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Later-life satisfaction with adult children's achievements: does parents' personality matter?



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ABSTRACT

The happy personality model proposes that individuals with happy personality traits are more satisfied with the events of their lives than those who are not. Based on this proposition, this study examined whether parents' personality - as measured by the Big Five typology - would predict satisfaction with the achievements of adult children. Participants include 465 community elders from Ekiti State, comprising 294 mothers with mean age 74.18 \pm 9.42. Both univariate and multivariate statistics were used in data analyses. Results indicated that mothers' extraversion and conscientiousness respectively predicted satisfaction in education, occupation, finances and health achievements. Fathers' agreeableness and openness traits respectively predicted satisfaction in education in education and occupation. These results provide support for the happy personality model by demonstrating that extraversion, agreeableness, and conscientiousness predict satisfaction with life events, while neuroticism predicts dissatisfaction.

1. Introduction

In most societies, children are regarded as one of the most important fruits of marital union. Anecdotal evidence shows that many parents within African societies perceive their children as assets for the future, the reason for engaging in paid work and their purpose for living. In protecting and safeguarding the future of children, parents invest much in the nurturing process so that children achieve positive outcomes when they reach adulthood. These positive outcomes are usually expected in areas of education, finances, social and emotional adjustments (Campbell et al., 2012). When children become adults, they are expected to reciprocate the kindness of parents by providing adequate support for them in old age. This makes children's future outcomes a determinant of parent's satisfaction in later life, most especially in countries where there is lack of social welfare services for the elderly (Wang, 2013; Okeniyi, 2013). Although many children become successful adults and remain a significant source of support to parents, others become problematic and give a strain across different life stages (Birditt et al., 2010). Thus, while successful adult children provide satisfactions for parents, unsuccessful ones create dissatisfactions and increase parental distress (Pillemer et al., 2017).

More recently, parents' satisfaction with achievements of adult

children is evidenced as a significant predictor of elderly well-being (Olawa and Idemudia, 2019). Specifically, satisfaction with achievements of adult children was found to predict lower levels of depression and loneliness. Such satisfaction was further demonstrated to be associated with expression of gratitude and level of support children provide for their older parents (Olawa and Idemudia, 2019). Given the significant association between satisfaction with adult children's achievement and psychological well-being of older parents, it becomes necessary to investigate variable(s) that may influence this aspect of life satisfaction at senescence.

Although yet to be evidenced in the research literature, parents' personality dispositions may have a significant role to play in their level of satisfaction with adult children's achievements. Drawing from the *happy personality* model, a potential relationship can exist between personality traits and satisfaction with adult children's achievement. According to this model, most individuals who are satisfied with their lives tend to have higher compositions of extraversion and agreeableness traits while showing less emotional instability or neuroticism (Diener & Seligman, as cited in Müller, 2014). Additionally, individuals with *happy personality* traits have a positive outlook to life compared with other people who have less of such traits (DeNeve and Cooper, 1998). This suggests that having a *happy personality* may make one perceive positive

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contents from negative life events, thus predisposing better life satisfaction (Müller, 2014). Similarly, satisfaction of parents with the achievements of their adult children may be influenced by these *happy personality* traits.

Previous research has established that overall life satisfaction in older adults is associated with personality traits. For example, Navarro-Prados et al. (2018) indicated that personality traits as measured by the "Big Five" dimensions significantly predict overall life satisfaction among older adults. In particular, neuroticism predicted lower levels of satisfaction whereas extraversion, agreeableness and openness to experience were associated with increased satisfaction. However, while the influences of neuroticism and extraversion were found to be stronger, conscientiousness seemed to be unimportant in overall life satisfaction. In a related study by Stephan (2009), the dimension of openness to experience was shown to have incremental variance in life satisfaction beyond that of financial satisfaction and self-rated health.

The roles of personality traits in overall life satisfaction have also been demonstrated using a longitudinal model. Using longitudinal data spanning over 12 years, Tauber et al. (2016) found personality traits (in terms of extraversion and neuroticism) to be stronger predictors of life satisfaction than when life satisfaction was specified as a predictor and personality traits as criteria. This pattern was especially noted in the elderly cohort. A more recent study (Lachmann et al., 2018) also showed that the domains of life satisfaction form significant associations with personality traits, especially for neuroticism and extraversion. These domains include satisfaction with health, job, income, housing and leisure.

Given that overall and domains of life satisfaction at old age are dependent on personality dispositions, this study aims to investigate the association between parents' personality traits and level of satisfaction with adult children's achievements. Hence, it is hypothesized that parents' personality traits as measured by the Big Five dimensions will significantly predict level of satisfaction with adult children's achievements in a sample of community elders from Ekiti State, Nigeria. Findings will fill the knowledge gap on the role of personality traits on satisfaction with adult children's achievements among older adults.

2. Method

2.1. Sample and procedure

Using the Yamane's (1967) sample size formula with a precision value of .05, 465 parents (comprising of 294 mothers) were selected from the estimated population of 137,415 older adults in Ekiti State, Nigeria (National Bureau of Statistics, 2018; National Population Commission, 2009). The ages of participants range between 60 and 96 with mean 74.18 (SD = 9.42). Selection was done by means of the multi-stage sampling process which included a simple random selection of six local governments areas (LGAs) from the three senatorial districts of Ekiti State, namely Ekiti Central, Ekiti North and Ekiti South. Also by means of simple random sampling, three communities were selected from each of the LGAs, except in two LGAs where only one community was selected because they are mainly one-town/community LGAs. In total, samples were drawn from 14 communities.

Given that there was no formal registration details of older adults in the State and in Nigeria generally, participants were recruited via hometo-home contacts and interviewed within each community. A quasisystematic random technique was used in the recruitment of participants. This entailed the selection of older adults whose streets and houses fall within the odd numbering system. The inclusion criteria consist in being either Yoruba or English speaker, 60 years or over, and not having observable signs of cognitive impairment, which were all established during initial rapport. Airtime worth \$100 was given to each participant after the interview to thank them for participating in the study.

Ethical consideration: This study was approved and cleared by the Department of Psychology, Ekiti State University after meeting the relevant ethical standards. In most cases, verbal informed consent was obtained from kings and community heads before carrying out the study in their respective domains. Informed consent was also obtained from individual participants before interview.

2.2. Measures

Independent variable: Parents' personality was measured by using the Big Five Inventory (BFI-10: Rammstedt and John, 2007). The 10 items in the scale assess five domains of personality which are extraversion (1, 6), agreeableness (2, 7), conscientiousness (3, 8), neuroticism (4, 9) and openness to experience (5, 10). The BFI-10 was derived from the 44 test items of the Big Five Inventory (John and Srivastava, 1999). An average of .75 test-retest reliability coefficient was obtained for the BFI-10 with a procedure spanning between 6-8 weeks. The average convergent validity correlations with the 44 items BFI was .67 (Rammstedt and John, 2007). In the current study, an average of .85 two-week test-retest reliability coefficient was obtained for the BFI-10.

Also, the confirmatory factor analysis (CFA) of the BFI-10 with study data yielded acceptable relative fit for the five factor structure of the BFI-10. The values of the fit indices are: GFI = .98; RMSEA = .07, 90% CI = (.035, .071). PCLOSE = .36, SRMR = .04.

Dependent variable: Parental satisfaction with children's achievements was assessed with Satisfaction with Adult Offspring's Achievement Questionnaire (SOAQ) designed by author 1 (see section B in the appendix). The SOAQ measures general satisfaction of parents with the achievements of their children. Thus, focus is not on only one child but satisfaction with achievements of all children in total. In constructing the SOAQ, separate interviews were carried out with 14 older adults resident in Ado Ekiti. During the interview, the researcher asked the respondents to list the important aspects of their children's lives in which they expected them to achieve considerable success. Interview results yielded common themes in the area of health, occupation, finances, education, marital life and spirituality. Hence in the present study, participants were asked to express general satisfaction with the level of their children's achievement in these areas on a 5-point Likert scale [very dissatisfied (0), dissatisfied (1), neither satisfied nor dissatisfied (2), satisfied (3) and very satisfied (4)]. Individual scores on each item were dichotomized into dissatisfied (0-2) and satisfied (3 and 4). An aggregate score expressing total satisfaction with children's achievement can be derived by summing the individual scores across the six areas of satisfaction. An internal consistency coefficient of .75 was obtained for the SOAO. Given that parental satisfaction with adult children's achievement should intuitively correlate with perceived support from children, the scores on the SOAQ was correlated with items on the social support subscale of the Duke Social Support and Stress Scale (DUSOCS: Parkerson et al., 1989). While the correlation coefficient between SOAQ scores and item 2 of the DUSOCS which specifically assess perceived support from children was .36, the correlation coefficient of SOAQ scores with other items ranged between .09 and .25. This demonstrated potential convergent and discriminant validity for SOAQ. Also, the data for this study fits the underlying construct of the SOAQ [GFI = .99; RMSEA = .04, 90% CI = (.00, .085). PCLOSE = .55, SRMR = .02].

We used both judgmental and statistical designs in trans-adapting the research instruments from English to the Yoruba language (International Test Commission, 2005). This was done to allow participants to respond to instrument items in their native language and accommodate older adults who do not understand the English language. The backward translation process was followed in the judgmental design while bilingual examinees responded to both English and Yoruba language versions of the instruments in the statistical design (Bolaños-Medina, 2012; Hambleton, as cited in Bolaños-Medina and González-Ruiz, 2012). Test-retest correlation coefficients ranging between .82 and .87 were obtained for both source and target language on the BFI-10 while .95 coefficient was obtained for the SOAQ.

2.3. Statistical analysis

Data analysis was done by utilizing IBM SPSS Statistics, version 20.0 for Windows (SPSS Inc., Chicago, IL). We used Chi-square statistic to test the association between gender and other categorical variables. Spearman's rho was utilized to examine the relationship between personality dimensions and domains of SOAQ. Spearman's rho was also used to assess the relationship among scores on SOAQ items for both fathers and mothers. Independent t-test provided the difference between fathers and mothers on personality traits. Multivariate binary logistic regression stratified by gender was employed in regressing parents' personality traits on satisfaction with children's achievement (SWCAs). Given that missing data do not exceed 9% of cases, the method of replacement with mean was used to take care of missing values (Mertler and Vannatta, 2005). In addition, there was no significant outlier in data set that could pose problems for data analysis.

3. Results

The distributions of study variables are shown in Table 1. There were differences in distribution of age categories with more participants

Table 1Distributions of study variables.

% or mean (SD)	Total (N = 465)	Mothers (n = 294)	Fathers (n $= 171$)	Difference (Total/gender)
Demographics				
Age				
60–69	31	29	34	<.001/.82
70–79	34	35	33	
80-89	26	27	25	
90–99	9	9	8	
Marital status				
Single	1	0	3	<.001/< .001
Married	49	29	84	
Widowed	50	71	13	
Family type				
Polygamy	56	63	43	.02/< .001
Monogamy	44	37	57	
Education				
Primary	76	84	63	<.001/<.001
Secondary	6	2	12	
Post-secondary	18	14	25	
SOAQ				
Education				
Dissatisfied	43	43	42	.003/.72
Satisfied	57	57	57	
Occupation				
Dissatisfied	62	65	55	<.001/.03
Satisfied	38	35	45	
Finances				
Dissatisfied	84	84	84	<.001/.91
Satisfied	16	16	16	
Health				
Dissatisfied	9	9	9	<.001/.95
Satisfied	91	91	91	
Marriage		05		001 50
Dissatisfied	26	25	28	<.001.58
Satisfied	74	75	72	
Spirituality Dissatisfied	8	7	9	< 001 / 05
Satisfied			9 91	<.001/.25
Big Five	92	93	91	
Extraversion	7.06	0 10 (1 74)	7 71 (1 07)	.03
	7.96 (1.83)	8.10 (1.74)	7.71 (1.97)	
Agreeableness	8.21	8.26 (1.57)	8.12 (1.79)	.37
0	(1.65)	0.01 (1.74)	0.06 (1.74)	07
Conscientiousness	8.26	8.21 (1.74)	8.36 (1.74)	.37
Neuroticiem	(1.74)	4 00 (1 77)	4 40 (1 00)	001
Neuroticism	4.77	4.98 (1.77)	4.40 (1.92)	.001
Openness	(1.85)	5 10 (2 20)	5.05 (2.27)	.83
Openness	5.08 (2.22)	5.10 (2.20)	5.05 (2.27)	.03
	(2.22)			

falling within the category 60–69 (31%) and 70–79 (34%). However, data were almost evenly distributed in age categories for both mothers and fathers. For marital status, almost the same distribution was recorded for both married (49%) and widowed (50%) participants; with more mothers (71%) experiencing widowhood than fathers (13%). While the majority of fathers were from a monogamous family (57%), the greater part of mothers practiced polygamy (67%). Overall, more participants practiced polygamy (56%). In terms of educational level, 76% of the total sample studied up to the primary level. Fathers (25%) were found to have higher education than mothers (14%).

The proportion of data on SOAQ demonstrates that a significant number of participants were satisfied with the level of their children's achievement in education (57%), health (91%), relationship (74%) and spirituality (92%). Conversely, more participants expressed their dissatisfaction at children's achievement in occupation (62%) and finances (84%). There was no significant association between gender and expression of satisfaction except in the domain of occupation, where more mothers (65%) expressed dissatisfaction with children's achievements. Gender differences existed only for extraversion (p = .03) and neuroticism (p < .001). Specifically, mothers were found to report more extraversion and neuroticism traits than fathers. Gender differences did not exist on agreeableness (p = .37), conscientiousness (p = .37) and openness (p = .83).

Table 2 indicates that all the domains of satisfaction with children's achievement were all correlated with each other in both mothers and fathers. Among fathers, the highest correlation coefficients were observed between SWCAs in occupation and finance (r = .58, p < .001), occupation and education (r = .46, p < .001), and education and finances (r = .42, p < .001). Similarly, the highest correlation coefficients were between occupation and finance (r = .68, p < .001), occupation and education (r = .53, p < .001), and education and finance (r = .53, p < .001), and education and finances (r = .53, p < .001), and education and finances (r = .53, p < .001), and education and finances (r = .53, p < .001), and education and finances (r = .53, p < .001), and education and finances (r = .53, p < .001) among mothers.

Table 3 displays the bivariate coefficients between each dimension of parents' personality and SWCAs for both mothers and fathers. Neuroticism was found to be negatively correlated with all domains of SWCAs in women. Correlations were stronger for satisfaction in education (r = -.31, p < .001), finances (r = -.28, p < .001), and spirituality (r = -.30, p < .001). In fathers, neuroticism was only correlated with spirituality (r = -.23, p = .002) and education (r = -.31, p < .001).

Extraversion was positively associated with satisfaction mainly in mothers, albeit weak. These include satisfaction in education (r = .21, p < .001), finances (r = .16, p = .005) and relationship (r = .18, p = .002). Further, conscientiousness was found to be related with satisfaction in health, relationship and spirituality in both fathers and mothers. However, associations of SWCAs with agreeableness and openness to experience was almost not statistically significant.

Table 4 shows odd ratios (ORs) and 95% confidence intervals (C.I) for both mothers and fathers resulting from multivariate logistic regression specifying the domains of SOAQ as dependent variables and dimensions of parents' personality as predictor variables. Major findings indicated that mothers' extraversion predicted satisfaction in education (OR = 1.35, p < .001), relationship (OR = 1.35, p = .001) and overall achievements (OR = 1.71, p = .002). Conversely, mothers neuroticism

Table 2

Correlations for domains of SOAQ for fathers (below the diagonal) and mothers (above the diagonal).

Variables $N = 465$	1	2	3	4	5	6
1. Education	-	.53**	.53**	.22**	.32**	.30**
2. Occupation	.46**	-	.68**	.18**	.25**	.12*
Finances	.42**	.58**	-	.19**	.22**	.20**
4. Health	.18**	.26**	.22**	-	.27**	.37**
5. Marital life	.28**	.33**	.31**	.22**	-	.30**
6. Spirituality	.26**	.21**	.25**	.37**	.26**	-

**p < .001, * p < .05.

Table 3

Correlations between personality and domains of satisfaction with children's achievements for fathers and mothers.

Variables $N = 465$		Extraversion	Agreeableness	Conscientiousness	Neuroticism	Openness
Education	Mothers	.18**	.03	.09	31**	.09
	Fathers	02	.14	.04	17*	17*
Occupation	Mothers	.05	02	.03	23**	04
	Fathers	02	.09	.14	09	001
Finances	Mothers	.16**	.06	.10	28**	03
	Fathers	.11	.02	.12	15	13
Health	Mothers	.10	.06	.28**	27**	14**
	Fathers	.09	.05	.23**	09	20**
Relationship	Mothers	.18**	.03	.12*	15**	08
	Fathers	.03	.03	.19*	10	09
Spirituality	Mothers	.11	.14*	.28**	30**	.003
	Fathers	.18*	.05	.19*	23**	07

**p < .001, * p < .05.

Table 4

Model for the multivariate associations between parents' personality and satisfaction with children's achievement, adjusting for demographic variables.

OR (95% C.I)	Education	Occupation	Finances	Health	Relationship	Spirituality	Overall
Mothers $(n = 294)$							
Age	1.04 (.99, 1.08)	1.03 (.99, 1.07)	1.03 (.98, 1.07)	.99 (.94, 1.06)	1.01 (.97, 1.04)	.98 (.92, 1.04)	1.06 (.99, 1.14)
Marital status	1.32 (.66, 2.68)	1.03 (.52, 2.06)	1.45 (.60, 3.53)	.66 (.21, 2.06)	1.02 (.48, 2.17)	1.08 (.30, 3.86)	1.14 (.30, 4.32)
Family type	.93 (.51, 1.70)	1.34 (.75, 2.41)	1.15 (.53, 2.47)	.55 (.19, 1.61)	.62 (.32, 1.21)	.96 (.34, 2.70)	1.12 (.31, 4.06)
Education	.49 (.10, 2.41)	.37 (.09, 1,56)	.34 (.07, 1.70)	.00 (.00)	1.04 (.23, 4.81)	2.12 (.22, 20.63)	.06 (.004, 1.05)
Extraversion	1.35** (1.14, 1.60)	1.12 (.96, 1.32)	1.21 (.97, 1.51)	1.21 (.93, 1.57)	1.35** (1.13, 1.61)	1.03 (.78,1.35)	1.71** (1.22, 2.39)
Agreeableness	1.00 (.83, 1.20)	.97 (.81, 1.15)	1.05 (.83, 1.32)	1.14 (.85, 1.52)	1.15 (.95, 1.40)	1.18 (87, 1.58)	.87 (.63, 1.21)
Conscientiousness	.97 (.82, 1.16)	.94 (.80, 1.11)	1.03 (.82, 1.29)	1.13 (.86, 1.49)	.82* (.67, 1.00)	1.21 (.91, 1.60)	1.09 (.82, 1.46)
Neuroticism	.69** (.58, .82)	.73** (.62, .86)	.64* (.50, .81)	.67** (.51, .90)	.92 (.77, 1.10)	.79 (.60, 1.05)	.53** (.37, .75)
Openness	1.35** (1.17, 1.55)	1.16* (1.01, 1.32)	1.11 (.93, 1.33)	1.13 (.94, 1.36)	1.07 (.95, 1.23)	1.09 (.89, 1.32)	1.14 (.88, 1.48)
Fathers $(n = 171)$							
Age	1.02 (.97, 1.07)	1.10** (1.04, 1.16)	1.04 (.98, 1.11)	1.01 (.94, 1.09)	1.06 (1.00, 1.13)	1.07 (.99, 1.16)	1.14 (1.04, 1.26)
Marital status	1.18 (.40, 3.49)	3.04* (1.00, 9.25)	1.84 (.48, 7.10)	1.37 (.25, 7.50)	2.64 (.55, 12.74)	2.16 (.25, 18.74)	1.64 (.22, 12.20)
Family type	1.84 (.88, 3.85)	1.45 (.68, 3.11)	1.69 (.65, 4.42)	.36 (.11, 1.20)	1.10 (.49, 2.48)	.96 (.31, 2.95)	1.42 (.41, 4.92)
Education	.38 (.16, .94)	.22 (.09, .54)	.27 (.09, .78)	.16 (.02, 1.36)	.68 (.26, 1.78)	.54 (.13, 2.32)	.24 (.05, 1.15)
Extraversion	.95 (.79, 1.15)	1.00 (.82, 1.23)	1.10 (.86, 1.40)	1.07 (.80, 1.45)	.94 (.75, 1.17)	.97 (.73, 1.30)	1.02 (.73, 1.45)
Agreeableness	1.39** (1.11, 1.75)	1.09 (.87, 1.37)	1.09 (.81, 1.46)	1.09 (.79, 1.50)	1.08 (.85, 1.37)	1.08 (.79, 1.49)	1.26 (.86, 1.84)
Conscientiousness	.91 (.73, 1.14)	1.17 (.93, 1.48)	.87 (.66, 1.37)	1.14 (.82, 1.58)	.93 (.72, 1.20)	1.14 (.82, 1.59)	1.27 (.88, 1.83)
Neuroticism	.88 (.73, 1.06)	.93 (.76, 1.14)	.81 (.61, 1.08)	.95 (.72, 1.27)	.90 (.74, 1.11)	.81 (.62, 1.07)	.83 (.57, 1.20)
Openness	.92 (.78, 1.09)	1.22* (1.02, 1.47)	1.03 (.82, 1.28)	1.08 (.84, 1.39)	.96 (.79, 1.16)	1.19 (.95, 1.51)	.83 (.59, 1.16)

**p <.001, *p < .05 (2-tailed).

Marital status (0 = Widowed, 1 = Married); Family type (0 = Monogamy, 1 = Polygamy); Education (0 = Post-primary, 1 = Primary).

predicted dissatisfaction in education (OR = .69, p = .002), occupation (OR = .73, p < .001), finances (OR = .64, p < .001), health (OR = .67, p = .007) and low overall satisfaction (OR = .53, p < .003).

However, fathers' personality traits rarely predicted satisfaction with children's achievements. Father's agreeableness and openness traits were only found to predict satisfaction in education (OR = 1.39, p = .004) and occupation (OR = 1.22, p = .03) respectively.

4. Discussion

This work examined the predictive ability of personality traits on satisfaction with adult children's achievements in a sample of community older adults. Descriptively, we found that a majority of older adults expressed dissatisfaction with their children achievements in both occupation and finances while expressions of satisfaction were found in education, health, relationships and spirituality. These outcomes suggest that the quality of employment is linked with the level of income given that dissatisfaction with children's achievements were expressed for both occupation and income (Katikireddi et al., 2016). It is also observed that SWCAs in finances and occupation were also more related to satisfaction in education than other domains of SOAQ. This confirms that higher education is substantially linked with better job prospects (OECD, 2012). Results further showed that there was a higher degree of relationship between satisfaction with health and spirituality achievements of children. This corroborates studies that suggests that high spirituality may be

linked with better health outcomes (e.g. Tabei et al., 2016; Johnstone et al., 2012).

Moreover, results demonstrated that mothers reported more extraversion and neuroticism traits than fathers. Previous studies have consistently demonstrated that females express high neuroticism than males (e.g. Chapman et al., 2007; Djudiyah et al., 2016). This difference can be attributed to the cultural norms that permit females to express more negative emotions than males (Reynolds, 1998). In view of the fact that mothers were more extroverted, it was expected that they would report less neuroticism compared to fathers given that high extraversion is associated with less neuroticism (e.g. Narooi, 2015). This finding implies that extraversion may not predispose lower neuroticism.

The negative association of neuroticism with SWCAs reiterates the fact that neuroticism is accompanied with negative affects and hinders the individual from perceiving the positive aspects of life (Finch et al., 2012; Prinzie et al., 2009), and having contentment in level of children's achievements. Considering that neurotic parents are hyper-competitive (Ryckman, 2008), low achievers and have high perfectionistic tendencies (Daitkar, 2017; Briley et al., 2014), they may expect their children to be excessively involved in achieving life goals and 'overachieve' in order to surpass their own achievements. Perhaps, these feelings and attitudes make neurotic parents put undue pressure on children to achieve, and if children do not perform up to expectation, they become less satisfied and express their displeasure.

The positive associations of conscientiousness with SWCAs in health,

relationship and spirituality, and not education, occupation and finances (which are markers of socioeconomic status) reflects the notion that conscientious parents may not be concerned with children's achievements in areas that point to where children stand in the social strata. However, they may be more concerned about children's health, relationship with others and spirituality. In other words, conscientious parents may not be so much concerned about material achievements of children but their well-being. In addition, the negative association of openness with SWCAs in health and education may indicate that imaginative and creative parents require greater educational achievement, better physical and mental health in their children. This result confirms the notion that parents with openness trait may tend to express dissatisfaction and have high expectations about child's development (Begum and Huque, 2016). This is because individuals with the openness trait seek challenges (Schultz and Shultz, 2005) and for that reason, expect their children to go for highly challenging tasks and hunt for greater achievements. The positive association of extraversion with domains of SWCAs means that extroverted parents may be contented with the level of their children's achievements. Extraversion is a positive emotion characterized by an accommodating nature which predisposes the individual to easily adapt to the present circumstances and avoid any possible disgruntlement (Ryckman, 2008). In contrast to openness, extroverted parents may be more satisfied with their children's achievements given that they worry less (Ryckman, 2008) about the shortcomings in their children.

Results from multivariate logistic regression analysis showed that mothers' neuroticism predicted dissatisfaction with children's achievement in education, occupation, finances, health and in overall achievements. Conversely, in mothers, extraversion predicted satisfaction in education, relationship and overall achievements. Further, mothers' conscientiousness predicted satisfaction in spirituality. The ability of the conscientiousness trait to predict SWCAs may be premised on the notion that conscientious parents are likely to have raised their children to be industrious, fastidious, exacting and thorough like themselves, thus inducing in children high achievements that give satisfaction to parents. Multivariate outcomes also showed that openness in mothers predicted high satisfaction in educational achievement. Similar to conscientious parents, this result implies that mothers with the openness trait build the culture of creativity, intelligence and insight into their children which inclined children to greater achievements in adulthood. In addition, results demonstrated that agreeableness in fathers predicted satisfaction in education. This result sounds logical since fathers high in agreeableness are likely to be undemanding, sympathetic, and uncritical of children's levels of achievements. These empathic traits may predispose fathers with agreeableness traits to accept and be satisfied with the level of their children's achievement in education.

In all, these results suggest that parents' personality traits are significant predictors of satisfaction with adult children achievements. Findings provide support for the *happy personality* model given that extraversion, agreeableness and openness traits predicted satisfaction with children's achievement (Müller, 2014). Further, results corroborate previous outcomes showing that older adults' satisfactions with life events are predicted by personality traits (e.g. Navarro-Prados et al., 2018). Collectively, study results are in consonance with previous outcome that demonstrated the association of neuroticism and extraversion with difference facets of life satisfaction among older adults (Lachmann et al., 2018).

Nevertheless, results should be interpreted with caution considering that study design is cross-sectional in nature. Longitudinal studies are needed to examine whether these findings will be consistent over time. In addition, ratings of SWCAs were based on general assessment of satisfaction with achievements of all adult children per parent and not separately for every adult child. An assessment of parental satisfaction with the achievements of every child may be more objective. Prospective studies may build on these limitations to obtain more robust findings.

5. Conclusion

Despite the aforementioned limitations, this study has demonstrated that older parents' personality may predict satisfaction with children's achievement. While mothers' extraversion predicted satisfaction with children's overall achievements, mothers' neuroticism predicted dissatisfaction in educational, occupational, health and financial achievements. Fathers' openness and agreeableness respectively predicted satisfaction in children's educational and occupational achievements. Overall, while mothers' extraversion and neuroticism respectively influenced satisfaction and dissatisfaction with children's achievements, fathers' openness and agreeableness influenced satisfaction with children's achievements. Altogether, these results suggest that parents' personality traits in some ways predict satisfaction with adult children's achievement. Future studies may investigate the possible influence of satisfaction with adult children's achievements on mental health of older adults, and test whether actual children's achievements and parental expectation about children's achievements mediate the relationship between parents' personality traits and satisfaction with adult children's achievements.

Declarations

Author contribution statement

B. Olawa: Conceived and designed the experiments; Performed the experiments; Analyzed and interpreted the data; Wrote the paper.

E. Idemudia: Conceived and designed the experiments; Analyzed and interpreted the data; Contributed reagents materials, analysis tools or data; Wrote the paper.

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Competing interest statement

The authors declare no conflict of interest.

Additional information

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References

- Begum, T., Huque, A., 2016. Parents' personality and their expectations about child's development. Univ. J. Psychol. 4 (5), 222–227.
- Birditt, K.S., Fingerman, K.L., Zarit, S., 2010. Adult children's problems and successes: implications for intergenerational ambivalence. J. Gerontol.: Psychol. Sci.
- Bolaños-Medina, A., 2012. Las pruebas psicométricas en la investigación empírica sobre los procesos cognitivos del traductor. In: Colado, S.C., Alonso, A.L., Del Pozo Trivino, M.,., Alvarezlugris, A. (Eds.), Traducir en la Frontera. Actas del IV Congreso de AIETI. Atrio, Granada, pp. 469–482.
- Bolaños-Medina, A., González-Ruiz, V., 2012. Deconstructing the translation of psychological tests. Meta: Translators' J. 57 (3), 715–739.
- Briley, D.A., Domiteaux, M., Tucker-Drob, E.M., 2014. Achievement-relevant personality: relations with the big five and validation of an efficient instrument. Learn. Individ. Differ. 32, 26–39.
- Campbell, F.A., Pungello, E.P., Kainz, K., Burchinal, M., Pan, Y., Wasik, B.H., et al., 2012. Adult outcomes as a function of an early childhood educational program: an abecedarian project follow-up. Dev. Psychol. 48 (4), 1033–1043.
- Chapman, B.P., Duberstein, P.R., Sörensen, S., Lyness, J.M., 2007. Gender differences in five factor model personality traits in an elderly cohort: extension of robust and surprising findings to an older generation. Personal. Individ. Differ. 43 (06), 1594–1603.
- Daitkar, A., 2017. Effect of achievement motivation on personality traits of students. Int. J. Indian Psychol. 4 (2), 124–129. Retrieved from. https://www.ijip.in/index.php/c omponent/content/article/79-volume-4-issue-2/1207-effect-of-achievement-moti vation-on-personality-traits-of-students.html.
- DeNeve, K.M., Cooper, H., 1998. The happy personality: a meta-analysis of 137 personality traits and subjective well-being. Psychol. Bull. 124, 197–229.

Finch, J.F., Baranik, L.E., Liu, Y., West, S.G., 2012. Physical health, positive and negative affect, and personality: a longitudinal analysis. J. Res. Personal. 46 (5), 537–545. International Test Commission, 2005. Guidelines for translating and adapting tests.

- Retrieved from http://www.intestcom.org.
- John, O.P., Srivastava, S., 1999. The Big-Five trait taxonomy: History, measurement, and theoretical perspectives. In: Pervin, L.A., John, O.P. (Eds.), Handbook of personality: Theory research. New York: Guilford Press, pp. 102–138. Retrieved from http:// www.fetzer.org/sites/default/files/images/stories/pdf/selfmeasures/Personality-B igFiveInventory.pdf.
- Johnstone, B., Yoon, D.P., Cohen, ., Schopp, L.H., McCormack, G., Campbell, J., Smith, M., 2012. Relationships among spirituality, religious practices, personality factors, and health for five different faith traditions. J. Relig. Health 51 (4), 1017–1041.
- Katikireddi, S.V., Niedzwiedz, C.L., Popham, F., 2016. Employment status and income as potential mediators of educational inequalities in population mental health. Eur. J. Public Health 26 (5), 814–816.
- Lachmann, B., Sariyska, R., Kannen, C., Błaszkiewicz, K., Trendafilov, B., Andone, I., et al., 2018. Contributing to overall life satisfaction: personality traits versus life satisfaction variables revisited—is replication impossible? Behav. Sci. 8 (1), 1–23.
- Mertler, C.A., Vannatta, R.A., 2005. Advanced and Multivariate Statistical Methods: Practical Application and Interpretation, third ed. Pyrczak Publishing, Glendale, CA.
- Müller, M., 2014. The Development of Life Satisfaction: Does Personality Matter? A Five Year Longitudinal Study (Master Thesis, University of Twente). Retrieved from.
- essay.utwente.nl/64907/1/Müller,%20ML%20-%20s0163465%20(verslag).pdf. Narooi, Z.S., 2015. Investigating the relationship among personality traits, decisionmaking styles, and attitude to life (Zahedan Branch of Islamic Azad University as case study in Iran). Mediterr. J. Soc. Sci. 6 (6), 311–317.
- National Bureau of Statistics, 2018. Demographic Statistics Bulletin. Retrieved from. http://nigerianstat.gov.ng/download/775.
- National Population Commission, 2009. 2006 Population Housing Census Tables. Retrieved from. http://www.population.gov.ng/images/Vol%2003%20Table%20 DSx%20LGAPop%20by%20SDistrict-PDF.pdf.
- Navarro-Prados, A.B., Serrate-Gonzalez, S., Munoz-Rodriguez, J., Diaz-Orueta, U., 2018. Relationship between personality traits, generativity, and life satisfaction in individuals attending University Programs for Seniors. Int. J. Aging 87 (2), 184–200.

- OECD, 2012. Education at a Glance 2012: Highlights. Paris: OECD Publishing. Retrieved from https://www.oecd.org/education/highlights.pdf.
- Okeniyi, 2013. March 25). Who cares for the elderly in Nigeria? Orient newspaper. Retrieved from. http://orientnewspaper.com/who-cares-for-the-elderly-in-nigeria/.
- Olawa, B.D., Idemudia, E.S., 2019. Satisfaction with adult children's achievements is associated with depression and loneliness in later-life: the mediating roles of children's support and gratitude. Educ. Gerontol.
- Parkerson Jr., G.R., Michener, J.L., Wu, L.R., Finch, J.N., Muhlbaier, L.H., Magruder-Habib, K., et al., 1989. Associations among family support, family stress, and personal functional health status. J. Clin. Epidemiol. 42, 217–229.
- Pillemer, K., Suitor, J.J., Riffin, C., Gilligan, M., 2017. Adult children's problems and mothers' well-being: does parental favoritism matter? Res. Aging 39 (3), 375–395.
- Prinzie, P., Stams, G.J.J.M., Deković, M., Reijntjes, A. H. a, Belsky, J., 2009. The relations between parents' big five personality factors and parenting: a meta-analytic review. J. Personal. Soc. Psychol. 97 (2), 351–362.
- Rammstedt, B., John, O.P., 2007. Measuring personality in one minute or less: a 10-item short version of the Big Five Inventory in English and German. J. Res. Personal. 41, 203–212. Retrieved from. http://www.westmont.edu/_academics/department s/psychology/documents/Rammstedt_and_John.pdf.
- Reynolds, C.R., 1998. Need we measure anxiety differently for males and females? J. Personal. Assess. 70, 212–221.
- Ryckman, R.M., 2008. Theories of Personality, ninth ed. Thomson Wadsworth, Belmont, CA.
- Schultz, D.P., Schultz, S.E., 2005. Theories of Personality, eighth ed. Thomson Wadsworth, Belmont, CA.
- Stephan, Y., 2009. Openness to experience and active older adults' life satisfaction: a trait and facet-level analysis. Personal. Individ. Differ. 47, 637–641.
- Tabei, S.Z., Zarei, N., Joulaei, H., 2016. The impact of spirituality on health. Shiraz E Med. J. 17 (6) e39053.
- Tauber, B., Wahl, H.-W., Schröder, J., 2016. Personality and life satisfaction over 12 years. J. Gerontopsychol. Geriatr. Psychiatr. 29 (1), 37–48.
- Wang, X., 2013. The Influences of Parental Expectations on Children's Academic Achievements: a Comparative Analysis of the United States and China (Master's Thesis. Loyola University, Chicago, United States). Retrieved from. https://pdfs.sema nticscholar.org/4a16/aee3ee32615f4a84c6415301fa925dffe08b.pdf.
- Yamane, T., 1967. Statistics: An Introductory Analysis, 2nd Ed. New York: Harper and Row.