



## Gender and City Differences in Personality Traits Among Adolescents in Some Selected Cities of Nigeria

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### Abstract

There are overwhelming evidences from researches in the regional science that the attitudes, values and behaviours of people are geographically clustered. Psychologists, however, have historically had little to say about regional and city differences (Rentfrow, 2010). The present study investigated on gender and city differences in trait personalities among adolescents in some selected cities within Nigeria. A thousand and one (1001) adolescents (532 females, 469 males) sampled from five cities (Markurdi, Calabar, Nnewi, Victoria Island, Benin) within Nigeria were employed for the study. Big Five Personality Inventory by John, Donahue and Kentle (1991) was used to gather their data on personality traits while Multivariate Analysis of Covariance (MANCOVA) and Pearson Product Moment correlation were used in data analysis. The findings of the study showed significant city difference on the personality traits examined and significant gender differences on neuroticism personality. Similarly significant interaction effects of city and gender were also seen. Furthermore there were positive and negative correlations of age and personality among adolescents studied. Discussions of the findings were done as well as the implications of the findings for social behaviours.

**Key words:** Psychological research; Personality traits; The host environment; Mete analytic mode

### INTRODUCTION

The concept of individual differences has been studied by psychologists for decades now. Little effort has been formally made however in the history of psychology to study group personality differences as it relates to cities and states within nations (Rentfrow, 2010). One need not be a student of history or the social sciences to know that people in different parts of a nation are psychologically different. There are overwhelming evidences from researches in the regional science that attest to the facts that differences in attitudes, values and behaviours of peoples are geographically clustered. For examples Krug & Kulhavy (1973), Plaut, Markus & Lachman (2002) and Rentfrow, Gosling & Polter (2008) in their studies showed significant regional personality differences in the Untied States. Similarly, reasons have been adduced on why people differ geographically. Several empirical reports have been published in the past years that provide convincing evidence for cross national differences in personality (McCrae, 2001; McCrae, Terracciano & et al 2005; Schmitt, AlleKe, McCrae & Benet – Martinez, 2007). Explanations for these differences range from culture and climate to migration patterns and genetics (Heine & Buchtel, 2009; Hofsteda & McCrae, 2004; Jokela, 2009; Jokela, Elovainom, Kivimaki & Keltikangas – Jartvinen, 2008; Kitayoma, Ishii, Imada, Takemura & Ramaswamy, 2006). But just as nations vary in terms of culture, ecology ethnic diversity and health, so too do regions and cities within nations and states differ respectively (Renfrow, 2010). There could be many factors that may make people

in one area of a state differ in behavior from those in the other area(s) of the same state. Similarly, there are reasons that may further make people living in one city of a country differ behaviourally from others living in another city of the same country. For e.g. Urbanization, climate, topography, political reasons etc may cause a particular city to differ in behavior from other cities. As such city's physical, and commercial attributes are very much likely to influence the behavior/personality of the residents. This is in line with psychological researches emphasizing the roles of person environment interaction, where a fit can be observed between the individual's characteristics and the characteristics of the host environment.

On the other hand, gender differences in personality traits have also been a subject of intense study by many psychologists. Wilson, Kickul & Marlino (2007) found that women lack behind men in their level of self efficacy. Concerning gender differences in locus of control, findings are ambiguous as men are predominantly suggested to be more internally controlled as compared to women which holds across different domains (Bonte & Jarosch, 2012). Budaeu (1999) in a meta analytic study of BIG Five personality traits found that agreeability and neuroticism personality traits were significant variance of men and women with men showing low agreeability with high emotional stability while women showing high agreeability and low emotional stability. Other researchers using meta analytic mode of research have also found striking but related differences (agreeability and neuroticism) of gender and trait personality (Feingold, 1994; Shugin, 1995). The present study therefore was on gender and city differences in personality traits using adolescent group.

## 1. STATEMENT OF THE PROBLEM

The present study was borne out of two relative problems. First is the limited literatures on the city differences in personality traits generally and Nigeria in particular. Such gap in literatures has actually limited our knowledge of social behaviours within the country.

The second reason was that adolescent groups have been under studied in relation to personality trait differences across cities and also gender differences' studies in general. The few literatures reviewed in the present study were all done with adult population studies. However, the adolescent group is very important for two reasons. First, they are at the development cross road and needed help and guidance at this time. Secondly, they are always the next replacement of the adult population and needed to be constantly studied to make positive future plans for a sustainable national development.

## 2. PURPOSE OF THE STUDY

The three purposed of the study were:

a. To find out whether gender differences in trait personality exist among adolescent samples from Nigeria.

b. To find out whether the adolescent participants from each city differs from others from different cities in Nigeria.

c. To find out whether an interaction of gender and city differences exist in personality traits among the respondents.

## 3. IMPORTANCE OF THE STUDY

a. To increase our knowledge of social behaviours as they relate to cities in Nigeria.

b. To add to the sparse literatures on regional psychology differences with special emphasis on the adolescents.

c. To aid in social policy makings at the national and state levels.

## 4. RESEARCH QUESTIONS

The following questions will be answered at the end of the study.

a. Do gender differences in trait personalities exist among adolescents from the selected cities?

b. Do cities differ in personality trait (Openness, conscientiousness, neuroticism, extraversion and agreeability) studied?

c. Are there interaction effects of gender and city on personality trait difference among adolescents studied?

## 5. HYPOTHESIS

a. There will be no significant gender differences in personality traits except agreeability and neuroticism traits.

b. There will be no significant differences among cities in personality traits.

c. There will be no interaction effects of gender and cities on personality trait differences.

## 6. METHOD

### 6.1 Participants

A thousand and one (1001) participants were employed for the study. They were sampled from some secondary schools in five cities of Nigeria (Markudi, Victoria Island, Benin city, Nnewi and Calabar). The choice of the cities was based on the geo-political divisions of Nigeria and also on conveniences and proximities to the researchers. Markurdi was at the North Central geopolitical region, Victoria Island at the South West, Benin and Calabar cities were at the south-south while Nnewi was at the South East. Only the North East and North West were excluded. Table 1 below shows the demographic distributions of the participants.

**Table 1**  
**Demographic Distribution of the Participants Studied**

Sources	Frequency Percentage		Gender	
Cities			Male	Female
City 1 (Markudi)	168	16.80	68	100
City 2 (Calabar)	233	23.30	101	132
City 3 (Nnewi)	200	20.00	100	100
City 4 (Victoria Island)	200	20.00	100	100
City 5 (Benin city)	200	20.00	100	100
<b>TOTAL</b>	<b>1001</b>	<b>100%</b>	<b>469</b>	<b>532</b>
Age	Frequency	Percent	Mean age	SD age
12 years	1	0.10		
13 years	86	8.60		
14 years	213	21.30	15.29	1.35
15 years	280	28.00		
16 years	240	24.0		
17 years	104	10.40		
18 years	77	7.70		
Education				
Junior class 3	150	14.98		
Senior Class 1	300	29.97		
Senior Class 2	400	39.96		
Senior Class 3	151	15.08		

## 6.2 Instrument

Big Five Personality Inventory (BFI) by John, Donahue & Kentle (1991) was used in data gathering. BFI

assesses personality from five dimensional perspectives (extraversion, agreeableness, conscientiousness, neuroticism and openness). BFI has mean convergent validity coefficient of 0.75 and 0.85 with Big Five instruments authored by Costa and McCrae (1992) and Goldberg (1992) respectively. The divergent validity coefficients obtained by Umeh (2004) with University Maladjustment scale (Kleinmuntz, 1961) were extraversion = 0.05, agreeableness = 0.13, conscientiousness = 0.11, neuroticism = 0.39 and openness = 0.24.

## 6.3 Procedure

The instrument (BFI) was administered by research assistants recruited for the study. Ten (10) secondary schools (2 from each city) were used for the study. The consents to use the schools were got from the school principals. The ethical principle of informed consent was observed. In that case, the research assistants explained to each participant before responding to questionnaire what the whole exercise were about and elicited consent to participate. Incidental sampling technique was used. As such, any person who wished to participate and was available and disposed to respond to the questionnaire on the spot was involved in the study.

## 7. RESULT

**Table 2**  
**Summary Table of MANCOVA Statistics of City and Gender (Age as Coveriate) on Personality Traits<sup>a</sup>**

Source	Dependent variable	SS	DF	MS	F
Age	Openness	17.91	1	17.91	0.59
	Conscientiousness	183.41	1	183.41	5.24*
	Extraversion	0.92	1	0.92	0.05
	Agreeableness	313.47	1	313.47	8.49**
	Neuneticism	5.13	1	5.13	0.18
City	Openness	3308.02	4	827.00	27.01**
	Conscientiousness	9804.13	4	2451.03	69.97**
	Extraversion	276.24	4	69.06	3.70**
	Agreeableness	10328.11	4	2582.03	69.89**
	Neuneticism	1817.60	4	454.40	15.52**
Gender	Openness	16.90	1	16.90	0.55
	Conscientiousness	11.82	1	11.82	0.34
	Extraversion	44.12	1	44.12	2.36
	Agreeableness	63.09	1	63.09	1.71
	Neuneticism	294.20	1	294.20	10.05* <sup>+</sup>
City & Gender	Openness	20.53	4	5.13	0.17
	Conscientiousness	249.22	4	62.30	1.78
	Extraversion	183.17	4	45.79	2.45*
	Agreeableness	1108.31	4	277.08	7.50**
	Neuroticism	383.48	4	95.87	3.27*
Error	Openness	30312.81	990	30.62	
	Conscientiousness	34680.27	990	35.03	
	Extraversion	18483.91	990	18.67	
	Agreeableness	36574.85	990	36.94	
	Neuneticism	28985.17	990	29.28	

Note:

\* Shows significant at P< 0.05; + Shows significant at P< 0.005; \*\* Shows significant at P< 0.001; <sup>a</sup> The multivariate test of significance including the test names were calculated. The Pillais and Hotellings methods were considered, and they showed significance; F = 0.006 (for Pillais method) and 0.004 (for Hotellings method). As such the multivariate test model interpreted above was significant.

**Table 3**  
**Pair Wise Comparison of Significant Variables of Personality and City**

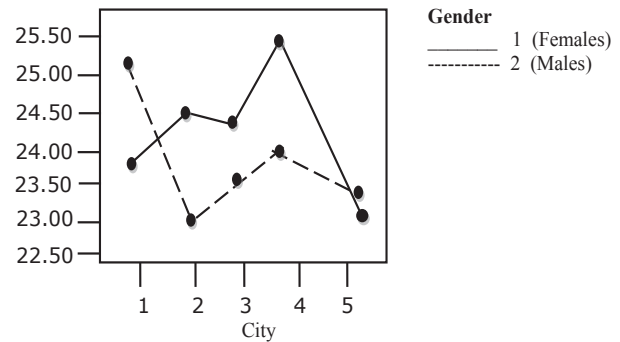
Dependent variable	(I) City	(J) City	Mean difference <sup>a</sup>
Openness	Markurdi	Nnewi	3.82
		Benin	2.77
	Calabar	Nnewi	4.19
		Benin	3.13
	Lagos	Nnewi	4.45
Benin		3.40	
Consciousness	Markurdi	Nnewi	-8.61
		Lagos	.72
	Calabar	Nnewi	5.30
		Benin	7.54
	Lagos	Nnewi	4.22
		Benin	6.89
Extraversion	Markurdi	Benin	1.04
		Lagos	1.12
	Lagos	Nnewi	0.91
		Benin	1.56
Agreeableness	Markurdi	Nnewi	7.08
		Benin	4.92
	Calabar	Nnewi	7.07
		Lagos	1.17
	Lagos	Nnewi	4.91
		Benin	8.24
Neuroticism	Markurdi	Nnewi	3.16
		Benin	1.20
	Calabar	Nnewi	3.48
		Benin	2.28
Lagos	Nnewi	-3.01	
	Benin	-1.20	
	Lagos	Benin	1.81

Note: a: all mean differences are significant at  $P < 0.05$

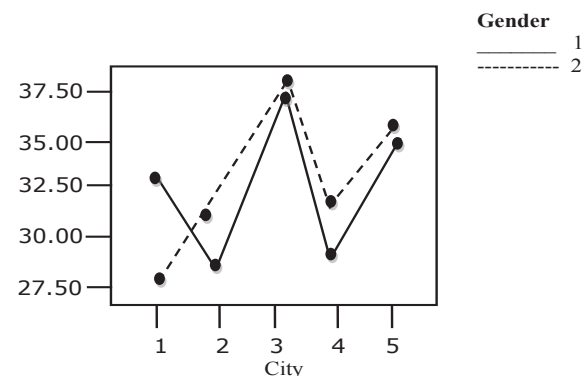
**Table 4**  
**Summary Table of Significant Mean Scores of City and Gender on Personality Traits**

Dependent variable	Independent variable	Mean	Standard error
Openness	Markurdi (1)	32.22	0.44
	Calabar (2)	31.85	0.37
	Nnewi (3)	36.03	0.38
	Lagos (4)	31.58	0.39
	Benin (5)	34.98	0.39
Consciousness	Markurdi	27.33	0.47
	Calabar	28.41	0.38
	Nnewi	35.95	0.47
	Lagos	29.06	0.42
	Benin	32.63	0.42
Extroversion	Markurdi	24.20	0.34
	Calabar	23.62	0.29
	Nnewi	23.82	0.31
	Lagos	24.73	0.31
	Benin	23.16	0.31
Agreeableness	Markurdi	30.07	0.48
	Calabar	30.08	0.40
	Nnewi	37.16	0.43
	Lagos	28.92	0.43
	Benin	34.99	0.43
Neuroticism	Markurdi	23.96	0.43
	Calabar	24.28	0.36
	Nnewi	20.80	0.38
	Lagos	23.81	0.38
	Benin	22.00	0.38
	Gender 1 (Female)	23.52	0.24
Gender 2 (Male)	22.42	0.24	

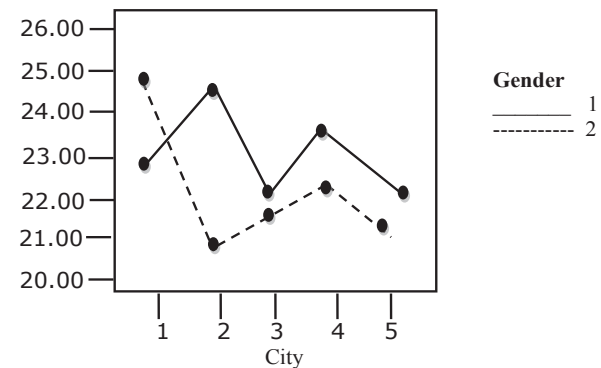
A survey research design was used in the study while multivariate analysis of covariance (MANCOVA) statistics was used in data analysis.



**Figure 1**  
**Estimated Marginal Mean of Extraversion**



**Figure 2**  
**Estimated marginal Means of Agreeableness**



**Figure 3**  
**Estimated Marginal Means of Neuroticism**

**Table 5**  
**Age and Personality Relationship Among Participants**

Variable	Age	Open-ness	Conscient-iousness	Extrover-sion	Agreeable-ness	Neuroticism
Age	1.00	-0.04	-0.08**	0.01	-0.11**	-0.01
Openness	-0.04	1.00	0.28**	-0.05	0.31**	-0.20**
Conscient iousness	-0.08**	0.28**	1	-0.10**	0.40**	-0.23**
Extraversion	0.01	-0.05	-0.10**	1	-0.12**	-0.01
Agreeableness	-0.11**	0.31**	0.40**	-0.12**	1	-0.26**
Neuroticism	-0.01	-0.20**	-0.23**	-0.01	-0.26**	1

Note: \*\* Shows correlation at 0.01 level (2 tailed).

Table 5 above showed significant negative correlation of age and conscientiousness, as well as age and agreeableness.

## 8. DISCUSSION

The findings of the study show significant city differences in personality traits among adolescents. Adolescents from Nnewi and Benin showed significantly higher levels of openness than other cities, so also with conscientiousness and agreeable personality traits. Conversely adolescents from Victoria Island (VI) and Markurdi showed high levels of extraversion, while those from Calabar together with VI and Markurdi showed significant neuroticism trait. The present finding was in line with previous literatures in Regional differences in personality (Rentflow, 2010). On the other hand, female adolescents showed significant neuroticism than male adolescents. This is still in line with literatures reviewed that emphasised neuroticism and agreeableness as major traits of variance between males and females.

On the other hand, significant interactions of gender and city on personality traits were also found on traits of extraversion, agreeableness and neuroticism. A closer look at the graphs of estimated marginal means showed that gender – city interactions increased the extraversion rates of female adolescents except those from Markurdi that scored below the male adolescents. Conversely, males also showed higher agreeableness trait when interacting with the city. There was also within gender differences on the personality traits when gender interacted with city. For examples female adolescents from Nnewi show very high stable emotions compared with other female adolescent, and showed very high level of agreeableness when compared with adolescent from other cities. Similarly, the females from VI showed high extraversion than other females.

In addition, the males adolescents from Markurdi (North East of Nigeria) differed markedly from male adolescents from other cities. They showed high neuroticism even more than their females which was not seen in other cities and as well showed less agreeability when compared to their females and to other male adolescents from other

cities. The same was also seen in extraversion. They showed opposite of their male counterparts.

## 9. IMPLICATIONS OF FINDINGS FOR SOCIAL BEHAVIORS

A lot of researches have analysed the roles of personality traits on social behaviours like leadership; persuasion, sexual behaviours as well as bullying and negative feelings of self. Barrick & Mount (1991) as well as Mount, Barrick & Stewart, (1998) have identified conscientiousness personality trait as a general predictor of job performance across a whole range of jobs. If one goes by this, it implied that cities with adolescents high in conscientiousness are likely produce individual capable of gaining and retaining jobs/careers effectively.

Conversely agreeability trait has been associated with modesty, humility, gentleness and tender mindedness with significant peace, and very low violence. Such social behaviours are likely to be seen among adolescents that reside in cities where they show high agreeableness.

In conclusion, the present study has shown that city differences in personality traits exist among adolescents, as well as gender differences. Whether and how they affect social behaviours in this country are still very much unknown. Such social psychological questions/enquiries needed to be filled in order to understand fully why we behave the way we do interms of groups and regions within Nigeria nation State.

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