of belief items are *I believe our climate is changing* and *Human activities cause global climate change*. Examples of intention items are *I can do my part to make the world a better place for future generations* and *Things I do have no effect on the quality of the environment*.

The New Ecological Paradigm Measure (NEP):²⁵ This is a 15-item measure designed to measure individuals concerns about the environment and was used here to provide a measure of attitudes. Each item is scored on a 5-point Likert scale from strongly agree to strongly disagree. In our data the scale had a Cronbach Alpha of .75. Examples of items are, *Humans have the right to modify the natural environment to suit their needs* and *The so-called "ecological crisis" facing humankind has been greatly exaggerated*. The Self-Compassion Scale - Short Form (SCS-SF).²⁶ This is a 12-item scale abbreviated from the original 26 item scale by Neff. Each item was scored on a 5-point Likert scale ranging from almost always to almost never. The composite scale has a Cronbach Alpha of .86 in this data. Examples of items are, *I try to see my failings as part of the human condition* and *When something upsets me, I try to keep my emotions in balance*.

The Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS):²⁷ This scale consists of 14 statements about thoughts and feelings. The items are scored on a 5-point scale from (1) 'none of the time', (2) 'rarely', (3) 'some of the time', (4) 'often' and finally (5) 'all of the time'. The scale has a Cronbach Alpha of .87 in this data. Examples of items are, *I've been feeling optimistic about the future* and *I've been feeling confident*. Implementation Intentions: We used 4-items from the International Social Survey Programme (ISSP;²⁸). These were,

- I do what is right for the environment, even when it costs more money or takes more time;
- I would be willing to accept cuts in my standard of living in order to protect the environment;
- I would be willing to pay much higher prices in order to protect the environment;

d. and I would be willing to pay much higher taxes in order to protect the environment.

The items as a composite had a Cronbach Alpha of .86. The concept of implementation intentions was introduced by Gollwitzer²⁹ in response to the limited success of goal intentions to predict behaviour change. The argument was that moving beyond simple intentions to more specific plans would be a better predictor of behaviour change, and the evidence has been supportive.³⁰ While the four items used here may not reflect the if-then model proposed by these researchers, they do reflect something beyond just a general intention in that they specify behaviours that the individual would be willing to undertake.

Procedure: The above measures were presented in an online survey using the Qualtrics platform following ethical approval from the School of Psychology Ethics Committee. Participants were presented with an information sheet which they read before completing a tick box consent form and then going on to complete the questionnaire. The target sample was emerging adults aged between 18-25 years and

they were invited to participate via social media platforms and e-mail. The e-mail sample were university students. A snowball approach was used as participants were asked to forward the invitation to friends. The sample were self-selecting, so a response rate is not possible. Data was analysed using SPSS 25 and AMOS 25 software and via Correlation, Regression and Path Analysis.

Results

The aim of this study was to explore the role of self-compassion and wellbeing in relations to attitudes and concerns about environmental issues. In particular to test the model of the relationship between beliefs, attitudes, intentions and implementation intentions towards climate change and self-compassion and wellbeing as shown in Figure 1.

First descriptive statistics and correlations were calculated and are shown in Table 1&2.

Table 1 Descriptive statistics and bivariate correlations for study variables

	Mean (Sd)	1	2	3	4	5
Wellbeing	46.32 (9.83)					
Self-compassion	3.198 (0.50)	.69**				
Beliefs	17.89 (7.35)	.36**	.26**			
Attitudes	22.57 (7.81)	.39**	.43**	.47**		
Intentions	20.73 (5.03)	.47**	.39**	.21**	.44**	
Implementation intention	10.89 (3.48)	.55**	.47**	.40**	.37**	.40**

*p <.01 ** p<.001

Table 2 HMRA to identify the predictors of implementation intention

Dependent Variable: Implementation intention	Total R ² = .41	B	SE B	β
Sex		.315	.250	.045
Student versus nonstudent		-.486	.323	-.069
Rural versus Urban		-.626	.244	-.089**
Beliefs		.069	.023	.146**
Attitudes		.005	.020	.011
Intentions		.115	.030	.166***
Self-compassion		.210	.043	.181***
Wellbeing		.130	.015	.368***
Dependent variable: Wellbeing	Total R ² = .34	B	SE B	β
Sex		-2.681	.738	-.136***
Student versus nonstudent		.010	.966	.001
Rural versus Urban		-.179	.731	-.009
Beliefs		.313	.067	.234***
Attitudes		.118	.059	.094*
Intentions		.790	.081	.404***
Self-compassion		.420	.126	.128***
Dependent variable: Self-compassion	Total R ² = .09	B	SE B	β
Sex		.213	.266	.035
Student versus nonstudent		-.721	.347	-.118*
Rural versus Urban		-.109	.264	-.018
Beliefs		-.002	.024	-.005
Attitudes		.100	.021	.259***
Intentions		-.023	.029	-.039
Dependent variable: Intentions	Total R ² = .21	B	SE B	β
Sex		.878	.412	.087*
Student versus nonstudent		1.459	.535	.143**
Rural versus Urban		.550	.409	.054
Beliefs		.063	.038	.092
Attitudes		.279	.030	.433***

Table 2 Continued...

Dependent variable: Attitudes	Total R ² = .24	B	Std. Error	Beta
Sex		1.446	.624	.092*
Student versus nonstudent		-2.265	.809	-.143**
Rural versus Urban		1.148	.622	.073
Beliefs		.387	.054	.365***
Dependent Variable: Beliefs	Total R ² = .40	B	Std. Error	Beta
Sex		1.171	.518	.079*
Student versus nonstudent		-9.384	.523	-.628***
Rural versus Urban		-.169	.518	-.011

* p < .05. ** p < .01 *** p < .001

The correlations do support the contention of a relationship between the variables and an initial test of the model. Wellbeing was directly correlated with self-compassion (r=.69, p<.001), beliefs (r=.36, p<.001), attitudes (r=.39, p<.001), intentions (r=.47, p<.001) and implementation intentions (r=.55, p<.001). Self-compassion was directly correlated with beliefs (r=.26, p<.001), attitudes (r=.43, p<.001), intentions (r=.39, p<.001) and implementation intentions (r=.47, p<.001).

Next Hierarchical Multiple Regression analysis (HMRA) was conducted to test the relationships more robustly. The first HMRA entered implementation intentions as the dependent variable and beliefs on the first step as a predictor variable. It accounted for 16% of the variance in implementation intentions (β = .404, p<.001). Attitudes was entered on the second step and accounted for an additional 4% of variance (β = .238, p<.001). Next self-compassion was entered and accounted for 11% of the variance (β = .360, p<.001). Next wellbeing was entered and added 6% to the explained variance (β = .347, p<.001). Finally, intention was entered and added 2% variance (β = .143, p<.001). When self-compassion, wellbeing and intentions were added on each step the partial correlation for attitudes was reduced to non-significance suggesting some mediational effect.

The second HMRA entered wellbeing as the dependent variable and again beliefs on the first step as a predictor variable. It accounted for 13% of the variance in wellbeing (β = .358, p<.001). Attitudes was entered on the second step and accounted for an additional 6% of variance (β = .280, p<.001). Next intention was entered and accounted for 11% of the variance (β = .373, p<.001). Next implementation intention was entered and added 10% to the explained variance (β = .367, p<.001). Finally, self-compassion was entered and added 18% variance (β = .507, p<.001). When implementation intention was added the partial correlation for attitudes was reduced to non-significance suggesting some mediational effect.

Both the correlations and HMRA support the relationships proposed so the final analysis used path modelling with the Structural Equation Modelling programme on AMOS 25 to test both proposed models.

Firstly, the model with implementation intentions as the outcome (see Figure 2) was shown to be a very good fit for the data. For the model to be a good fit for the data the chi-square should be non-significant, or the Chi-square divided by the degrees of freedom (CMIN/DF) should be less than 3. In addition, the comparative fit index (CFI), the normed fit index (NFI), and the incremental fit index (IFI) should be greater than .95, the Root Mean Square Error of Approximation (RMSEA) should be less than .08, and PCLOSE should not be significant. Fit statistics were Chi-square (3) = 5.445, p=.142, CMIN/DF = 1.815, NFI=.99, IFI=.99, CFI=.99, RMSEA=.04, PCLOSE = .529. The second model with wellbeing as the outcome was next tested (see Figure 3). Fit statistics for this model were Chi-square (2) = 3.251, p=.197, CMIN/DF = 1.626, NFI=.99, IFI=.99, CFI=.99, RM-

SEA=.03, PCLOSE = .532. Again, the model was an equally good fit for the data. While this was cross sectional data it looks likely that reciprocal relations of causality exist.

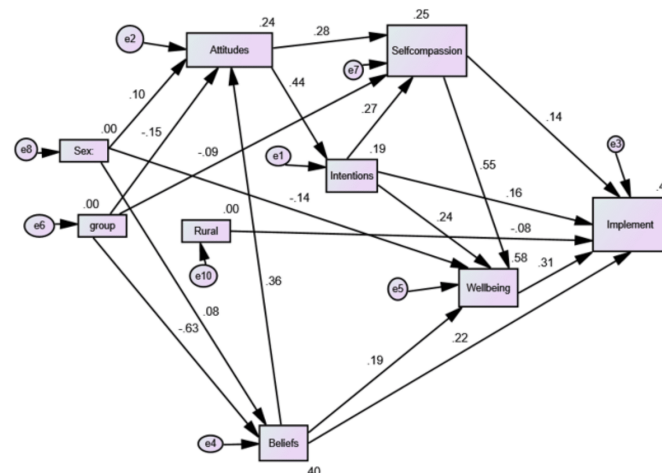


Figure 2 Path model of the predictors of Implementation intentions.

Discussion

The aim of this study was to explore the role of self-compassion and wellbeing in relations to attitudes and concerns about environmental issues. In particular to test two potential models of the relationship between beliefs, attitudes, intentions and implementation intentions towards climate change and self-compassion and wellbeing as shown in Figure 1. The several analyses conducted all support a significant relationship between self-compassion and wellbeing, and beliefs, attitudes, intentions, and implementation intentions regarding climate change. Previous studies have found that attitudes and beliefs are important when considering how individuals act towards the environment.^{7,11} Leviston,³¹ draw on Maslow’s hierarchy of needs to explain why those who have a higher wellbeing had more positive attitudes, beliefs and intentions towards the environment and vice versa. They state that basic needs and deficiency needs within Maslow’s hierarchy of needs are ultimately dependent upon the environment. For example, the basic needs of food, water and air, and the deficiency needs of safety, affection and belonging, could be altered by changes in the environment due to human damage. This would mean that basic needs and deficiency needs are not being met, hindering an individual from achieving self-actualisation.³²

As mentioned previously in this study, learned helplessness is a major factor which can hinder people from behaving pro-environmentally;¹⁰ this is because they lack the hope that in acting pro-environmentally there is still time to reverse the damage that has been done to the planet. Interestingly in relation to our findings that self-compassionate individuals are more likely to have positive beliefs

and intentions towards the environment, Yang,³³ found from their research study that being self-compassionate was positively associated with hope and life satisfaction. It could be suggested that individuals who score higher on self-compassion are more hopeful, therefore influencing their beliefs and intentions towards the environment. Self-compassionate individuals having a higher level of life satisfaction could be associated with also having a higher level of wellbeing. The thorny question remains regarding direction of causality which cannot be fully answered in cross sectional data. However, the path models suggest that the relationships are significant in both directions suggesting reciprocal relations of causality.

Further suggestions for future research in this area include investigating a possible link between being Biospheric and self-compassion, investigating both self-compassion and learned helplessness in regards to pro-environmental behaviour and wellbeing, and repeating the current study with participants over a period of time and measuring actual behaviour, in order to investigate the direction of causality. Overall, the research conducted is of significant importance due to continuously rising concern for the planet. It is crucial that psychologists conduct studies and develop frameworks to understand why people act pro-environmentally, and how to get more people to do so.⁶

The current study set out to investigate the relationship between attitudes to the environment and mental wellbeing, while considering self-compassion as a mediator. These results indicate that having positive attitudes, beliefs and intentions towards the environment result in a more positive wellbeing, and that being self-compassionate is a mediator. The implications of these results include promoting pro-environmental behaviour as a potential way of increasing wellbeing, which will in turn benefit the planet. Another implication is support for increasing awareness and concern, which is an informational strategy to promote pro-environmental behaviours.¹⁸ An example of the effectiveness of this method, as mentioned previously, can be found in the 'Attenborough Effect', in which the BBC series 'Blue Planet' influenced an increase in public recycling behaviour and climate change searches on Google.³⁴

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This study was approved by the School of Psychology Ethics Committee.

Conflicts of interest

I wish to declare for myself and on behalf of my co-authors that there are no conflicts of interest.

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References

- Fagan M. On the dangers of an Anthropocene epoch: Geological time, political time and post-human politics. *Political Geography*. 2019;70:55–63.
- Mackay AW. Anthropocene epoch. In: JD Wright, editor. *International Encyclopaedia of the Social & Behavioral Sciences*, 2nd ed. Elsevier. 2015. p. 722–727.
- Lebreton L, Slat B, Ferrari F, et al. Evidence that the Great Pacific garbage patch is rapidly accumulating plastic. *Scientific Reports*. 2018;8(1):4666.
- Leal Filho W, Havea PH, Balogun AL, et al. Plastic debris on Pacific Islands: Ecological and health implications. *Science of the Total Environment*. 2019;670:181–187.
- Brown P. Narrative: An ontology, epistemology and methodology for pro-environmental psychology research. *Energy Research & Social Science*. 2017;31:215–222.
- Jagers SC, Martinsson J, Matti S. The environmental psychology of the ecological citizen: comparing competing models of pro-environmental behavior. *Social Science Quarterly*. 2016;97(5):1005–1022.
- Christensen R, Knezek G. The climate change attitude survey: measuring middle school student beliefs and intentions to enact positive environmental change. *International Journal of Environmental and Science Education*. 2015;10(5):773–788.
- Kollmuss A, Agyeman J. Mind the gap: why do people act environmentally and what are the barriers to pro-environmental behavior?. *Environmental Education Research*. 2002;8(3):239–260.
- Le Hebel F, Montpied P, Fontanieu V. What can influence students' environmental attitudes? Results from a study of 15-year-old students in France. *International Journal of Environmental and Science Education*. 2014;9(3):329–345.
- Landry N, Gifford R, Milfont TL, et al. Learned helplessness moderates the relationship between environmental concern and behavior. *Journal of Environmental Psychology*. 2018;55:18–22.
- Schultz PW, Gouveia VV, Cameron LD, et al. Values and their relationship to environmental concern and conservation behavior. *Journal of Cross-cultural Psychology*. 2005;36(4):457–475.
- Pfattheicher S, Sassenrath C, Schindler S. Feelings for the suffering of others and the environment: Compassion fosters proenvironmental tendencies. *Environment and Behavior*. 2016;48(7):929–945.
- De Dominicis S, Schultz P, Bonaiuto M. Protecting the environment for self-interested reasons: Altruism is not the only pathway to sustainability. *Frontiers in Psychology*. 2017;8:1065.
- London P, Bower RK. Altruism, extraversion, and mental illness. *The Journal of Social Psychology*. 1968;76(1):19–30.
- Helm SV, Pollitt A, Barnett MA, et al. Differentiating environmental concern in the context of psychological adaptation to climate change. *Global Environmental Change*. 2018;48:158–167.
- Neff KD, Knox MC. Self-compassion. In: V Zeigler-Hill, TK Shackelford, editors. *Encyclopedia of Personality and Individual Differences*. 2017;1–8.
- Neff K, Germer C. Self-compassion and psychological. *The Oxford handbook of compassion science*. 2017. p. 371–385.
- Steg L, Vlek C. Encouraging pro-environmental behaviour: An integrative review and research agenda. *Journal of Environmental Psychology*. 2009;29(3):309–317.
- Aunger R, Curtis V. Behaviour centred design: towards an applied science of behaviour change. *Health Psychology Review*. 2016;10(4):425–446.
- Seppälä E, Simon-Thomas E, Brown S, et al. Compassion fatigue resilience. In the Oxford handbook of compassion science: Oxford University Press; 2020.
- Sinclair S, Raffin-Bouchal S, Venturato L, et al. Compassion fatigue: A meta-narrative review of the healthcare literature. *International Journal of Nursing Studies*. 2017;69:9–24.
- Link BG, Schwartz S, Moore R, et al. Public knowledge, attitudes, and beliefs about homeless people: Evidence for compassion fatigue? *American Journal of Community Psychology*. 1995;23(4):533–555.
- Kinnick K, Krugman D, Cameron G. Compassion fatigue: communication and burnout toward social problems. *Journalism & Mass Communication Quarterly*. 1996;73(3):687–707.
- Upton KV. An investigation into compassion fatigue and self-compassion in acute medical care hospital nurses: a mixed methods study. *Journal of Compassionate Health Care*. 2018;5:7.

25. Anderson MW. The new ecological paradigm, NEP scale. The Berkshire encyclopedia of sustainability: *Measurements, Indicators and Research Methods for Sustainability*. 2012. p. 260–262.
26. Raes F, Pommier E, Neff KD, et al. Construction and factorial validation of a short form of the self-compassion scale. *Clinical Psychology & Psychotherapy*. 2011;18(3):250–255.
27. Tennant R, Hiller L, Fishwick R, et al. The Warwick–Edinburgh mental well-being scale (WEMWBS): development and UK validation. *Health and Quality of Life Outcomes*. 2007;5(1):63.
28. Franzen A, Vogl D. Two decades of measuring environmental attitudes: A comparative analysis of 33 countries. *Global Environmental Change*. 2013;23(5):1001–1008.
29. Gollwitzer PM. Goal achievement: The role of intentions. *European Review of Social Psychology*. 1993;4:141–185.
30. Gollwitzer PM, Sheeran P. Implementation intentions and goal achievement: A meta-analysis of effects and processes. *Advances in Experimental Social Psychology*. 2006;38:69–119.
31. Leviston Z, Walker I, Green M, et al. Linkages between ecosystem services and human wellbeing: A Nexus Webs approach. *Ecological indicators*. 2018;93:658–668.
32. Neher A. Maslow's theory of motivation: A critique. *Journal of Humanistic Psychology*. 1991;31(3):89–112.
33. Yang Y, Zhang M, Kou Y. Self-compassion and life satisfaction: The mediating role of hope. *Personality and Individual Differences*. 2016;98:91–95.
34. Hafner RJ, Elmes D, Read D. Promoting behavioural change to reduce thermal energy demand in households: A review. *Renewable and Sustainable Energy Reviews*. 2019;102:205–214.