Factors related to positive and negative attitudes toward dreams: An empirical investigation

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Summary. Attitudes toward dreams can be positive, e.g., "I think that dreaming is in general a very interesting phenomenon" or negative, e.g., "Dreams are boring for me". At first, research treated positive and negative attitudes toward dream as two poles of a unidimensional concept but recent evidence has suggested that despite the large overlap both concepts can be differentiated. The findings of the present online survey (N = 1450) supported this notion as variables like age, dream recall frequency, neuroticism, agreeableness are differentially associated with positive and negative attitudes towards dreams. Dream recall frequency and neuroticism were more closely related to positive attitudes toward dreams, whereas low agreeableness was more closely associated with negative attitudes toward dreams. Overall, the correlations between attitude towards dreams and stable factors like personality.

Keywords: Attitude towards dreams, Dream recall frequency, Neuroticism, Openness to experience, Agreeableness

1. Introduction

Dreams have fascinated mankind since the dawn of history (Van de Castle, 1994). The uncertainties regarding dreams' significance and interpretation can be illustrated by the Penelope's lines in Odysseus: "Two gates there are for unsubstantial dreams, one made of horn and one of ivory. The dreams that pass through the carved ivory delude and bring us tales that turn to naught. Those that come forth through polished horn accomplish real things, whenever seen. (Amory, 1966, p. 3)" Also in modern times there are different views on dreaming ranging from "Dreams are garbage products of the mind" and "Dreams are prophetic—they tell us something about what awaits us in the future" to "Dreams are dealing with distress/emotional conflicts that we have" (Olsen, Schredl, & Carlsson, 2016).

In order to measure attitudes towards dreams, specific scales were developed (e.g., Beaulieu-Prevost, Simard, & Zadra, 2009; Robbins & Tanck, 1988; Schredl, Brenner, & Faul, 2002; Schredl & Doll, 2001; Selterman, 2016). One of the first attitude towards dreams scales was developed by Cernovsky (1984) and included positive ("I believe that dreams are one of the most important ways to understand myself") and negative statements ("I do not pay attention to my dreams"); the 16-item scale yielded a Cronbach's alpha of α = .69. The underlying assumption of this approach is that it is a unidimensional construct ranging from very negative attitudes to very positive ones. However, Schredl, Nürnberg, and Weiler (1996) reported that a 11-item scale measuring a positive attitude towards dreams (e.g., "I like dreaming") shared only 28% variance with a 6-items scale with negative statements (e.g., "Persons that recall many dreams have a lot of difficulties"). Similarly, the five-point item "I like dreaming" loaded only with -.26 on a factor composed of negative attitudes toward dreaming, e.g., "Dreams are a nonsense product of the brain", "I am opposed to working with dreams", and "I do not take my dreams seriously" (Schredl, Ciric, Götz, & Wittmann, 2003). Also, Schredl and Bulkeley (2019) found only a small correlation of r = -.283 between two three-items scales measuring positive ("Dreams are a good way of learning about my true feelings") and negative ("I am too busy in waking life to pay attention to my dreams") attitudes, even though both scales showed satisfactory internal consistencies (r = .704 and r = .691).

In order to test the hypothesis that positive and negative attitudes towards dreaming are closely related but have somewhat different dimensions, Schredl, Burau, Kunkel, and Lanzl (2019) carried out a confirmatory factor analysis with fifteen items measuring positive attitude towards dreams, e. g., "I think that dreaming is in general a very interesting phenomenon" and seven items measuring negative attitude towards dreams, e.g., "Thinking about dreams is a waste of time". The results indicated that a two-factor solution fitted the data much better than a one-factor solution, even though the two scales with high internal consistencies (r = .944 for the positive attitudes scale and r = .904 for the negative attitudes scale) were correlated with r = -.696, i.e., shared almost 50% variance. Despite this close relationship, the absolute values of the correlations of the two scales with dream recall were statistically different: r = .351 (positive attitudes scale) versus r = -.240 (negative attitudes scale; z = 7.1, p<.0001). That is, the positive attitudes toward dreams are more closely related to dream recall frequency than the negative attitudes; a finding also reported by Schredl (2013). The unidimensional construct of "attitude toward dreams" was related to personality traits like boundary thinness (Aumann, Lahl, & Pietrowsky, 2012), absorption (Beaulieu-Prevost et al., 2009), openness to experience (Schredl & Göritz, 2017; Schredl, Wittmann, Ciric, & Götz, 2003), and neuroticism (Aumann et al., 2012; Schredl & Göritz, 2017). Although Beaulieu-Prevost et al. (2009) performed an exploratory factor analysis for 80 items eliciting

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different viewpoints related to dreaming resulting in seven factors, e.g., dream guidance, dream positivity, dream apprehension, and reported differential correlational patterns for these factors with boundary thinness, absorption, and measures of well-being, their 12-item scale "dream significance", globally equivalent to the unidimensional construct of "attitude toward dreams", did include items eliciting positive attitudes like "I attach a lot of significance to my dreams" but also negative attitudes like "Dreams are random products of the brain" or "People who often think about their dreams are avoiding dealing with reality". So far, the question whether positive and negative attitudes towards dreams are related differently to personality is unanswered. In the study of Bulkeley and Schredl (2019), persons with Hispanic background did not differ from white persons regarding positive attitudes toward dreams but expressed negative attitudes more often, i.e., culture related differently to positive and negative attitudes.

To summarize, these findings indicate that there is a substantial overlap between the negative and positive attitudes towards dreams constructs but there is also evidence that attitude towards dreams is not a simple unidimensional scale but might be differently related to other variables, e.g., dream recall frequency.

The aim of the present investigation was to test whether positive and negative attitudes towards dreaming differentially relate to the Big Five personality dimensions. The approach was exploratory; based on the hypothesis that negative and positive attitudes towards dreams do not reflect a unidimensional construct, i.e., it was expected that some of the correlation coefficients of the two scales with personality traits might differ statistically.

2. Method

2.1. Participants

Overall, 1450 persons (863 women, 587 men) were included in the analyses. The mean age of the sample was 53.51 ± 13.93 years (range: 19 to 95 years). The level of education was distributed as follows: 10 persons had not graduated from school, 194 had 9 yrs. of education, 456 had 10 yrs. of education, 319 completed their A-levels, 431 had graduated from university, and 40 had a doctoral or higher degree.

2.2. Research Instruments

For eliciting dream recall frequency, a 6-point scale (coded as 0 = never, 2 = about once a month, 3 = about 2 to 3 times a month, 4 = about once a week, 5 = several times a week, 6 = almost every morning) was presented. Due to a programming error, the category "1 = less than once a month" of the original scale (Schredl, Berres, Klingauf, Schellhaas, & Göritz, 2014) was not presented. The retest reliability of the original scale is high: r = .85 for an average interval of about 55 days (Schredl, 2004).

Based on a literature review and the attitude towards dreams scale of the Mannheim Dream Questionnaire (MADRE; Schredl et al., 2014), twenty-two items with a five-point format (0 = Not at all, 1 = Not that much, 2 = Partly, 3 = Somewhat, and 4 = Totally) were collected: Fifteen items measuring positive attitude towards dreams, e. g., "I think that dreaming is in general a very interesting phenomenon" and seven items measuring negative attitude towards dreams, e.g., "Thinking about dreams is a waste of time" (Schredl, Burau, et al., 2019). The confirmatory factor analysis supported a two-factor solution, even though the correlation between the positive attitude towards dreams scale (Cronbach' alpha = .944) and the negative attitude towards dreams scale (Cronbach' alpha = .903) was high: r = -.696 (Schredl, Burau, et al., 2019).

The big five personality factors were measured with the German version of the NEO-FFI-30, which includes 30 Items (Körner, Drapeau, et al., 2008). Each personality factor (neuroticism, extraversion, openness to experience, agreeableness and conscientiousness) was computed as the sum score of the six corresponding items. The internal consistencies (Cronbach's alpha) of the five scales of the 30 item version given by the test authors ranged from r = .67 (openness to experience) to r = .81 (neuroticism) and were comparable to those of the 60 item version of the NEO-FFI (Körner, Geyer, et al., 2008). Within this subject population, 888 participants (495 women, 393 men) with a mean age of 50.77 ± 13.74 yrs. (in 2015) completed the NEO-FFI-30 twice with a time span in between of two years. The stability coefficients were high: r = .798 (neuroticism), r = .747 (extraversion), r = .797 (openness to experience), r = .722 (agreeableness), and r = .724 (conscientiousness). In addition, means didn't differ between the two measurement points, with the exception of a very small but significant reduction in neuroticism (2015: 1.38 ± 0.92 to 2017: 1.34 ± 0.89, t = -2.1, p = .0384).

2.3. Procedure

The online survey eliciting the positive and negative attitudes toward dreams was carried out between April 4, 2019 and April 15, 2019. Of the total sample of 2056 participants, 1450 participants completed the German version of the NEO-FFI-30 in a previous survey (N = 943 in 2018, N = 285 in 2017, and N = 222 in 2015). The link for the study was sent via email to all the persons who were registered at http://www.wisopanel.net. Within this panel persons with an interest in online studies and with heterogenic demographic backgrounds are registered. During the registration process, the participants were informed about data protection procedures. For some surveys, prizes or money are offered for study participation, but this study was completely voluntary and unpaid.

Statistical procedures were carried out with the SAS 9.4 software package for Windows. For the attitude towards dreams scales, multiple linear regression analyses were computed. The asymptotic z-test was used to test whether the magnitude of two correlation coefficients is statistically different.

3. Results

The distribution of scores on the dream recall frequency scale for the sample is depicted in Table 1. About 55% of the participants recalled dreams at least once a week while about 12% stated that they never recalled dreams. The means and standard deviations of the two attitudes toward dreams scales and the Big Five personality dimensions are shown in Table 2. The correlation between positive and negative attitudes towards dreams was r = .701 (p < .0001).

In Table 3, the correlations between the two attitudes toward dreams scales, socio-demographic variables, dream recall frequency, and the Big Five personality dimensions

Table 1. Dream recall frequency

Category	Total sample (N = 1450)
Almost every morning	11.10%
Several times a week	24.90%
About once a week	18.69%
About 2 to 3 times a month	15.72%
About once a month	17.59%
Less than once a month	---
Never	12.00%

Table 2. Means and standard deviation of the attitudes toward dreams scales and the Big Five personality dimensions (N = 1450)

Variables	Mean ± SD
Positive attitudes toward dreams scale	2.36 ± 0.79
Negative attitudes toward dreams scale	1.19 ± 0.84
Neuroticism (N = 1448)	1.48 ± 0.92
Extroversion (N = 1449)	2.07 ± 0.67
Openness to experience	2.42 ± 0.79
Agreeableness (N = 1448)	2.86 ± 0.69
Conscientiousness	2.95 ± 0.66

are depicted. The magnitudes of the coefficients differed significantly ($p < .0001$) for age, dream recall frequency, neuroticism, extroversion, and agreeableness, whereas the associations were similar for gender, education, and openness to experience. For conscientiousness, the difference in correlations coefficients was significant but very small. Age, dream recall frequency, neuroticism, and extroversion were more strongly related to the positive attitudes toward dreams scale than to the negative attitudes toward dreams scale, whereas it was the other way round for agreeableness. This pattern was also found in the regression analyses (see Table 4), except for extroversion that correlated positively with both scales significantly, even though the relationship was not very strong.

4. Discussion

Overall, the finding that positive attitudes and negative attitudes toward dreams were related differentially to socio-demographic variables, dream recall frequency, and personality dimensions supports the notion that these constructs differ – even though they share about 50% of the variance.

First, it has to be mentioned that the sample was not representative: persons with higher dream recall and with higher education were overrepresented – see Schredl, Burau, et al. (2019) for details of the complete sample of N = 2056. Despite this bias the full range in both variables (dream recall frequency and education) has been preserved and, thus, allowed reliable correlational analyses. Comparing the slightly smaller standardized regression coefficient between openness to experience and positive attitudes towards dreams (*SE* = .2547) with the coefficient of a cross-sectional study (*SE* = .3146; Schredl & Göritz, 2017) indicates that using personality data elicited up to three years prior to the attitude survey affected the results in a marked way – as personality scores were quite stable over the years. For the specific purpose of the study, that is, comparing correlation coefficients, this methodological issue had no effect.

First, dream recall frequency was more closely associated with positive attitudes toward dreams than with negative attitudes toward dreams. Possible explanations might be that the high recallers have more likely experienced dreams with positive effects, e.g., dreams stimulating waking-life creativity (Schredl & Erlacher, 2007) or problem-solving dreams

Table 3. Pearson correlations between the two attitudes toward dreams scales, socio-demographic variables, dream recall frequency, and the Big Five personality dimensions

Variable	**Positive attitudes toward dreams**		**Negative attitudes toward dreams**		**Difference in correlations**	
	r	*p*	*r*	*p*	*z*	*p*
Age	-.195	<.0001	.098	.0002	4.9	<.0001
Gender (1 = f, 0 = m)	.211	<.0001	-.204	<.0001	0.4	.7237
Education	.015	.5566	-.050	.0561	-1.7	.0843
Dream recall frequency	.383	<.0001	-.120	<.0001	13.6	<.0001
Neuroticism	.151	<.0001	-.015	.5577	6.8	<.0001
Extroversion	.108	<.0001	.006	.8166	5.6	<.0001
Openness to experience	.323	<.0001	-.323	<.0001	0.0	1.000
Agreeableness	.027	.3131	-.184	<.0001	-7.8	<.0001
Conscientiousness	.028	.2933	-.089	.0007	-3.0	.0026

[1]*Spearman Rank Correlation*

Table 4. Regression analyses for the two attitudes toward dreams scales (N = 1447)

Variable	Positive attitudes toward dreams			Negative attitudes toward dreams		
	SE	*t*	*p*	*SE*	*t*	*p*
Age	-.1379	-5.8	<.0001	.0972	3.8	.0001
Gender (1 = f, 0 = m)	.0976	3.7	.0002	-.1121	-4.5	<.0001
Education	-.0781	-3.4	.0008	.0268	1.1	.2706
Dream recall frequency	.3154	13.6	<.0001	-.1994	-8.2	<.0001
Neuroticism	.1302	4.8	<.0001	-.0085	-0.3	.7636
Extroversion	.0935	3.9	.0001	.0679	2.7	.0071
Openness to experience	.2547	10.7	<.0001	-.2766	-11.1	<.0001
Agreeableness	.0555	2.2	.0287	-.1708	-6.4	<.0001
Conscientiousness	.0320	1.3	.2087	-.0244	-0.9	.3626
		R^2 = .2806			R^2 = .2040	

SE = Standardized estimates

(Klepel, Schredl, & Göritz, 2019) or dreams with profound insights that can change one's life (Bulkeley, 2016; Hoss & Gongloff, 2017) and, thus, developed a more positive attitude toward dreams in general. Systematic longitudinal studies on this effect, however, are still lacking. On the other hand, persons with a positive attitude towards dreams might use techniques to increase their dream recall, e.g., keeping a dream diary (Schredl, 2018) because they want to know about their dreams. In a longitudinal study, the change in positive attitudes towards dreams paralleled changes in dream recall frequency, an increase in attitude was correlated with an increase in dream recall frequency (Schredl, Braband, Gödde, Kreicker, & Göritz, 2019) – supporting this line of thinking.

Persons with high neuroticism scores are more likely to seek psychotherapy (Thalmayer, 2018). As dreams are a valuable tool within the context of therapy (Hill & Knox, 2010; Pesant & Zadra, 2004) and reading dream literature can be beneficial (Schredl, 2011; Schredl & Göritz, 2020), one might speculate that positive experiences with dreams that help understanding and coping with problems explain the relationship between neuroticism and positive attitudes toward dreams. It would be very interesting to study whether successful psychotherapy that included dream work or benefiting from reading a self-help book on dreams affect general attitudes toward dreams.

As low agreeableness is characterized by being competitive, not trusting other people, and general skepticism, the negative correlation between agreeableness and negative attitudes toward dreams make sense, i.e., dreams are just one topic among many that these persons are skeptical about. The finding that extraversion correlates positively – even if the coefficients are small – with positive as well as negative attitudes toward dreams is not easily understood and warrants further research.

As attitude toward dreams does not change over a 5-year interval in adults (Schredl, Braband, et al., 2019), one might assume that the negative correlation between age and positive attitudes toward dreams reflect cohort effects. That raises the question as to how attitudes toward dreams are formed. In a sample of 12-year-old school children, there was no gender difference regarding the attitude towards dreaming, and positive attitude was related to the frequency of dream sharing within the family, reading about dreams, watching television programs on dreams, and looking at dream-related web sites (Schredl, Buscher, Haaß, Scheuermann, & Uhrig, 2015). Longitudinal studies looking at the effect of parents' attitudes towards dreams and media on the process of forming a specific attitude toward dreams in children have not yet been carried out.

Gender and openness to experience are two factors that are associated with both attitude scales in a similar way, that is, women report more positive attitudes towards dreams and less negative attitudes toward dreams than men. The same is valid for persons who are open to experiences.

To summarize, the findings that positive and negative attitudes toward dreams are affected – sometimes differently – by a large variety of factors raises the question as to how these attitudes are formed; possibly during childhood, adolescence, or early adulthood as the stability of the attitude towards dreams scale over a five-year interval in adults was high (r = .707; Schredl, Braband, et al., 2019). Longitudinal studies will be desirable to study changes in attitudes towards dreams, for example, following impactful dreams.

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