CAN SELF-AFFIRMATIONS REDUCE DEPRESSION AND ANXIETY, AND BOOST WELL-BEING IN PSORIASIS PATIENTS? PRELIMINARY FINDINGS*

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Summary. Emerging evidence suggests that tendencies to spontaneously self-affirm in the face of threat may enable people to view it in a quite different manner, with a greater perspective, in the context of psychosocial resources as well as approach it more effectively, with fewer self-evaluative implications. The aim of the study was to examine whether and how self-affirmation tendency is related to well-being and mental health outcomes (depression and anxiety) in psoriasis patients sample. Fifty-one patients with psoriasis aged 19-67 years completed the full battery of self-report questionnaires measuring body-related emotions, cognitive coping strategies, spontaneous self-affirmation, well-being, depression, anxiety, and disease severity. Engaging in spontaneous self-affirmation was related to better well-being, and less depression and anxiety. Results of multiple mediation analyses with sequential mediators (putting into perspective as a mediator in the first sequence; body-related emotions as a mediator in the second sequence) revealed that the effects of self-affirmation in psoriasis patients may be explained by mechanisms, which include processes of fostering a higher use of putting into perspective and decreasing negative body-related emotions. These findings highlight the adaptive role of self-affirmation in the context of chronic illness, such as psoriasis, and suggest several potentially fruitful avenues for future research. Key words: anxiety, depression, psoriasis, self-affirmation, well-being

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Background

People have a basic need to preserve a positive, adaptive self-image and to maintain self-integrity (Steele, 1988). But in contemporary society, an individual faces innumerable threats to the self-system. Self-threats may take many forms, including negative social feedback, feeling threatened because of one's gender, race (i.e., stereotype threat), or visible skin condition (i.e., stigmatization). People differ in how they cope with self-threats, and the effectiveness of these coping strategies has real consequences in terms of physical and mental health (Taylor, Broffman, 2011). According to Steele's (1988), if one of the domains defining the self is threatened (e.g., by stigma related to visible skin disease), this threat might be compensated for if one can manage to affirm an important domain that is not directly addressed by the threat (e.g., by recalling personal values and strengths). In other words, a self-affirming act brings about a more expansive view of the self and its resources, and by this broadened conception of the self, reduces the impact of threats to the self on both physiological and psychological responses (see Sherman, Cohen, 2006; Cohen, Sherman, 2014). When people self-affirm, they are reminded of their psychosocial resources, focus on the bigger picture, and appreciate the context of the threat as well as approach it more effectively. This process makes the threat less physiologically and psychologically impactful (Sherman, 2013; Cohen, Sherman, 2014).

The aim of the current study was to examine whether and how self-affirmation tendency - reflecting on personal values or strengths - is related to mental health outcomes and well-being in psoriasis patients sample – specifically, whether and how it may serve as a resource to mitigate negative psychological and emotional consequences of psoriasis. Psoriasis is a common chronic skin disorder that is associated with both physical and psychological burdens (Parisi et al., 2013; Boehncke, Schön, 2015). To date, an extensive literature describes the co-occurrence of psoriasis and anxiety, negative self-image, depression, and suicidal ideation (e.g., Kimball et al., 2010; Schmitt, Ford, 2010; Dalgard et al., 2015; Sakson-Obada et al., 2017). More recently, research has shown that the negative emotional attitude towards the body is one of the most important modifiable risk factors for the psychological impairments associated with psoriasis (Łakuta et al., 2016; Łakuta, Przybyła-Basista, 2017), the severity of psoriasis has been found, however, to be unrelated to the risk of anxiety or depression (c.f., Pacan, Kiejna, Szepietowski, 2003; Bangemann et al., 2014; Cohen, Martires, Ho, 2016). It is clear that some patients are able to cope with psoriasis better than others. This raises the question of what factors are at play? Whether self-affirmation is also the case for these factors, should, therefore, be tested. Thus, the principal aim of the present study is to see whether and how self-affirmations are linked to better mental health outcomes and well-being in psoriasis patients sample.

Self-affirmation has benefits in numerous domains and is often beneficial when people feel psychologically threatened (Sherman, Cohen, 2006; Sherman, 2013; Cohen,

Sherman, 2014). For example, when people are instructed to self-affirm, they show reduced physiological and psychological stress responses to chronic naturalistic stressors (Sherman et al., 2009), engage in more healthy behaviors, including decreased alcohol consumption (Armitage, Harris, Arden, 2011; Epton et al., 2015; Armitage, Arden, 2016), perform better academically (Cohen et al., 2006; 2009), are more likely to help other people (Lindsay, Creswell, 2014), report increased well-being (Nelson et al., 2014), and decreased job-related anxiety (Morgan, Harris, 2015). Although, most prior research has experimentally induced self-affirmation by instructing people to self-affirm (Cohen, Sherman, 2014), emerging evidence suggests that tendencies to spontaneously self-affirm in the face of threat may be an individual difference factor associated with outcomes similar to induced self-affirmation (they may be even more powerful than manipulated self-affirmations when such inductions are unable to be ideally timed) (Pietersma, Dijkstra, 2012; Emanuel et al., 2016; Harris et al., 2017).

Nevertheless, mechanisms underlying the benefits of self-affirmation have not been elucidated. Evidence suggests that when people focus on valued aspects of the self, they view negative information and events in their lives from a broader perspective (Sherman, 2013; Critcher, Dunning, 2015). It is also proposed that affirming important values enhances psychological resources available to an individual to confront a threat. As such, affirmations can help people focus on the bigger picture and remind them of other aspects of the self-psychological resources – that are important to them. Additionally, a recently published study indicates that reflecting on personal values affects emotion regulation processes – self-affirmation was shown to increase the use of more positive reappraisal emotion regulation strategies (Morgan, Atkin, 2016). Thus, self-affirmation may enable people to view a threat in a quite different manner, with a greater perspective, and in the context of sources of self-integrity that are not contingent upon the threatened domain. From a higher level of construal, offered by values affirmation, focal threats can be evaluated on their own terms, thus people may approach the threats more effectively, with fewer self-evaluative implications.

The aim of this study was, therefore, not only to explore within a sample of patients with psoriasis the interplay between self-affirmation tendencies, mental health outcomes, and well-being but to examine the hypothesized mechanisms of self-affirmation. Thus, the first aim of this study was to examine whether spontaneous self-affirmation – the extent to which individuals spontaneously focus on their values or strengths when feeling threatened or anxious – is associated with better mental health outcomes and well-being. Specifically, it was predicted that the tendency to engage in spontaneous self-affirmation is related to greater well-being (defined as a composite of high life satisfaction, happiness, and pleasant affect, and low unpleasant affect; Diener, 2000) as well as less anxiety and depressive symptoms. The second aim was to examine the degree to which the effects of self-affirmation on depression, anxiety, and well-being are sequentially mediated through putting into perspective (cognitive emotion regulation strategy), and body-related

emotions. Building on preliminary evidence that self-affirmation affects emotion regulation processes (Morgan, Atkin, 2016) and provides a broader perspective on self-threat (Critcher, Dunning, 2015), and emotional attitude towards the body is one of the key risk factors contributing to psoriasis patients' mental health outcomes (Łakuta et al., 2016; Łakuta, Przybyła-Basista, 2017), it was hypothesized that putting into perspective and emotional attitude towards the body jointly, sequentially operate as the mediators between self-affirmation and psoriasis patients' mental health and well-being. Specifically, it was hypothesized that putting into perspective, resulting from engaging in spontaneous self-affirmation, would translate into decreased negative emotional attitude towards the body, and finally would be related to greater well-being and lower levels of depression and anxiety.

Methods

Participants and procedure

Participants were provided information about the purpose of the study and an assurance of their anonymity in participation, and gave written informed consent in order to participate. Responses were collected in cooperation with the Polish Association of Psoriasis Patients in Bydgoszcz (Poland) and the Union of Psoriasis Associations in Poland. The study was conducted in consideration of the Helsin-ki Declaration. All participants received the same questionnaire and no clinical or experimental treatment. A total sample of 51 patients with diagnosed psoriasis aged 19–67 years ($M_{\rm age}$ = 37.37, $SD_{\rm age}$ = 12.04) completed the full battery of self-report questionnaires. The sample consisted of 74.5% women; 60.8% of the participants were married or living with a partner; 54.9% held a university degree; 70.6% were employed. Plaque psoriasis was the most common clinical type of psoriasis, which was reported in 94.2% cases. The mean age of onset of psoriasis was 15.80 years (SD = 7.77), ranging between 2 and 34 years of age.

Measures

Consent and background information. After reading a consent form that informed them of their rights and agreeing to take part, participants were asked to provide general background information, such as gender, age, educational level, marital and employment status, age of onset of psoriasis, diagnosed clinical type of psoriasis, and duration of the disease.

Subjective well-being (**SWB**). SWB includes both affective and cognitive components (Diener, 2000) – concepts encompassed by SWB include pleasant and unpleasant affect, happiness, and life satisfaction. Accordingly, in this study, participants' satisfaction with life, happiness, pleasant affect, and unpleasant affect were assessed (with self-report scales typically used in composite measures of SWB

in the psychological literature, e.g., Lyubomirsky et al., 2011), and, it was created a composite of these outcomes referred to as overall subjective well-being – by averaging their z-scores (after reverse-coding unpleasant affect). As such, higher scores on overall subjective well-being reflect higher levels of life satisfaction, happiness, and pleasant affect, and lower levels of unpleasant affect. The correlations of the SWB components were quite high in this study (mean r = .63).

Life satisfaction. The Satisfaction With Life Scale (SWLS; Diener et al., 1985; Polish adaptation: Juczyński, 2001) is a well-validated measure of satisfaction with life in general. The SWLS consists of five items (e.g., "I am satisfied with my life"), which are rated on a 7-point Likert type scale, ranging from 1 (*Strongly disagree*) to 7 (*Strongly agree*). Thus, higher scores on this measure indicate greater satisfaction with life. The internal consistency of the scale in the current sample was acceptable (Cronbach's α = .84).

Happiness. Participants evaluated their happiness with the Subjective Happiness Scale (SHS; Lyubomirsky, Lepper, 1999; Polish adaptation: Jasielska, 2013). The SHS is a well validated 4-item measure that asks participants first to rate on 7-point Likert-type scales how generally happy they are $(1 = not \ a \ very \ happy \ person)$; $7 = a \ very \ happy \ person)$ and how happy they are relative to their peers $(1 = less \ happy)$; $7 = more \ happy)$. The remaining two questions require participants to indicate the extent to which a description of a "very happy" and a "very unhappy" person, respectively, characterizes them $(1 = not \ at \ all; 7 = a \ great \ deal)$. After reverse-scoring the fourth item, higher scores on this measure indicate greater subjective happiness. The internal consistency of the scale in the current sample was acceptable (Cronbach's $\alpha = .88$).

Affect. Two types of affect – Unpleasant and Pleasant – were measured using six items adapted from Feldman Barrett and Russell (1998; see also Lyubomirsky et al., 2011). The measures consisted of three adjectives each – miserable, unhappy, and troubled for Unpleasant Affect and content, happy, and pleased for Pleasant Affect. Participants indicated the degree to which they experienced each of the three unpleasant and three pleasant emotions over the past week on 5-point Likert-type scales, ranging from 1 (*Very slightly or not at all*) to 5 (*Extremely*). The scales have demonstrated good psychometric properties in many happiness studies (e.g., Lyubomirsky et al., 2011). In the current sample, good internal consistency was observed for both Unpleasant Affect (Cronbach's α = .88) and Pleasant Affect (Cronbach's α = .92).

Depression and anxiety. Symptoms of depression and anxiety were measured by the Hospital Anxiety and Depression Scale (HADS). The HADS consists of two 7-item self-report subscales designed to assess depressive (HADS-D) and anxiety (HADS-A) severity, respectively (Zigmond, Snaith, 1983; Polish adaptation: Majkowicz, 2000). The HADS excludes somatic symptoms thereby avoiding potential confounding by the somatic symptoms of psoriasis. An example item of the depression scale is "I can laugh and see the funny side of things". An example item of

the anxiety scale is "I get a sort of frightened feeling as if something awful is about to happen". Both subscales consist of 7 items scored on 4-point scales (range 0–3). The total scores for each subscale may range from 0–21, with higher scores indicating more severe symptoms. The HADS is widely used and it has been shown to have good psychometric properties (c.f., Bjelland et al., 2002). In the current sample, good internal consistency was observed for both HADS-D (Cronbach's α = .86) and HADS-A (Cronbach's α = .90) subscales.

Body-related emotions. Emotional attitude towards the body was measured by the Body Emotions Scale derived from the Body Self Questionnaire (Sakson-Obada, 2009). The Body Emotions Subscale consists of nine items (e.g., "Sometimes I hate the way I look"; "I am ashamed of my appearance"). The items were rated on a 7-point Likert-type scale, ranging from 1 (*Strongly disagree*) to 7 (*Strongly agree*). As such, higher scores on this measure indicate greater levels of negative emotional attitude towards the body. The scale has demonstrated good reliability and validity (e.g., Sakson-Obada, 2009). In the current sample the internal consistency was $\alpha = .92$.

Spontaneous self-affirmation. Two items were used to measure the extent to which participants spontaneously self-affirmed in the face of threat ("When I feel threatened or anxious I find myself thinking about my values/strengths") (Harris et al., 2017). These items were rated on a 7-point Likert type scale, ranging from 1 (*Strongly disagree*) to 7 (*Strongly agree*), and were summed and averaged to form the two-item index (r = .70, p < .001). This measure has previously been used successfully to examine spontaneous self-affirmation (Ferrer et al., 2015; Emanuel et al., 2016; Taber et al., 2016a, b). In the current sample the internal consistency was $\alpha = .82$.

Putting into perspective. A subscale of the Cognitive Emotion Regulation Questionnaire (CERQ; Garnefski, Kraaij, Spinhoven, 2001; 2002; Polish adaptation: Marszał-Wiśniewska, Fajkowska, 2010) was used to measure the extent to which a cognitive coping strategy – putting into perspective – is used by individuals after the experience of threatening or stressful life events. The CERQ consists of 36 items in nine subscales (to evaluate nine cognitive coping strategies). Subscales include four items rated from 1 (Almost never) to 5 (Almost always). A subscale score can be obtained by adding up the four items, indicating the extent to which a certain cognitive coping strategy is used (possible scores for each subscale range from 4 to 20). Putting into perspective refers to thoughts of playing down the seriousness of negative and stressful life events and emphasizing the relativity when comparing it to other events (sample item: "I think that other people go through much worse experiences"). The CERQ has been found to have good psychometric properties (Garnefski, Kraaij, Spinhoven, 2002; Garnefski, Kraaij, 2006; Marszał-Wiśniewska, Fajkowska, 2010). The internal consistency of the subscale in the current sample was acceptable (Cronbach's α = .84).

Severity of psoriasis. Severity of psoriasis was measured by the Self-Administered Psoriasis Area and Severity Index (SAPASI). The SAPASI is a structured

instrument designed for patient self-assessment of severity (Fleischer et al., 1994; Polish adaptation: Szepietowski et al., 2001). The SAPASI combines the assessment of lesion severity (erythema, induration, and scale) and the evaluation of percentage of body surface area involvement (for each of the following four areas: head, upper extremities, trunk, and lower extremities) into a single score between 0 (no disease) to 72 (maximal severity of disease). Studies have demonstrated good reliability and validity of the SAPASI (Spuls et al., 2010). The SAPASI correlation with the PASI, which is recognized as the gold standard for psoriasis assessment, has been measured many times and is reported to be good (e.g., Feldman et al., 1996; Sampogna et al., 2003).

Analytic strategy

Data were analyzed using SPSS version 23. For testing the mediation models (see Figure 1), serial multiple mediation analyses were performed using the macro PROCESS (v. 2.16.3), Model 6, with 5,000 bootstrapped replications (Hayes, 2013). PROCESS permits the conduct of multiple mediator analysis in linear multiple regression models while accounting for covariates (i.e., age, gender, severity of psoriasis, and age of onset). To detect the specific nature of the mediation, Preacher and Hayes' (2008; see also Hayes, 2013) approach generates point estimates and bias-corrected confidence intervals (BC CIs) for each of the proposed indirect effects and the remaining direct effect. The criterion for detecting a mediation was a significant indirect effect, which is computed using a 95% BC CI and 5000 bootstrap samples (Preacher, Hayes, 2008; Hayes, 2013). Providing bias corrected confidence intervals bootstrapping mitigates power problems and constitutes more accurate type I error rates. Moreover, bootstrapping generally is superior to the multivariate product-of-coefficients strategy in small samples, with BC CIs performing best in terms of both power and Type I error rates (Briggs, 2006; Preacher, Hayes, 2008). For the BC intervals, power may reach or exceed .80 with a sample of 50. Thus, it offers a more reliable estimation than the traditional Sobel test or the causal step method by Baron and Kenny (1986) for testing indirect effects.

It was conducted multiple mediation analyses with sequential mediators (putting into perspective as a mediator in the first sequence; body-related emotions as a mediator in the second sequence), controlling for age, gender, age of onset, and severity of psoriasis. Results of mediation analyses are presented using two types of coefficients. The standardized regression coefficient for each parameter is provided (see Figure 1). Furthermore, PROCESS estimates the indirect effect coefficient (θ) for each indirect pathway (through respective mediators) between the independent variable (self-affirmation) and the dependent variable (depression, anxiety, or subjective well-being) (see Table 2).

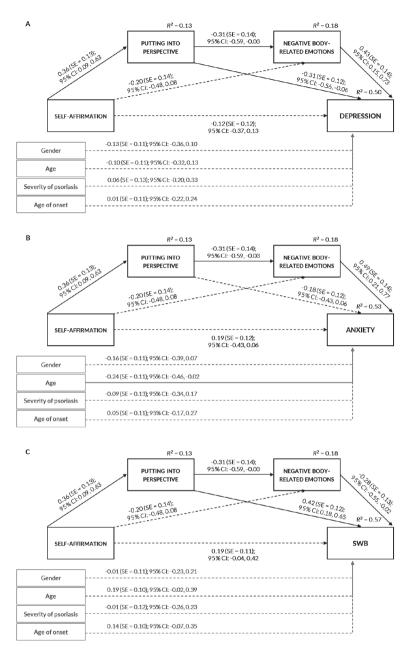


Figure 1. The sequential mediation models: with depression (Panel A), anxiety (Panel B), and overall subjective well-being (SWB; Panel C) as the outcome variables, respectively

Table 1. Correlations between study variables

		1	2	3	4	5	9	7	8	6	10	M	SD
I.	1. Gender	I	90.	.02	05	.17	05	00.	13	90.	23	I	I
7.	2. Age		I	.12	05	15	35*	21	.30*	.14	.07	37.37	12.04
3.	3. Age of onset			I	.24	.05	.02	.00	.15	10.	10.	15.80	7.77
4	4. SAPASI				I	.45**	.15	.26	10	90.	10.	13.91	10.53
г.	Body-related emotions					ı	.59***	.61***	53***	31*	38**	43.16	12.32
9.	6. HADS-A						I	.74**	70***	45**	41**	8.82	4.84
К.	7. HADS-D							I	75***	38**	49***	29.9	4.42
∞.	8. SWB								I	.45**	.61***	I	I
9.	9. Self-affirmation									I	.36**	4.28	1.58
10.	10. Putting into perspective										1	12.47	3.52

Note. Gender: -1 = female, 1 = male. HADS-A = anxiety; HADS-D = depression; SWB = overall subjective well-being (a composite of satisfaction with life, happiness, pleasant affect, and unpleasant affect). * p < .05; ** p < .01; *** p < .001.

Results

Participant characteristics and correlations

Means, standard deviations, and intercorrelations of study variables can be found in Table 1. Correlation analysis showed that spontaneous self-affirmation was related to greater subjective well-being, and less depression and anxiety. Moreover, self-affirmation was related to more frequent use of putting into perspective – positive cognitive emotion regulation strategy. Self-affirmation was also associated with lower levels of negative body-related emotions. Gender and age were not significantly associated with spontaneous self-affirmation. Age was negatively associated with anxiety, and positively with subjective well-being. SAPASI showed a significant positive association with body-related emotions, indicating that more severe psoriasis was associated with more negative emotional attitude towards the body.

There were no significant differences between men and women for any demographic, disease-related, or psychological variables (including the concepts encompassed by SWB; all ps > .10).

Total, direct, and indirect effects of self-affirmation on mental health and well-being

The first sequential mediation model (Figure 1: Panel A) was designed to verify the mediating effects of putting into perspective and body-related emotions in the relationship between self-affirmation and depressive symptoms. Results revealed that the association between self-affirmation and depression was mediated by putting into perspective and body-related emotions as indicated by a significant indirect effect (θ = -.048, SE = .040, 95% CI: -.170, -.003). As indicated in Table 2, the indirect effect assuming putting into perspective as the sole mediator was also significant (θ = -.110, SE = .063, 95% CI: -.321, -.023). Total effect of self-affirmation on depression was significant, -.385, SE = .130 (95% CI: -.648, -.121), whereas the direct effect was nonsignificant, -.96, SE = .29 (95% CI: -.368, .130). Overall, the variables included in the model explained 50% of the variance of depressive symptoms.

The second sequential mediation model (Figure 1: Panel B) was designed to verify the mediating effects of putting into perspective and body-related emotions in the relationship between self-affirmation and anxiety. Results revealed that the association between self-affirmation and anxiety was mediated by putting into perspective and body-related emotions as indicated by a significant indirect effect ($\theta = -.054$, SE = .042, 95% CI: -.180, -.004) (see Table 2). The indirect effects assuming only one mediator were not significant (putting into perspective as the sole mediator: $\theta = .065$, SE = .057, 95% CI: -.233, .013; body-related emotions as the sole mediator: $\theta = -.098$, SE = .089, 95% CI: -.333, .028). Total effect of self-affirmation on anxiety was significant, -.422, SE = .125 (95% CI: -.674, -.170), whereas the direct effect was

Table 2. Estimated coefficients for mediation models

	95% BC CI	.191;	044; .419	.032;	.002;	01 <i>7</i> ;
SWB	1	.124 3.552***	1.632			
	SE	.124	.115	.074	.031	.051
	Effect	.440	.188	.149	.033	.061
	95% BC CI	674; 170	428; .056	233; .013	180; 004	333; .028
Anxiety	7	.125 -3.369**674;	-1.548			
	SE	.125	.120	.057	.042	680.
	Effect	422	186	.065	054	860
	95% BC CI	648; 121	368; .130	321; 023	170; 003	295; .019
Depression	<i>t</i>	.130 -2.940**	968			
	SE	.130	.123	.063	.040	.074
	Effect	385	119	110	048	088
		Total effect of self-affirmation on Y	Direct effect of self-affirmation on Y	Indirect effect via putting into perspective	Indirect effect via putting into perspective and body-related emotions	Indirect effect via bodyrelated emotions

Note. All confidence intervals generated with bias corrected bootstrapping (based on 5000 resamples). Significant findings are marked in bold. All analyses were conducted with controlling for age, gender, age of onset, and severity of psoriasis. *p < .05; **p < .01; ***p < .001. nonsignificant, -.186, SE = .120 (95% CI: -.428, .056). There was a significant prediction of levels of anxiety by age, -.241, SE = .108 (95% CI: -.460, -.023). Overall, the variables included in the model explained 53% of the variance of anxiety.

The third sequential mediation model (Figure 1: Panel C) was designed to verify the mediating effects of putting into perspective and body-related emotions in the relationship between self-affirmation and overall subjective well-being (SWB). Results revealed that the association between self-affirmation and SWB was mediated by putting into perspective and body-related emotions as indicated by a significant indirect effect (θ = .033, SE = .031, 95% CI: .002, .138) (see Table 2). The indirect effect assuming putting into perspective as the sole mediator was also significant (θ = .149, SE = .074, 95% CI: .032, .345). Total effect of self-affirmation on SWB was significant, .440, SE = .124 (95% CI: .191, .690), whereas the direct effect was nonsignificant, .188, SE = .115 (95% CI: -.044, .419). Overall, the variables included in the model explained 57% of the variance of overall well-being in psoriasis patients.

In sum, the total effects of the bootstrapped mediation analyses indicated a moderate relationship between self-affirmation and overall subjective well-being. Self-affirmation was also inversely related to depression and anxiety as well. More importantly, for the mediation hypotheses, adding two mediators (putting into perspective and negative body-related emotions) in sequence to the models reduced these effects. With overall well-being as the outcome variable, there was a reduction of the total effect of self-affirmation in the model that included both mediators. For anxiety, the total effect of self-affirmation was also reduced by controlling for the mediators. Similar results occurred for depression. Furthermore, the bootstrapped indirect effect of self-affirmation on depression via putting into perspective as the sole mediator was also significant. Similar results occurred for subjective well-being. In these cases, an examination of the specific indirect effects indicates that the indirect effect coefficient for indirect pathway through putting into perspective was larger than for indirect pathway through body-related emotions as the sole mediator, as well as for both mediators in the sequence.

Discussion

The findings of this study offered insight into the associations between spontaneous self-affirmation and subjective well-being and two mental health outcomes: depression and anxiety. Participants reporting higher self-affirmation tendencies also reported better mental health and well-being including greater happiness, satisfaction with life, and pleasant affect, as well as less unpleasant affect, depression, and anxiety. This is the first study to assess the mental health and well-being correlates of spontaneous self-affirmation in psoriasis patients. Moreover, the results of this study provide insight into potential mediators of the self-affirmation effects. The findings suggest that the effects of self-affirmation in psoriasis patients may be explained by mechanisms, which include processes of fostering a higher

use of putting into perspective, decreasing negative and developing more positive body-related emotions. Thus, these results provide an important first look at the mechanisms by which self-affirmation may be channeled into better mental health outcomes and well-being in psoriasis patients.

So far, the mechanisms underlying the benefits of self-affirmation are not clear. More recently, Morgan and Atkin (2016) suggested, however, that self-affirmation effects may be mediated by increases in the use of more positive emotion regulation strategies, and increments domain-related positive emotions (e.g., toward teaching). The results of the current study support these assumptions. Moreover, consistent with the present pattern of findings, in a series of experimental studies, Critcher and Dunning (2015) found that self-affirmation brings about a more expansive view of the self and its resources, offering a broader perspective in which the threat appears more narrow and self-worth is adjusted into broader dispositional self-views. Self-affirmed participants, relative to those not affirmed, indicated that threatened self-aspects were less all-defining of the self (although just as important). Moreover, the enhanced perspective on the threat mediated the effect of affirmations on reduced defensiveness (Experiment 2). Together these findings imply that self-affirmation seems to do not cause one to trivialize threats; it simply reminds people that additional important aspects of the self (i.e., values and strengths) exist. As such, self-affirmations may enable people to view the disease in a quite different manner, with a greater perspective and in the context of psychosocial resources as well as approach it more effectively, with fewer self-evaluative implications, better mental health outcomes, and greater well-being. The present findings are encouraging and warrant further investigation.

Overall, the results of this study are also in line with previous research (Pietersma, Dijkstra, 2012; Taber et al., 2016b; Harris et al., 2017) showing that people seem to differ in how likely they are to self-affirm in everyday life when feeling threatened or anxious, although it is unknown whether spontaneous self-affirmation is a personality trait or is more habitual in nature. This is perhaps an interesting avenue for future work. Furthermore, it is also unknown to what extent any benefits of self-affirmation are similar to benefits of other self-resources such as self-esteem or dispositional optimism. Thus, another possible avenue for further research is to consider whether effects involving self-affirmation hold when controlling for other resource constructs.

Finally, the present study adds to existent research findings by showing that spontaneous self-affirmation may serve as a resource to prevent or mitigate psychological impairments associated with psoriasis, and promote well-being in daily life. Psoriasis is not only a disease that causes painful, debilitating, highly visible physical symptoms. It is also associated with a multitude of psychological impairments. For many reasons, psoriasis can be psychologically devastating, for example, stigmatization (Hrehorów et al., 2012; Donigan, Pascoe, Kimball, 2015; Łakuta et al., 2017; Zięciak et al., 2017) along with alterations in various life trajectories

- relationships and family life or career (Warren, Kleyn, Gulliver, 2011; Ayala et al., 2014; Bewley et al., 2014; Bundy et al., 2014). However, it is clear to see that some patients, irrespectively of the disease severity, are able to cope with psoriasis better than others (c.f., Pacan et al., 2003; Bangemann et al., 2014; Cohen, Martires, Ho, 2016). Thus, it is worth to learn what characteristics, inclinations, and strategies differentiates them from others and make them less depressed or anxious. The present study provides preliminary evidence for the beneficial and adaptive role of spontaneous self-affirmation tendencies. The findings suggest that such affirmations may make a huge difference to the way patients are coping with the disease - they may serve as a resource to prevent or mitigate psychological impairments, and boost well-being in daily life. With regard to other study variables, similarly to other research (e.g., Cohen, Martires, Ho, 2016; Sakson-Obada et al., 2017), the current study did not find any evidence for relationships between the disease severity and any of mental health outcomes. In contrast, psoriasis patients' age was a relevant variable in the analyses of negative mental health outcomes, i.e., anxiety. The findings are consistent with a large population-based cohort study (Kurd et al., 2010; for a review, see Kimball et al., 2010) showing that the relative risk of negative mental health outcomes, including anxiety, is particularly elevated in younger patients with psoriasis (see also Łakuta, Przybyła-Basista, 2017).

Limitations

This study has several limitations that need to be kept in mind when interpreting the results. First, the sample size was small, which could affect the obtained results. Although the current sample size secures acceptable power of analysis (see Briggs, 2006; Preacher, Hayes, 2008), more respondents should participate in the study, thus replication in a larger sample is warranted. The relatively small sample size may limit the power of our analyses and chances for obtaining significant results (note, however, that almost all of the indirect effects examined in this study were small, but significant). Second, the observed patterns were found among people with the specific disease; the results cannot be generalized to people with other health conditions. Another limitation concerns the over-representation of women in the current sample. Finally, a fourth limitation concerns the potential weaknesses of the cross-sectional design – it is important to highlight that cross-sectional estimates of mediation may generate biased estimates. In sum, any conclusions have to be drawn with caution and the findings should be treated as preliminary.

Conclusions and avenues for further research

Regardless of the limitations, the present study takes the literature on self-affirmation forward in some important respects. First, this study provides evidence that self-affirmation tendency may be an important individual difference factor in the way of coping with psoriasis: it is associated with better mental health and well-being. Second, the study provides insight into the mechanisms by which self-affirmation may be channeled into better mental health outcomes and well-being in psoriasis patients. Although these results are promising, the cross-sectional design limits the ability to draw conclusions that there is a temporal, causal effect between spontaneous self-affirmation and mental health or well-being. However, induced self-affirmations have been shown to increased well-being (c.f., Nelson et al., 2014), providing support for such causal relationships. Nevertheless, it is also possible that greater levels of well-being allow people to spontaneously self-affirm. As such, future research should more directly examine the direction of the associations between self-affirmation, mental health, and well-being in psoriasis patients.

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CZY AUTOAFIRMACJE MOGĄ ZMNIEJSZYĆ NASILENIE DEPRESJI I LĘKU ORAZ POPRAWIĆ DOBROSTAN PACJENTÓW Z ŁUSZCZYCĄ? DONIESIENIA WSTĘPNE

Streszczenie. W rosnącej liczbie badań naukowych odnotowuje się, że dokonanie autoafirmacji w obliczu zagrożenia dla jakiegoś aspektu Ja może sprzyjać przyjęciu szerszej perspektywy, z uwzględnieniem zasobów psychospołecznych, umożliwiając bardziej skuteczne radzenie sobie. W ramach prezentowanych badań poddano ocenie, czy i w jaki sposób tendencja do autoafirmacji wiąże się z dobrostanem i poziomem nasilenia depresji i lęku u pacjentów z łuszczycą. Badaniem objeto 51 chorych w wieku 19-67 lat. W badaniach wykorzystano metody samoopisowe do pomiaru negatywnych emocji związanych z ciałem, nasilenia lęku i depresji, oceny dobrostanu, tendencji do autoafirmacji, nasilenia choroby oraz poznawczej strategii regulacji emocji - stwarzania perspektywy. Wyniki analiz wykazały, że tendencja do autoafirmacji związana jest z niższym nasileniem depresji i lęku oraz wyższym poziomem dobrostanu. W kolejnych analizach testowaniu poddano modele mediacji, uwzględniające sekwencyjne działanie dwóch mediatorów. Wyniki tych analiz sugerują, że relacje między tendencją do autoafirmacji a niższym nasileniem depresji i lęku oraz wyższym poziomem dobrostanu można tłumaczyć mechanizmami, które obejmują procesy sprzyjające zdolności do spoglądania na negatywne wydarzenia z szerszej perspektywy i utrzymaniu bardziej pozytywnych emocji do własnego ciała. Prezentowane wyniki wskazują na adaptacyjną rolę autoafirmacji w kontekście chorób przewlekłych, takich jak łuszczyca, oraz potrzebę dalszych badań w tym obszarze.

Słowa kluczowe: lęk, depresja, łuszczyca, autoafirmacja, dobrostan

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