

FANTASY PRONENESS IN ONE'S PSYCHOLOGICAL LIFE AND HEALTH: OBSERVATIONAL STUDY WITH IMPACT ANALYSIS

Hana Sejfović^{1*}, Anida Vrcić Amar¹, Atif Avdović²

¹Department of philosophy and arts, State University of Novi Pazar, Serbia, e-mail: hana.sejfovic@np.ac.rs, avrcic@np.ac.rs

²Department of science and mathematics, State University of Novi Pazar, Serbia, e-mail: aavdovic@np.ac.rs



Abstract: Fantasy proneness has so far been treated as a trait associated with both pathological and adaptive mechanisms. What also seems to be the case is that both claims are evident and experimentally verified. This is an indicator of the much greater sensitivity with which these traits should be treated. This paper examines the relationship between fantasy proneness with selected indicators of mental health and sociodemographic characteristics with special consideration of the corresponding role of positive and negative affect. Obtained results contribute to detecting the sensitivity traits that seem to categorize fantasy prone individuals into the groups of those under risk for the development of mental health problems and those who are well adapted. This has been done by performing statistical analysis on impact detection methods to achieve significant correlation and determination of fantasy proneness via sociodemographic variables and mental health indicator variables. The results indicate that only marital status is a significant socio-demographic predictor, while all of the mental health indicators have significant direct or indirect impact on fantasy proneness.

Keywords: fantasy proneness, mental health, positive affect, negative affect, life satisfaction, impact analysis.

Field: General psychology, Clinical psychology, Statistics in psychology.

1. INTRODUCTION

Fantasizing has primarily been defined as a defense mechanism (Perrotta, 2020). The concept of fantasy proneness, as a personality trait, was introduced to science much later, by Wilson and Barber (1982) and refers to a set of distinct and related characteristics of a small group of people they labeled as fantasy addicts or fantasy prone personalities. A large number of studies indicate that fantasy-prone personalities can be assigned to individuals who spend most of their time in intense and vivid fantasies (Sánchez-Bernardos et al., 2015; Barber, 2000; Merckelbach et al., 2000a; Lynn & Rhue, 1988). The tendency of people to imagine events beyond those that actually happened is a pervasive feature of human thought (Byrne, 2002). It occurs across cultures, even in the absence of linguistic signs (Au, 1983) and preschoolers can already draw conclusions about what could have happened if previous events had been different (Harris et al., 1996). Individuals who are highly susceptible to fantasizing tend to spend a considerable amount of time daydreaming (Schupak & Rosenthal, 2009) and to experience "deep, thorough and long-lasting participation in fantasy and imagination" (Lynn & Rhue, 1988, p. 35). Such individuals can have fantasies and pseudo-memories so vivid that it is difficult for them to distinguish them from reality (Horslenberg et al., 2004; Merckelbach et al., 2000a).

A number of researches indicate that fantasy prone individuals show a greater range and level of psychopathology compared to people who are not prone to fantasizing (Tan et al., 2019; Lynn et al., 2018; Waldo & Meritt, 2000; Irwin, 1991; Rhue & Lynn, 1989; Lynn & Rhue, 1988). Increased prevalence of symptoms, in fantasy prone personalities, is most evident in the following disorders: depression (Lynn et al., 2018; Golding & Singer, 1983; Beck, 1979); person with OCD spectrum disorder (van Heugten-van der Kloet et al., 2014; Klinger et al., 2009; Rauschenberger & Lynn, 1995); dissociative disorders (Merckelbach et al., 2005; Pekala et al., 2001; Merckelbach et al., 2000b) and posttraumatic stress disorder (PTSD) (Dalenberg et al., 2012; Thomson et al., 2009; Muris et al., 2003). Also, fantasizing has been associated with schizotyping in both adults (Merckelbach & Giesbrecht, 2006) and adolescents (Sánchez-Bernardos & Avia, 2004).

However, fantasy proneness is also considered to be a benign trait (Merckelbach et al., 2000b). It is argued to be a cognitive resource that contributes to problem solving (Henderson et al., 1982) and serves important adaptive functions in everyday life, such as planning, preparing desirable responses in advance, and assessing consequences (Mueller & Dyer, 1985). According to Klinger (1990) and Singer (1980), fantasy and daydreaming reflect current worries, regulate mood, organize experience,

*Corresponding author: hana.sejfovic@np.ac.rs



provide relevant information about oneself, facilitate learning, and stimulate decision-making. Rhue and Lynn (1989) concluded in their research that most people prone to fantasizing are well adapted and that fantasizing and the imaginative activities associated with it are generally adaptive. Fantasy prone individuals are generally successful in meeting the academic requirements of studying, they recognize and conform to social norms, and possess a rich affective and cognitive life (Rhue & Lynn, 1989). So far, it has been proven that fantasy, daydreaming and imagination in general are adaptive and healthy aspects of psychological functioning, that they serve to regulate and organize mood and everyday experiences and by providing us with relevant information, encourage learning and stimulate decision making (Lynn et al., 2018; Singer & Switzer, 1980).

Vaillant (2012) states that psychiatry has only begun to develop empirical approaches to conceptualizing and assessing positive mental health in the last 40 years. Diener et al. (2009) constructed a hierarchical model of subjective well-being according to which, at the highest level of the hierarchy, is the very notion of subjective well-being, which represents a general assessment of a person's life.

2. MATERIALS AND METHODS

The research was conducted by distributing written and online questionnaires via Google Forms in the time period from 16th to 27th of November 2022. In both cases, respondents gave informed consent to participate in the survey with a guarantee of data anonymity. The research was conducted in accordance with all applicable guidelines, which aim to ensure proper implementation and safety of persons participating in scientific research.

Table 1. *Research sample according to demographic variables*

Variable	Categories	N	%
Sex	Male	50	14.1%
	Female	304	85.9%
Education	High school	33	9.3%
	College	9	2.5%
	Faculty	115	32.5%
	Master/PHD	48	13.6%
	Still studying	149	42.1%
Employment	Still studying	195	55.1%
	Unemployed	55	15.5%
	Employed	104	29.4%
Marital status	Single	139	39.3%
	In a relationship	159	44.9%
	Married	51	14.4%
	Divorced	5	1.4%
Total		354	100%

The sample consists of respondents aged 18 to 64 years (N=354; M=24.94, SD=5.884). Table 1 shows the demographic characteristics of the collected sample. Out of the total number, 50 (14.1%) are male and 304 (85.9%) are female. The largest percentage of respondents are students (42.1%).

Instruments used are The Creative Experience Questionnaire (Mercklebach et al., 2001), Life satisfaction questionnaire (Deiner et al., 1985), Positive and Negative Affect Schedule-Expanded Form (Watson & Clark, 1999), Resilience Scale for Adults (Friborg et al., 2003). All of these instruments are known and verified.

Statistical analysis methods employed in this paper for obtaining results are as follows. Frequency analysis for detailed sample description (Table 1), normality tests, e.g. Kolmogorov-Smirnov test and the Shapiro-Wilk test for validation of parametric methods implementation, correlation analysis for detecting significant variable interdependence, univariate ANOVA or Kruskal-Wallis test for detecting the significant discrepancies in variable scores between three or more groups and post hoc tests or Man-Whitney test for precise determination of those discrepancies, Levene's test for detecting significant variance differences between several groups scores, multivariate linear regression analysis for describing the relations between the variables and partial correlation for detecting the correspondence in variable impact relations.

Data is processed using the statistical package IBM SPSS Statistics, version 23.

3. RESULTS and DISCUSSION

Table 2 shows descriptive statistic values for fantasy proneness and mental health measures.

Table 2. *Descriptive data on variables*

Variable	N	M	SD	Median	Mode	Min	Max	Skew	Kurt
Fantasy proneness	354	9.84	4.322	10	9	1	22	0.202	-0.421
Life satisfaction	352	24.08	5.643	24	23	6	35	-0.299	-0.190
Resiliency	325	126.51	17.001	128	118*	62	161	-0.535	0.309
Negative Affect	345	25.36	8.255	25	23	10	50	0.363	-0.404
Positive Affect	343	34.67	5.700	35	33	13	50	-0.490	0.382

*The variable is multimodal. The smallest mode is shown.

The results of the normality tests have yielded significant discrepancy of all variables distributions from the normal distribution (KS test: $D \geq 0.57$, $p \leq 0.015 < 0.05$; SW test: $W \leq 0.986$, $p \leq 0.005 < 0.05$). However, this does not mean that the parametric methods' results will not be reliable. Firstly, the power of the normality tests is larger for large sample sizes. Namely, it has been shown (Avdović & Jevremović, 2022) that even for small sample sizes such as $N=50$ usually used normality tests have high power values and, as such, identify even small discrepancies from normal distribution as significant. In our case, $N=354$. Additionally, parametric methods that we ought to apply are reliable for this large samples even when the normal distribution is not confirmed (Nikitin 2011). This is due to the sample mean being normally distributed for large samples (Avdović & Jevremović, 2022).

Table 3. *Correlation analysis of socio-demographic and mental health indicator variables with Fantasy proneness*

Variable		Marital status	Life satisfaction	Resiliency	Positive affect	Negative affect
Fantasy proneness	r	-0.122	-0.113	-0.133	0.259	0.108
	p	0.021	0.034	0.016	0.000	0.047
	N	354	352	345	345	343

Based on the correlation analysis results given in Table 3, the statistically significant correlation of socio-demographic variables with Fantasy proneness has been confirmed only for Marital status ($r = -0.122$, $p = 0.021 < 0.05$). We use ANOVA to describe detected relationships precisely. For other socio-demographic variables, the correlation analysis results are as follows; Sex: $r = 0.037$, $p = 0.485 > 0.05$; Age: $r = -0.070$, $p = 0.195 > 0.05$; Education: $r = 0.000$, $p = 0.995 > 0.05$; Employment: $r = 0.054$, $p = 0.310 > 0.05$.

When it comes to mental health indicator variables, significant correlation with fantasy proneness has been confirmed for all of them. As seen in table 3, the lowest, yet significant, absolute correlation coefficient for fantasy proneness has been detected for negative affect ($r = 0.108$, $p = 0.047 < 0.05$). Fantasy proneness correlates even better with other variables. An obtained negative association with resilience is consistent with the increased vulnerability to the development of psychopathology found in the fantasy-prone population (Rauchenberger & Lynn, 1995).

Table 4. *Kruskal-Wallis test results for difference of Fantasy proneness scores between the Marital status groups.*

Variable	Marital status	N	M	SD	95% CI for M		Min	Max	K-W test	
					Lower	Upper			H	p
Fantasy proneness	Single	139	10.58	4.196	9.87	11.28	1	20	8.517	0.036
	In a relationship	159	9.45	4.180	8.79	10.10	1	22		
	Married	51	8.92	4.681	7.60	10.24	2	18		
	Divorced	5	11.00	6.285	3.20	18.80	7	22		

The Kruskal-Wallis test results have shown there is a significant difference in fantasy proneness scores between the Marital status groups ($H = 8.517$, $p = 0.036 < 0.05$). To locate between which pairs of groups significant differences occur, we use the Man-Whitney test. Significant difference of 1.645 (with 95% CI from -0.16 to 3.47) occurs only between Single and Married respondents ($U = 2784$, $p = 0.023 < 0.05$). These results are consistent with the expected and usual results due to these categories being the imperiled ones when certain negative impact is analyzed (Rauschenberger & Lynn, 2003).

Table 5. *Multivariate linear regression results for predicting the Fantasy proneness scores*

Model	B	95% CI for B		t	p	R ²	ANOVA	
		Lower	Upper				F	p
Constant	4.879	-0.066	9.824	1.941	0.053	0.103	8.769	0.000
Life satisfaction	-0.001	-0.100	0.098	-0.018	0.985			
Resiliency	-0.025	-0.061	0.011	-1.357	0.176			
Negative affect	0.131	0.066	0.195	3.979	0.000			
Positive affect	0.138	0.046	0.230	2.946	0.003			

The optimal regression model for predicting Fantasy proneness via mental health indicators contains only Negative affect and Positive affect as predictors. Namely, the prediction of the model is statistically significant ($F=8.769$, $p=0.000<0.05$), and 10.3% ($R^2=0.103$) of the Fantasy proneness scores variability has been determined by changes in the linear model values. The increase of (only) Negative affect score by 1, causes the significant ($t=3.979$, $p=0.000<0.05$) increase of the Fantasy proneness score by 0.131, whilst the increase of (only) Positive affect score by 1, causes the significant ($t=2.946$, $p=0.003<0.05$) increase of the Fantasy proneness score by 0.138.

Life satisfaction and Resiliency scores have not shown to have a significant independent impact on Fantasy proneness scores (LS: $t=-0.018$, $p=0.985>0.05$; R: $t=-1.357$, $p=0.176>0.05$). To precisely determine the correct causality model, we shall first perform the partial correlation analysis, where we shall determine how well does life satisfaction and Resiliency correlate to Fantasy proneness when Negative and Positive affect impact are controlled. In other words, we shall determine the correlation between these variables when we eliminate the correlation manifested by negative and positive affect.

Table 6. *Partial correlation analysis of mental health indicators and Fantasy proneness*

Variable		Life satisfaction	Resiliency	Variable Controlled
Fantasy proneness	r	0.031	-0.002	Negative affect
	p	0.587	0.966	
	N	314	314	
	r	-0.137	-0.205	Positive affect
	p	0.015	0.000	
	N	314	314	

Since the partial correlation of both life satisfaction and resiliency with fantasy proneness, when Negative affect is controlled, is not significant (LS: $r=0.031$, $p=0.587>0.05$; R: $r=-0.002$, $p=0.966>0.05$), we conclude that the correlation of these variables is manifested almost entirely through Negative affect as a mediator variable. Rhue and Lynn (1989), as well as Wilson and Barber (1982) have indicated this result claiming that conditions where aversive life experiences cannot be avoided and must be lived. Fantasizing has proven to be a very adaptive overcoming mechanism. The features of fantasies that are disruptive to mental health are their disturbing content, repetitive character, and being accompanied by negative emotions (Beck, 1979). Therefore, such fantasies can be understood as a reflection of a person's current mental state, as a channel through which negative influences, obtained from elsewhere and in some other way, are expressed. That is why negative affect is a mediator in this relationship.

The partial correlation of the same variables, when positive affect is controlled, remains significant (LS: $r=-0.137$, $p=0.015<0.05$; R: $r=-0.205$, $p=0.000<0.05$) but is improved. Thus, there is no correspondence achieved through positive affect.

Similar studies have found that negative affectivity mediates the relationship between fantasy and current Axis I disorders according to the Diagnostic and Statistical Manual of Mental Disorders (Rauschenberger & Lynn, 2003). Fantasizing in the context of a negative mood can significantly reduce life satisfaction and an individual's overall resilience to negative life experiences. And the use of imaginary scenarios paired with positive emotions increases one's willingness to adapt to future life situations. With all of this in mind, we can argue that one of the most important determinants of whether an individual's tendency to fantasize is classified as well adjusted or as a sign of impaired mental health is precisely whether the content and activity of fantasizing is associated with a positive or negative affect.

4. CONCLUSIONS

This study examined the direct and indirect relationship of fantasy proneness with selected mental health indicators. For two of the three examined indicators, a significantly negative relationship was found, which justifies the previous labeling of fantasy proneness as a risk factor for the development of psychopathology. However, by eliminating the influence of the negative affect with which fantasy proneness positively correlates, this connection is lost, indicating that the impact of life satisfaction and resiliency is mostly manifested indirectly by negative affect. When it comes to a positive affect, it improves that impact. One can hereby conclude that fantasizing alone does not have the power to impair our mental health, but that it is necessary to develop more adequate and effective strategies for regulating negative emotions in the population of fantasy-prone personalities. This could be done via our future work and research includes life satisfaction improvement (as much as possible) advice, therapies and technics for increasing resiliency, and thus positive emotions for which the direct treatment is welcome as well. One could also hypothesize and examine improving the effect through institutional involvement and actions.

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