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THE ROLE OF PERSONALITY TRAITS IN PREDICTION OF GENERATIVITY

Abstract

According to E. Erikson (1980) *generativity* can be defined as creating, guiding and taking care of the next generation. This study investigates whether the five-factor (FF) personality traits predict generativity, while accounting for the impact of the demographic factors. The sample comprises 217 Bulgarian participants aged 16-65 years. They filled out The Mini IPIP FF model personality scale (Karabeliova, Petrov, Milanov & Ivanova, 2016) and *The Loyola Generativity Scale* (LGS, McAdams & de St. Aubin, 1992). Two-steps hierarchical regression analysis was used to create predictions for generativity. Socio-demographics entered model 1 ($F(4, 207) = 9.225, p < .001, R^2 = .151$) where *marital status* ($\beta = .229, p < .01$) and *education* ($\beta = .187, p < .01$) proved to be significant predictive factors. FF traits were added to Model 2 ($F(9, 202) = 13.689, p < .001, R^2 = .379$) where *Extraversion* ($\beta = .295; p < .001$), *Agreeableness* ($\beta = .233; p < .001$), *Intellect/Imagination* ($\beta = .149; p < .01$) and *Conscientiousness* ($\beta = .147; p < .05$) contributed and explained most of the variance ($\Delta R^2 = .228$) than demographics alone. Findings are in line with earlier studies and provide insights into the range of socio-demographic and personality factors which shape the context and the potential for generativity

Key words: generativity, generative concern, personality traits

Introduction

One of the aspects of being actively and productively included in society is through being generative. The idea of *generativity* was introduced by Erik Erikson in his psychosocial theory of identity development through the life cycle (Erikson, 1950). It postulates that human life consists of 8 stages, each represented by a critical conflict between two contrary dispositions. The adaptive stage outcome, named *basic virtue or basic psychosocial strength*, reveals the balance achieved between the two opposing developmental forces.

The stage of *generativity versus stagnation* is situated approximately between 40 and 65 years of age, i.e., in the middle adulthood. According to Erikson, generativity can be defined as "primarily the concern in establishing

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and guiding the next generation" (Erikson, 1950, p. 267). Although the parent is a prototypical figure of the generative adult, generativity includes any form of productivity, intended to create something of lasting worth in benefit of others and society (Erikson, 1968). Besides caring for one's own offspring, generativity could be expressed through being a leader, a teacher, a mentor, a volunteer, or in more general terms - by creating something that would outlast you (McAdams, 2013).

The disposition contrary to generativity is *stagnation*. It consists of self-absorption, caring for no one, not having desire to be an active member of society or to create something with intention to benefit others.

Basic stage virtue – *care* is an indicator for successful resolution of the conflict *generativity versus stagnation* and it is an adaptive prerequisite for all the further development.

Enriching and elaborating Eriksonian construct of generativity into a multi-facet model, McAdams and de St Aubin (1992) differentiate seven features of generativity: 1) *Cultural demand*, 2) *Inner desire*, 3) *Concern*, 4) *Belief in the worthiness of human life*, 5) *Commitment*, 6) *Action* and 7) *Narration* (McAdams & de St Aubin, 1992). They believe cultural demand about age-appropriate behavior and inner desire to be needed and attain symbolic immortality promote the concern for the next generation. This concern combined with having a belief in the goodness of human kind may lead to commitment to promote the development and well-being of future generation. Taking action may be directly driven by cultural demands or inner desire but, according to McAdams and de St Aubin, "...the most personally efficacious, psychologically fulfilling, and socially valuable behavioral expressions of generativity are often the products of the adult's reasoned commitments to generative endeavors and goals." (McAdams & de St Aubin, 1992, p. 680). Generative narration integrates all these and is expressed by the way in which the adult narrates and integrates his/her generative projects and endeavors into a self-defining life story.

As Erikson postulated it, generativity is mostly attributed to middle-aged people. Empirical studies revealed that it may appear earlier. Recently, a cross-sectional study of adolescents and young adults showed that generative concern may be present before middle age when identity and intimacy are already established (Lawford, Astrologo, Ramey & Linden-Andersen, 2020). The age-related tendency depends on how generativity is measured and "a substantial evidence suggests that a wide variation in generativity scores can be found in any age cohort among adults from late-adolescence to old age" (McAdams, 2006. p. 83). As a multifaceted developmental task, it may be influenced and nuanced by diverse contextual factors.

When it comes to generativity though, it is crucial to gain a more understanding of the relationship it may have with personality and examine which are the traits that predict higher levels of generative concern. Personality traits are often examined via the five-factor model of personality (McCrae & Costa,

1987) which consists of the traits *Intellect/Imagination* (also called *Openness*), *Conscientiousness*, *Extraversion*, *Agreeableness* and *Neuroticism*. The association of generativity with these traits is an issue that has been of persistent research interest. For example, a study, conducted by Cox et al. showed that generativity correlates strongly and positively with *Extraversion* and *Intellect/Imagination*. Results also revealed a positive correlation with *Conscientiousness* and a negative one with *Neuroticism* (Cox, Wilt, Olson & McAdams, 2010). In a study of de St Aubin and McAdams, the authors found a positive relationship between generative concern, life satisfaction and overall happiness. Furthermore, their research indicated a significant relation to *Extraversion*, *Intellect/Imagination*, *Agreeableness* and *Emotional stability* (Aubin & McAdams, 1995). Peterson et al. also identified a positive correlation between generativity and *Intellect/Imagination* (Peterson, Smirles & Wentworth, 1997). Ten years later, Peterson and Duncan found that: generativity was positively associated with *Extraversion*, *Agreeableness* and *Intellect/Imagination* and negatively – with *Neuroticism* (Peterson & Duncan, 2007). More recently, a longitudinal study identified a significant effect of *Extraversion*, *Conscientiousness* and *Intellect/Imagination* on generativity (Blatný, Millová, Jelínek, & Romaňáková, 2019).

The current study aims to contribute to the investigation of the relationship between generativity and personality traits. Specifically, we have decided to broaden the perspective by including certain socio-demographic variables as possible contextual predictors. *Marital status* is of particular interest. Thus, a study by Peterson and Duncan showed that generativity plays a predictive role on satisfaction with marriage. The more generative persons are, the more satisfied they will be with their marriage (Peterson & Duncan, 2007). These findings are also supported by a research done by Snarey et al. who found that highly generative men were more likely to be satisfied with their marriage, rather than divorced or not satisfied (Snarey, Son, Kuehne, Hauser & Vaillant, 1987). On the base of these findings, it is interesting to examine the opposite direction, i.e., whether being married predicts generativity.

As to *educational level*, older and newer studies highlight its relationship and positive effect on generativity (e.g., Becchetti & Bellucci, 2021; Hofer, Busch, Au, Poláčková Šolcová, Tavel & Tsien Wong, 2014; McAdams & de StAubin, 1998; Muñoz-Rodríguez, González & Navarro, 2019). In particular, a study of Keyes and Ryff showed that respondents with 12 or more years of education expressed more concern for other's well-being than those with less education (Keyes, Ryff as cited by McAdams & de St. Aubin, 1998).

The current study

The purpose of our study is to examine how personality trait dimensions predict generative concern, while accounting for the effect of socio-demographic factors.

On the base of earlier studies mentioned above, we hypothesize that:

1. Among socio-demographic factors, *marital status* and *educational level* are significant predictors of generative concern;
2. We expect that personality traits, except for *Neuroticism* (a trait associated with negative experiences and desadaptive behaviors), will contribute statistically significantly to the explanation of the variance of generative concern above and beyond the effect of the demographics alone.

Method

Participants

The research included 217 Bulgarian citizens, aged 16 - 65 years ($M = 33.64$, $SD = 13.28$). 70% were women, 30% - men. Regarding marital status, 53% of the respondents were not married, 47% were married. 34% had a high school diploma, 34% had a bachelor's degree and 32% had either a MD or a PhD. 54% do not have children, and 46% had at least one child. Regarding occupation, 56% of the participants were working full-time, 44% were students. As to residence, 67% of the respondents were resident of the capital of Bulgaria (the city of Sofia), 14% - of a village, 11% - of a big city, and 8% - of a small town.

Measures

Personality: To assess personality traits, we adopted the five-factor model (McCrae, & Costa, 1987). In the study, we used the Bulgarian version of the MiNi-IPIP questionnaire (Donnellan, Oswald, Baird, Lucas, 2006; Karabeliova, Petrov, Milanov & Ivanova, 2016). It consists of 20 items, four for each of the scales representing the five personality dimensions: *Intellect/Imagination*, *Conscientiousness*, *Extraversion*, *Agreeableness* and *Neuroticism*. Answers were given on a 5-point Likert-type scale from **1** (*It does not apply to me at all*) to **5** (*It completely applies to me*). Some example items are: "*I have lively imagination.*" (Intellect/Imagination); "*I like order.*" (Conscientiousness); "*I talk to a lot of different people at events.*" (Extraversion); "*I understand other people's emotions.*" (Agreeableness) and "*I get easily upset.*" (Neuroticism).

Generativity: The 20-items *Loyola Generativity Scale* (McAdams & de St. Aubin, 1992), designed to measure a general disposition to generativity, was used to assess generative concern. The participants had to mark their choice on a Likert-type scale from **1** (*It does not apply to me at all*) to **4** (*It completely applies to me*). Some of the items were: "*I try to be creative in most of the things I do.*"; "*I would adopt and raise a child if I'm unable to have one on my own.*"; "*People think of me as a very productive person.*"; "*I try to impart my gained experience and knowledge to others.*"

Procedure: The study began in the last quarter of 2019 and finished in 2020. Initially the data were collected via paper-based questionnaires. Due to the

COVID-19 pandemic, part of the data were collected online. The respondents were informed at the top of the questionnaires that their participation is anonymous and were asked to be sincere and to answer all of the questions. Data were analyzed by using SPSS, Version 20.0 (IBM SPSS Statistics for Windows, Version 20.0. Armonk, NY: IBM Corp).

Results

Correlation analysis

An intercorrelation matrix was calculated for the scores on the five personality traits and generative concern. **Table 1** shows that generative concern was significantly correlated with all personality traits, except for *Neuroticism* ($r = -.065, p = .208$). Generative concern and *Extraversion* marked the strongest association ($r = .426, p < .001$). The generative concern was moderately linked to *Agreeableness* ($r = .320, p < .001$) and *Conscientiousness* ($r = .263, p < .001$). Its relationship with *Openness to experience* was a weak one ($r = .180, p < .01$).

Table 1
Correlations between personality traits and generative concern

	1	2	3	4	5	6
1. Extraversion	-					
2. Agreeableness	.113*	-				
3. Conscientiousness	.103	.130*	-			
4. Neuroticism	-.071	.179*	-.107	-		
5. Openness	.067	.218**	.054	.167**	-	
6. Generative concern	.426***	.320***	.263***	-.059	.180**	-

* - $p < .05$; ** - $p < .01$; *** - $p < .001$

For the purposes of the statistical analysis, the demographic variables *occupation*, *residence*, *marital status* and *having children* were transformed in binary variables. In the case of *occupation*, **1** was used to designate the students' group and **2** – to designate the full-time working participants. As to *residence*, **1** was assigned to the participants inhabiting small towns and villages, and **2** – to those from the capital and big cities. Regarding *marital status*, the unmarried people in the sample were coded as **1**, the married ones – as **2**. The participants without children were coded as **1**, those with one or more children – as **2**. Men were coded as **1** and women – as **2**.

Table 2 presents the correlations between the socio-demographics and generative concern. The strongest correlations were between the factors *age* and

occupation ($r = .740, p < .001$) and age and having children ($r = .732, p < .001$). The variables with a significant intercorrelation above 0.7 could not be used for predictive purposes, so the socio-demographic factors age and having children were excluded from the further prediction equation (Schroeder, Sjoquist & Stephan, 2017). The participant's gender did not have a significant correlation with any other variable and was also excluded from the further regression analysis.

Generative concern scores significantly correlated with all socio-demographic factors, except for gender. Its correlations were significant and positive with the factors: education ($r = .318, p < .001$), occupation ($r = .277, p < .001$), marital status ($r = .313, p < .001$) and having children ($r = .320, p < .001$), and negative – with residence ($r = -.179, p < .01$).

Table 2
Correlations between the demographic variables and generativity

	1	2	3	4	5	6	7	8
1. Age	-							
2. Gender	-.098	-						
3. Level of education	.528***	.044	-					
4. Occupation	.740***	-.137	.454***	-				
5. Residence	-.279***	-.068	-.001	-.024	-.275***			
6. Marital status	.510***	-.016	.295***	.392***	-.279***	-		
7. Having children	.732***	-.032	.392***	.645***	-.372***	.594***	-	
8. Generative concern	.318***	.082	.277***	.227***	-.179**	.313***	.320***	-

** $p < .01$; ***, $p < .001$

Hierarchical regression analysis. For the purpose of the study, a two-step hierarchical regression analysis was applied. In the first model, we entered the demographic factors (education, occupation, residence and marital status) as predictors, and generative concern as a criterion variable ($F(4, 207) = 9.225, p < .001$). Both marital status ($\beta = .229, p < .01$) and education ($\beta = .187, p < .01$) were identified as significant predictors of generative concern. Occupation and residence did not have significant effects on the outcome. This model explained 15% of the variance ($R^2 = .151, \Delta R^2 = .151$).

In the second model ($F(9, 202) = 13.689, p < .001$), the personality traits were entered as predictors and the explained variance was up to 38% ($R^2 = .379, \Delta R^2 = .228$). The demographic factors education ($\beta = .164, p = .01$) and marital status ($\beta = .138, p < .05$) remained significant predictors of generative concern. All personality traits, except for Neuroticism, significantly predicted the levels of the dependent variable and contributed almost 23% to the variance explained. Extraversion had the biggest effect on the generative concern ($\beta = .295, p < .001$),

followed by *Agreeableness* ($\beta = .233, p < .001$), *Intellect/Imagination* ($\beta = .149, p < .01$) and *Conscientiousness* ($\beta = .147, p < .05$).

The summary of regression models is presented at **Table 3**.

Table 3
Summary of hierarchical multiple regression analysis

Model	R	R ²	Adj, R ²	SE	ΔR^2	ΔF	P
1	.389 ^a	.151	.135	7.784	.151	9.225	.000
2	.616 ^b	.379	.351	6.741	.228	14.801	.000

a. Predictors: (Constant), occupation, residence, marital status, education

b. Predictors: (Constant), occupation, residence, marital status, education, openness, conscientiousness, extraversion, agreeableness, neuroticism

Dependent variable: generative concern

Discussion

In an attempt to shed light on positive adult development, our study is focused on the construct of generativity and its predictors. In the seminal Erikson's lifespan theory, generativity represents a socially significant level in identity development, leading to self-enrichment by personal commitment to intergenerational continuity and strivings for enduring impact on historical future. In this way, the temporal frame of the generative project goes beyond the individual life and implies that people tend to project themselves in a way that allows them to keep the sense that their contribution is relevant to the well-being of the larger community and young generations. The purpose of this study was to give insight into the relationship between generativity and personality traits, while accounting for the impact of the socio-demographic factors. Given the importance of generativity in creating and maintaining the intergenerational continuity, we need in-deep understanding of the contextual factors in which it occurs, as well as personality dispositions it is shaped by. In the study reported here, along with demographic information about the participants we used the LGS (Loyola Generativity Scale) to measure a general disposition for generativity as a criterion variable and a five-factor personality traits questionnaire (Mini IPIP) - to assess the trait dimensions as predictive variables.

The results of correlation analyses revealed that from socio-demographic perspective, the disposition reflecting generativity increased with being married and having children, as well as with higher educational and occupational attainment. All these demographic factors are socially valued and referred to domains of realization which are supposed to create contextual opportunities for social engagement, generative involvement and growth. Participants from smaller towns and villages scored higher on generativity, indicated by a statistically significant negative

correlation between the factor *residence* and the scores on generative concern. Finding suggests that the more collectivist and tradition-oriented communities with cultural demand for filial piety, interdependence and group welfare seem beneficial for generativity. It is in line with cross-cultural studies (Hofer, Busch, Chasiotis, Kärtner & Campos, 2008; Hofer, Busch, Au, Poláčková Šolcová, Tavel & Wong, 2016) where, in particular, was shown that internalized cultural demand affects generative behaviors indirectly through generative concern.

Demographic factor *residence* however didn't prove further in our regression analyses to be a significant predictor of generative concern. So, it seems that *per se* it expresses a beneficial trend but is not enough to account for the differences in generativity.

From personality perspective, all personality traits, except for *Neuroticism*, demonstrated a significant and positive linear link to the criterion variable. The result highlights the importance of the stable and consistent personality characteristics to the general disposition for generativity. Participants who rated themselves higher on *Extraversion*, *Agreeableness*, *Conscientiousness* and *Intellect/Imagination* scored higher on generative concern.

The hypotheses 1 and 2 were empirically supported. A two-step hierarchical regression analytical strategy was applied for their verification. Among demographic predictors in the first model, *marital status* and *education* were identified as significant predictors with 15% contribution. Consistent with our results, educational attainment and identity one forms in psychosocial contexts of couple relationships have important implications for generativity. With adding personality traits in model 2, *Extraversion*, *Agreeableness*, *Intellect/Imagination* and *Conscientiousness* significantly contributed to the explanation of the individual differences in generative concern, accounting most of the outcome variance (23%) in comparison to the contribution of the socio-demographics alone.

Taking these results together, the study revealed that the family way of life and higher educational level, combined with an adaptive multifaceted personality profile explain a meaningful part of the individual differences in disposition to be productive, driven by the care for the future of human kind, culture and society. In general, findings backs-up previous studies, pointed out in the Introduction. As it appears, the personal and societal relevance as well as multi-task nature of the generative mission implementation needs the full potential of personality adaptive features, and education and family ensure a beneficial context.

The present study has some limitations. The design was cross sectional, men were underrepresented in the sample, and pandemic time of measuring – unusual and challenging. Although at the core of generativity, generative concern is one of the many facets of this rich and complex construct. Regardless, findings are in line with earlier studies and provide insights into the range of socio-demographic and personality factors which shape the context and the individual potential for generativity. It would be useful to be taken into accounts by institutionalists, policymakers and all whom may concern the future of human society.

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