Report of empirical study

HEALTH PSYCHOLOGY OPEN

Health Psychology Open
July-December 2017: 1–6

DOI: 10.1177/2055102917719564
journals.sagepub.com/home/hpo
SAGE

Two sides of the same coin and two routes for improvement: Integrating resilience and the social identity approach to well-being and ill-health

Rolf Van Dick[1,2], Charlene Ketturat[3], Jan Alexander Häusser[4] and Andreas Mojzisch[3]

Abstract

We propose that resilience effectively helps people cope with stress, thus predominantly reducing the negative. However, we argue that individuals' social identification has the potential to contribute to their well-being, thus fostering the positive. A two-wave survey study of 180 students shows that resilience is more strongly (negatively) associated with ill-health (i.e. stress and depression), whereas social identification is more strongly (positively) related to well-being (i.e. satisfaction and work engagement). We believe that it is necessary to see these two routes to improving people's health as complementary, both in future research and for therapy and interventions.

Keywords

health, positive and negative well-being, resilience, social identification, social identity approach

What do you do when you have an aching tooth or a hurting leg? Of course, you would go and see a dentist or a doctor. But what do you do when you are feeling physically okay but you want to get into a more positive mood? Your first thought is probably not to seek help from a physician.

For a long time, psychologists have focused on negative mental states and developed, practiced, and evaluated therapies for curing these states. When introducing positive psychology, Seligman (2002) strongly demanded that psychology should focus more on positive well-being. Rather than just trying to get people from −5 back to the 0 line, we should aim at getting them to +5. In this article, we will present two routes to better health, each focusing on one specific aspect. On one hand, we will discuss resilience as an individual difference factor that helps people cope with stress and prevents them from becoming ill. On the other hand, we suggest that social identification with teams and groups provides a social cure (Jetten et al., 2012) that helps people maintain happy and engaged lives beyond the mere absence of ill-health. More specifically, our study aimed to extend previous research by testing, for the first time, the hypothesis that resilience as an individual difference variable helps people cope with stress—that is, reducing the negative—whereas social identification with groups helps people to achieve a satisfactory life and increase their well-being—that is, fostering the positive.

Resilience and well-being

Stress-related illness represents one of the biggest challenges to modern societies, but there is mounting evidence that individuals substantially vary in how they react to stressors. When facing daily hassles such as time pressure (see Cassidy, 2000; Kanner et al., 1981), or critical life events such as job loss or a divorce, some people develop mental illnesses such as depression or anxiety disorders. Other people, however, do not show such negative reactions to similar stressors. In other words, some

[1]Goethe University Frankfurt, Germany
[2]Work Research Institute (AFI), Oslo, Norway
[3]University of Hildesheim, Germany
[4]Justus Liebig University Giessen, Germany

Corresponding author:
Rolf Van Dick, Department of Social Psychology, Goethe University Frankfurt, Theodor-W.-Adorno-Platz 6, 60323 Frankfurt am Main, Germany.
Email: van.dick@psych.uni-frankfurt.de

individuals seem to be resilient against stressors and they apparently have the biological, social, or psychological resources to cope with such negative experiences. Luthans et al. (2007) defined resilience as the "capacity to rebound or bounce back from adversity, conflict, or failure" (p. 18). It is one of the core concepts of positive psychology that has been studied and found to be predictive of people's health—even under stressful circumstances. Gloria and Steinhardt (2016), for instance, found a buffering effect of resilience on the relation between stress and anxiety and depression. Shamaskin-Garroway et al. (2016) found more adjustment to effects of Parkinson's disease, and Yi-Frazier et al. (2015) found among diabetes patients that high resilience was associated with less distress, better glycemic control, and the use of more adaptive coping strategies.

A recent meta-analysis by Hu et al. (2015) summarized 60 studies with a total of 111 effect sizes and looked at the relation between trait resilience and health-related variables. The analyses revealed an average effect of −.36 between resilience and negative indicators of well-being (i.e. depression, anxiety, and negative affect). The authors also identified positive relations between resilience and general life satisfaction and positive affect but no measures of domain-specific satisfaction or work engagement were included in the analyses. We found only one study that has investigated the relationship between resilience and work engagement by Mache et al. (2014) who reported a positive correlation in a cross-sectional survey of medical doctors in Germany. In line with the definition of Luthans et al. (2007), which suggests that resilience shows a buffering effect in the occurrence of negative event, Hu et al. (2015) also found that adversity was moderating the resilience-ill-health effect. That is, resilience was more strongly (negatively) related to ill-health in times of adversity. In this study, we further explore the idea of resilience as a variable that helps people cope with stress and thus reduces ill-health.

Social identity and well-being

The social identity approach (cf. Haslam, 2004; Jetten et al., 2012) states that groups that provide us with a sense of belonging are good for health and well-being. The theoretical foundation for these beneficial effects is derived from social identity theory (Tajfel and Turner, 1979) and self-categorization theory (Turner, 1985). A key idea of these theories is that when individuals identify with groups, they have a common perspective and coordinate their behavior with respect to group norms. This also leads to providing and receiving more social support which in turn helps developing a stronger sense of collective self-efficacy (e.g. Avanzi et al., 2015; see also Blecharz et al., 2014 for the mediating role of collective efficacy between motivational climate and the well-being of athletes). In addition, it has been proposed that a shared social identity serves as a basis for a more favorable interpretation of social support (Haslam et al., 2012). In line with this notion, it has been found that social support has more positive effects if the provider and recipient of support share a social identity (Frisch et al., 2014). Above and beyond this potential to better cope with stressors due to more support and higher self-efficacy, social identification should also lead to greater well-being because it satisfies basic human needs for belonging and affiliation, certainty, and safety (e.g. Greenaway et al., 2016; Ketturat et al., 2016). The importance of social relationships for well-being has also been suggested by Rusk and Waters (2015) in their psycho-social system approach and by Stavrova and Luhmann (2016) who found that collective connectedness was related to a higher sense of meaning in life and vice versa. Along similar lines, Stok et al. (2014) showed that participants who identified strongly with groups with pro-health norms had higher vegetable consumption. On one hand, one would predict such positive effects of shared group identities and high identification only if the respective group is supportive and promotes healthy living norms (e.g. Sani et al., 2015). Group membership may, on the other hand, harm well-being when the group norms prescribe unhealthy behaviors (e.g. binge drinking, see Gardner et al., 2012), or when relations between members in a group are toxic and hostile.

Steffens et al. (2017) have recently provided meta-analytic evidence that identification in organizational contexts is indeed related to people's health. Importantly, these authors also argued that identification should be more closely related to the presence of well-being rather than to the absence of stress because "high social identification is generally construed to be a basis for *experiencing positive outcomes* (e.g. support, belonging, control, agency) rather than to be a basis for *avoiding negative outcomes*" (Steffens et al., 2017: 11–12). We further investigated this idea in a longitudinal study with students at the beginning and at the (generally more stressful) end of the academic term.

Hypotheses

Building on existing theory and research, we predict the following:

Hypothesis 1. Students' resilience at the beginning of the academic term will positively relate to (a) study satisfaction and (b) work engagement, and negatively relate to (c) anxiety and depression and (d) chronic stress 3 months later.

Hypothesis 2. Students' social identification at the beginning of the academic term will positively relate to (a) study satisfaction and (b) work engagement, and negatively relate to (c) anxiety and depression and (d) chronic stress 3 months later.

Furthermore, we predict that resilience is more closely related to ill-health rather than well-being. This should be the case because the definition of resilience involves some adversity and coping with it. Resilience thus buffers negative effects of stressors and should help people not getting ill from such adversity. Identification, on the other hand, not only helps activating social support resources and foster collective self-efficacy but also exerts a main effect on people's health because of its function to satisfy people's needs for belonging, affiliation, and safety:

Hypothesis 3a. Resilience will be more strongly related to measures of ill-health than to measures of well-being.

Hypothesis 3b. Social identification will be more strongly related to measures of well-being than to measures of ill-health.

Methods

Sample and procedure

We used an online survey to measure the study concepts. In introductory lectures, we approached students in Bachelor and Master programs of various disciplines at the beginning of the academic term and informed them about the purpose and design of this study. We explained that the data were collected anonymously and that participation was voluntary. A total of 235 students participated in the first wave and provided an individual code so that we could match the data at the second wave, 3 months later. For the second wave, we chose a time around the end-of-term exams which should be perceived as stressful by students (see for an analysis of stress among undergraduate and graduate students: Bedewy and Gabriel, 2015). At time 2, 180 students participated again and formed the basis of our analyses. Of these, 91.7 percent were female, average age was 22 years (standard deviation (*SD*) = 5 years) and 79 percent were first year students.

Measures

At time 1, we measured the dependent variables, namely, identification and resilience. *Social identification* with fellow students, lecturers, and the university were measured adopting items from Doosje et al. (1995) and Mael and Ashforth (1992). We provided the items with a 7-point answering scale (endpoints "completely agree" and "completely disagree," sample item: "I feel strong ties with other students in my program"). Altogether, 14 items were used and collapsed into one scale. We measured *resilience* using the Brief Resilience Scale (Smith et al., 2008) with six items (sample item: "I tend to bounce back quickly after hard times") and the same answering scale as for identification.

At time 2, we measured all dependent variables. We measured students' *study satisfaction* with five items adapted from Holm-Hadulla and Hofmann (2007). The items asked for satisfaction with several aspects such as the general study conditions or one's personal study situation (5-point answering scales with endpoints "very dissatisfied" and "very satisfied").

Work engagement was measured using the 17-item Utrecht Work Engagement Scale (Schaufeli et al., 2006; 7-point answering scale with endpoints "never" and "always," sample items: "At my work, I feel bursting with energy," "I find the work that I do full of meaning and purpose," "Time flies when I am working").

Chronic stress was measured with the Trier Inventory for Chronic Stress (TICS) screening scale (Schulz et al., 2004) comprising 12 items and a 5-point answering scale (endpoints "never" and "very often," sample items: "I find it difficult to ignore negative thoughts and stop worrying," "Despite my best efforts, my work finds no recognition").

Finally, *depression and anxiety* were measured with four items of the Patient Health Questionnaire-4 (PHQ-4) (Kroenke et al., 2009; 4-point answering scale with endpoints "never" and "almost daily," sample item: "Over the past two weeks, I experienced little interest and enjoyment in my work").

Results

Table 1 provides means, standard deviations, scale intercorrelations, and Cronbach's alphas. First, we used confirmatory factor analysis using MPlus 7 to test whether the four dependent variables form distinctive factors. For the latent factor of depression/anxiety, we used four and for the latent factor of satisfaction, we used five variables as indicators. For the latent factors of work engagement and stress, we used parceling and combined half of the items into one indicator each (i.e. two parcels for engagement and two for stress). As expected, a model comprising four latent variables with two second-order factors, namely, one factor for ill-health (comprising stress and depression/anxiety) and a second factor for well-being (comprising satisfaction and engagement), fit the data best ($\chi^2 = 125.02$, degree of freedom (*df*) = 60, $p < .05$; comparative fit index (CFI) = .94; Tucker–Lewis index (TLI) = .92; root mean square error of approximation (RMSEA) = .078; standardized root mean square residual (SRMR) = .058) and significantly better than a model with all indicators (respectively, parcels) loading on a single factor ($\chi^2 = 1085.02$, *df* = 78, $p < .05$; CFI = .63; TLI = .56; RMSEA = .18; SRMR = .11). As expected, the two second-latent order factors were significantly related (−.71, the average absolute correlation between the four scales is much lower with $r = .47$) but the unshared variation of about 50 percent shows that they are not simply endpoints of a continuum but represent distinct aspects—which supports our view of well-being and ill-health being two sides of one coin.

Table 1. Means, standard deviations (*SD*s), and intercorrelations.

Variable	*M*	*SD*	1	2	3	4	5	6
1. Social identification (*t*1)	3.86	.97	(.89)					
2. Resilience (*t*1)	4.31	.96	.15*	(.82)				
3. Study satisfaction (*t*2)	3.41	.73	.29**	.26**	(.70)			
4. Work engagement (*t*2)	4.13	.95	.29**	.24**	.54**	(.92)		
5. Chronic stress (*t*2)	31.5	9.0	−.10	−.46**	−.53**	−.32**	(.91)	
6. Depression/anxiety (*t*2)	8.37	2.75	−.02	−.43**	−.46**	−.30**	.71**	(.78)

[a]Cronbach's alphas are displayed on the diagonal. $N = 180$ (listwise).
*$p < .05$; **$p < .01$.

Table 2. Variable results of linear regression analysis ($N = 180$).

	Satisfaction			Engagement			Stress			Depression/anxiety		
	b	*SE b*	*β*	*b*	*SE b*	*β*	*b*	*SE b*	*β*	*b*	*SE b*	*β*
Intercept	1.98	.29		2.3	.38		50.9	3.4		13.2	1.1	
Identification	.19	.05	.26**	.26	.07	.26**	−.32	.63	−.04	.14	.20	.05
Resilience	.16	.05	.22**	.19	.07	.20**	−4.2	.63	−.45**	−1.2	.20	−.43**
R^2			.13**			.12**			.21**			.18**

SE: standard error.
*$p < .05$; **$p < .01$.

To test our hypotheses, we compared correlation coefficients and ran regression analyses (see Table 2). Resilience was, as predicted in Hypothesis 1, both in the simple correlations and in the regression analyses, significantly and positively related to students' satisfaction (H1a) and work engagement (H1b) 3 months later and negatively and significantly related to depression/anxiety (H1c) and stress level (H1d). As predicted in Hypothesis 2a and b, we found significant and positive relations between social identification and students' satisfaction and engagement. Unexpectedly, however, we found no relation between social identification and depression/anxiety or stress (H2c and H2d).

As can be seen in Tables 1 and 2, identification was more closely related to measures of well-being compared to resilience, whereas resilience was more closely related to measures of ill-health. To test Hypothesis 3 more formally, we computed average correlations and tested the differences using *z*-tests. The average correlation of resilience and ill-health was .44 (absolute value) compared to the average correlation of resilience and well-being of .25; the difference was significant ($z = -2.87$, $p < .005$; Cohen's $q = .22$), thereby supporting H3a. The average correlation of identification and ill-health was .06 (absolute value) compared to the average correlation of identification and well-being of .29; the difference was significant ($z = 3.18$, $p < .005$; Cohen's $q = .24$), supporting H3b.

Discussion

We found that indicators of well-being and ill-health represent two sides of the same coin. As predicted, students' resilience and social identification both explained positive outcomes (i.e. less stress and greater well-being) over a period of 3 months. However, social identification was related to well-being but not to ill-health. Resilience was related to both aspects but, as expected, was more strongly related to ill-health than to well-being.

Our study has some limitations. Most importantly, we only surveyed a specific group of university students which is not representative of the wider population. However, we see no reason to assume, that the general pattern of resilience being a stronger predictor for negative outcomes and identification being a stronger predictor for positive outcomes should not generalize to other domains, even though the specific types of stressors might differ. Second, the use of self-reports may limit the validity of our findings. However, we used standardized scales designed for and commonly used as self-assessment. Also, it has been shown repeatedly that subjective indicators of health such as satisfaction are predictive of objective outcome such as longevity (Diener and Chan, 2011).

Clearly, the strength of our study is the longitudinal design allowing tentative causal inferences, and the fact that we actually found the predicted effects over a period of 3 months. It would be desirable to replicate our findings in future studies in other occupational groups, and using objective health indicators (e.g. endocrinological measures) and even longer time periods.

As implications for practice, our results point to the fact that both resilience and social identification are important pathways for reducing stress and ill-health and for creating satisfaction and well-being. The good news is that both

factors can be developed. Leppin et al. (2014) meta-analytically supported the idea that resilience can be built up with stress-management trainings. They identified 13 studies which provided a generalized stress training and measured resilience within 3 months of follow-up and found a moderate average effect of .37. Orzech et al. (2009) tested the effects of an intensive mindfulness intervention with 10–12 hours of training per day for 1 month and found significant increases in resilience compared to a control group. Adler et al. (2015) found positive effects on resilience trainings of soldiers during basic combat training for anxiety reduction.

Likewise, with respect to social identity, Haslam et al. (2016) have recently shown a relatively simple but effective way to increase people's usage of their social relations. Based on the social identity approach to health and well-being, the authors devised "groups 4 health," a manualized five-module psychological intervention aiming at developing social group relationships. In a non-randomized control design with young adults who suffered from social isolation and affective disorders, a significant increase in participants' social identification was found which in turn significantly improved mental health, well-being, and social connectedness.

It has already been shown that group-based trainings—possibly because of increased social identity—can be more successful than individual trainings, for instance, in mindfulness mediation trainings to reduce weight (Mantzios and Giannou, 2014).

Another way to increase people's well-being at work is through authentic leadership which has been suggested to unfold its positive effects through increased social identification (e.g. Hystad et al., 2014). Future applications of the two pathways and research combining the two fields of research are clearly promising.

Acknowledgement

We are grateful to Valeria Ciampa for her help with the confirmatory factor analyses.

Declaration of conflicting interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

References

Adler AB, Williams J, McGurk D, et al. (2015) Resilience training with soldiers during basic combat training: Randomisation by platoon. *Applied Psychology: Health and Well-Being* 7(1): 85–107.

Avanzi L, Schuh S, Fraccaroli F, et al. (2015) Why does organizational identification relate to reduced employee burnout? The mediating influence of social support and collective efficacy. *Work & Stress* 29(1): 1–10.

Bedewy D and Gabriel A (2015) Examining perceptions of academic stress and its sources among university students: The Perception of Academic Stress Scale. *Health Psychology Open* 2(2): 2055102915596714.

Blecharz J, Luszczynska A, Tenenbaum G, et al. (2014) Self-efficacy moderates but collective efficacy mediates between motivational climate and athletes' well-being. *Applied Psychology: Health and Well-Being* 6(3): 280–299.

Cassidy T (2000) Stress, healthiness and health behaviours: An exploration of the role of life events, daily hassles, cognitive appraisal and the coping process. *Counselling Psychology Quarterly* 13(3): 293–311.

Diener E and Chan MY (2011) Happy people live longer: Subjective well-being contributes to health and longevity. *Applied Psychology: Health and Well-Being* 3(1): 1–43.

Doosje B, Ellemers N and Spears R (1995) Perceived intragroup variability as a function of group status and identification. *Journal of Experimental Social Psychology* 31(5): 410–436.

Frisch JU, Hausser JA, van Dick R, et al. (2014) Making support work: The interplay between social support and social identity. *Journal of Experimental Social Psychology* 55: 154–161.

Gardner B, De Bruijn GJ and Lally P (2012) Habit, identity, and repetitive action: A prospective study of binge-drinking in UK students. *British Journal of Health Psychology* 17(3): 565–581.

Gloria CT and Steinhardt MA (2016) Relationships among positive emotions, coping, resilience and mental health. *Stress and Health* 32(2): 145–156.

Greenaway KH, Cruwys T, Haslam SA, et al. (2016) Social identities promote well-being because they satisfy global psychological needs. *European Journal of Social Psychology* 46(3): 294–307.

Haslam C, Cruwys T, Haslam SA, et al. (2016) Groups 4 health: Evidence that a social-identity intervention that builds and strengthens social group membership improves mental health. *Journal of Affective Disorders* 194: 188–195.

Haslam SA (2004) *Psychology in Organizations*. London; Thousand Oaks, CA: SAGE.

Haslam SA, Reicher SD and 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: Jetten J, Haslam C and Haslam SA (eds) *The Social Cure: Identity, Health, and Well-being*. London: Psychology Press, pp. 157–174.

Holm-Hadulla R and Hofmann FH (2007) Lebens-und Studienzufriedenheitsskala [Life- and study satisfaction scales]. In: *Tagungsband zur Fachtagung Beratung*. Berlin: Deutsches Studentenwerk.

Hu T, Zhang D and Wang J (2015) A meta-analysis of the trait resilience and mental health. *Personality and Individual Differences* 76: 18–27.

Hystad SW, Bartone PT and Eid J (2014) Positive organizational behavior and safety in the offshore oil industry: Exploring the determinants of positive safety climate. *The Journal of Positive Psychology* 9(1): 42–53.

Jetten J, Haslam C and Haslam SA (2012) *The Social Cure: Identity, Health and Well-being*. Hove: Psychology Press.

Kanner AD, Coyne JC, Schaefer C, et al. (1981) Comparison of two modes of stress measurement: Daily hassles and uplifts versus major life events. *Journal of Behavioral Medicine* 4(1): 1–39.

Ketturat C, Frisch JU, Ullrich J, et al. (2016) Disaggregating within- and between-person effects of social identification on subjective and endocrinological stress reactions in a real-life stress situation. *Personality and Social Psychology Bulletin* 42(2): 147–160.

Kroenke K, Spitzer RL, Williams JB, et al. (2009) An ultra-brief screening scale for anxiety and depression: The PHQ–4. *Psychosomatics* 50(6): 613–621.

Leppin AL, Bora PR, Tilburt JC, et al. (2014) The efficacy of resiliency training programs: A systematic review and meta-analysis of randomized trials. *PLoS ONE* 9(10): e111420.

Luthans F, Youssef CM and Avolio BJ (2007) *Psychological Capital: Developing the Human Competitive Edge*. Oxford: Oxford University Press.

Mache S, Vitzthum K, Wanke E, et al. (2014) Exploring the impact of resilience, self-efficacy, optimism and organizational resources on work engagement. *Work* 47(4): 491–500.

Mael F and Ashforth BE (1992) Alumni and their alma mater: A partial test of the reformulated model of organizational identification. *Journal of Organizational Behavior* 13(2): 103–123.

Mantzios M and Giannou K (2014) Group vs. single mindfulness meditation: Exploring avoidance, impulsivity, and weight management in two separate mindfulness meditation settings. *Applied Psychology: Health and Well-Being* 6(2): 173–191.

Orzech KM, Shapiro SL, Brown KW, et al. (2009) Intensive mindfulness training-related changes in cognitive and emotional experience. *The Journal of Positive Psychology* 4(3): 212–222.

Rusk RD and Waters L (2015) A psycho-social system approach to well-being: Empirically deriving the five domains of positive functioning. *The Journal of Positive Psychology* 10(2): 141–152.

Sani F, Madhok V, Norbury M, et al. (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.

Schaufeli WB, Bakker AB and Salanova M (2006) The measurement of work engagement with a short questionnaire a cross-national study. *Educational and Psychological Measurement* 66(4): 701–716.

Schulz P, Schlotz W and Becker P (2004) *Trierer Inventar zum chronischen Stress (TICS)*. Göttingen: Hogrefe.

Seligman MEP (2002) *Authentic Happiness: Using the New Positive Psychology to Realize Your Potential for Lasting Fulfillment*. New York: Free Press.

Shamaskin-Garroway AM, Lageman SK and Rybarczyk B (2016) The roles of resilience and nonmotor symptoms in adjustment to Parkinson's disease. *Journal of Health Psychology* 21(12): 3004–3015.

Smith BW, Dalen J, Wiggins K, et al. (2008) The brief resilience scale: Assessing the ability to bounce back. *International Journal of Behavioral Medicine* 15(3): 194–200.

Stavrova O and Luhmann M (2016) Social connectedness as a source and consequence of meaning in life. *The Journal of Positive Psychology* 11(5): 470–479.

Steffens NK, Haslam SA, Schuh SC, Jetten J and van Dick R. (2017) A meta-analytic review of social identification and health in organizational contexts. *Personality and Social Psychology Review*. Epub ahead of print 7 July. DOI: 10.1177/1088868316656701.

Stok FM, Verkooijen KT, Ridder DT, et al. (2014) How norms work: Self-identification, attitude, and self-efficacy mediate the relation between descriptive social norms and vegetable intake. *Applied Psychology: Health and Well-Being* 6(2): 230–250.

Tajfel H and Turner JC (1979) An integrative theory of intergroup conflict. In: Austin WG and Worchel S (eds) *The Social Psychology of Intergroup Relations*. Monterey, CA: Brooks Cole, pp. 33–47.

Turner JC (1985) Social categorization and the self-concept: A social cognitive theory of group behavior. In: Lawler EJ (ed.) *Advances in Group Processes: Theory and Research*. Greenwich, CT: JAI Press, pp. 77–122.

Yi-Frazier JP, Yaptangco M, Semana S, et al. (2015) The association of personal resilience with stress, coping, and diabetes outcomes in adolescents with type 1 diabetes: Variable-and person-focused approaches. *Journal of Health Psychology* 20(9): 1196–1206.