International Journal of Research in Social Sciences
Vol. 9, Issue 3, March - 2019,
ISSN: 2249-2496 Impact Factor: 7.081
Journal Homepage: http://www.ijmra.us, Email: editorijmie@gmail.com
Double-Blind Peer Reviewed Refereed Open Access International Journal - Included in the International Serial Directories Indexed & Listed at: Ulrich's Periodicals Directory ©, U.S.A., Open J-Gate as well as in Cabell's Directories of Publishing Opportunities, U.S.A

A comparative study of Eysenk personality among boys and girls of College student

Dr. Uday Kumar Sah Assistant Professor Dept. of Psychology K.V.Science College

Uchchaith, Benipatti Madhubani,Bihar,India

This paper is an attempt to study the personality profiles of college boys and girls of Darbhanga District of bihar . A total of 200 adolescent respondents, comprising of 100 male and 100 female students were obtained through random sampling technique. To assess the personality of the respondents Eysenk personality Questionnaire (EPQ) test was administered on the selected 200 respondents. In order to study the mean differences between boys and girls with respect to various dimensions of personality, t-test was used and the obtained results are interpreted and discussed. The findings of the study reveal that there are certain personality profiles among the college boys and girls which can be improved. In order to improve them the investigators provided some of the inferential suggestions at the end of the paper. Healthy Adjustment is necessary for normal growth of an individual in the life and education. Gender, Psychotic, Extraversion, Neuroticism, and Lie trains persons for various life situations of the present and future. This logic implies that psychotic, extraversion and neuroticism are interlinked and complementary to each other. Therefore, it is imperative for educators and researchers to understand the trends in college students' adjustment and the factors contributing to their good mental health. The study conducted by the investigator was a sincere attempt to understand the problems of adjustment faced by adolescents in areas- Gender, Psychotic, Extraversion, Neuroticism, and Lie Total sphere. Accordingly it would help in developing social and emotional maturity among the learning youth.

INTRODUCTION

Human beings are the supreme creation of the God endowed with the capacity of thinking, reasoning and judging. By these virtues a person can make adequate personality with himself and his surroundings. When he born, he is just like an animal. Animal like instincts dominates his behaviour. This is the education which brings changes in his behaviour and helps him in changing his environment and consequently a person can make adequate personality by changing his environment. Education gives direction to one's life. Personality is the sum total of all the biological innate dispositions, impulses, tendencies, and instincts of the individuals and the acquired dispositions and tendencies. It is a compromise between the needs of the individual and the demands of the society in which he lives.

Lankshear, & Pearson, 1989). The Eysenck Personality Questionnaire-Junior (EPQ-J) was developed by Eysenck in 1975 and is widely used with children aged 7 to 15 years (Francis et al., 1989). It has been adapted into many different languages and has been proven to be reliable and valid (e.g., Eysenck & Chan, 1982; Perez, Anglada, & Guitart, 1990). The measurement of

personality in children has raised several controversies over the years, regarding issues of structure and stability. Some researchers suggest that self-reported childhood personality may be less or more differentiated, that is, fewer or more dimensions than in adults, and suggest that the coherence of personality may change in the course of development (Lamb, Chuang, Wessels, Broberg, & Hwang, 2002). For instance, Mervielde and De Fruyt (2000) found three broad factors, instead of the expected five, among 8- to 12-year-old children, whereas John, Caspi, Robins, Moffitt, and Stouthamer-Loeber (1994) found two factors in addition to the expected Big Five in 12- to 13-year-old boys, a result showing more rather than less differentiation of personality in childhood. Most results concur, however, on the existence of three to five primary factors (i.e., Big Three or Big Five), indicating that childhood personality structure is remarkably similar to that of adults.

The validity and explanatory utility of the Big Three dimensions can be further supported by evidence that they are correlated with specific childhood behavior problems and adjustment. Indeed, there is ample evidence showing a relationship between Neuroticism and a broad range of internalizing and externalizing symptoms (e.g., Muris, Meesters, & Diederen, 2005). High Extraversion Extraversion may be associated with anxiety criminality and juvenile delinquency are related to Psychoticism (e.g., Eysenck & Gudjonsson,

1989. John et al. (1994) examined the relationship between Big Five personality traits and psychopathology in youths. They found that children with internalizing problems were high in Neuroticism, whereas children with externalizing problems were low in Agreeableness and Conscientiousness, a combination that closely resembles Eysenck's Psychoticism (Costa & McCrae, 1992). Apart from the controversies regarding the broader structure of personality and the predictive validity of the Big Three factors, concerns remain regarding the factor structure of the Eysenck Questionnaires themselves. One such issue relates to the dimensionality of the Lie scale, which was originally assumed to be uni-dimensional but has now been found to have several interpretations.

Indeed, earlier studies in England, Australia, and the United States with adults have suggested that the EPQ Lie scale contains two empirically distinct components (Pearson & Francis, 1989): the socially conformity and lying or faking. These components were not verified in non-Englishspeaking countries (e.g., Katz & Francis, 1991), and there have been no systematic attempts to address this issue with children. This study aims to fill this gap.

Another controversy regarding the EPQ, as noted above, has to do with the low reliability of the Psychoticism scale, implying that it may contain more than one underlying dimension.

Zuckerman (1989) re conceptualized P as a combination of impulsivity, sensation seeking, and lack of socialization. Eysenck and Eysenck (1994) justified the low reliability of P by pointing out its multifaceted nature, which may include hostility, cruelty, lack of empathy, and nonconformist. However, to the best of our knowledge, the multidimensionality of the P scale has not been investigated to date with children and adolescents, which is another purpose of this study.

The Greek version of the EPQ-J has been standardized to a representative sample of 2,316 children and youth, aged between 8 and 15 years, and youth by Dimitriou (1986) using exploratory factor analysis (Eysenck & Dimitriou, 1984), which was conducted for both boys and girls and generally supported its four-factor structure. Cronbach's alpha coefficients ranged from .56 to .89, and inters ale correlations ranged between -.01 and -.51. After of this original standardization, there is no study reporting results on the construct validity of the Greek EPQ-J. In sum, the study aims to provide evidence regarding the psychometric properties of the Greek

EPQ-J, further support the three-factor structure of personality in children and adolescents, and regarding the predictive validity of the instrument in relation to child psychopathology.

Method

Participants

The sample consisted of 1,368 Greek-speaking students who had participated in five previous studies conducted in Greece and Cyprus that included the EPQ-J. Study 1 investigated the association between bullying and parenting among Greek students (n = 167). Study 2 was on pupils' perceptions of teacher interpersonal behavior in Cyprus (n = 273). Study 3 was an investigation of the social, cognitive, and emotional profiles of students from Cyprus (n = 154) and Greece (n = 72). Study 4 examined personality and psychopathology among 356 Cypriot students, and Study 5 investigated the association between personality and bullying in 346 Greek students. Twenty three students were 9 years old, 268 were 10 years old, 531 were 11 years old, 407 were 12 years old, 95 were 13 years old, 31 were 14 years old, and 21 students were 15 years old (6 missing). With regards to grade level, 247 students were fifth graders, 847 were sixth graders, 216 were seventh graders, 42 were eighth graders, and 13 students were ninth graders (3 missing). items representing the three dimensions of personality: 17 for Psychoticism (P), 22 for

Extraversion (E), 21 for Neuroticism (N), and 24 for the Lie scale (L). In the present study, the

original translation was used following minor vocabulary adaptations. *The Strengths and Difficulties Questionnaire (SDQ).* Participants in the predictive validity sample additionally took the Greek SDQ (Goodman, 1997), a measure of children's and adolescents' psychological well-being with good psychometric properties and particularly useful in epidemiological, developmental, and clinical research (e.g., Bibou-Nakou, Kiosseoglou, & Stogiannidou, 2001).

The SDQ consists of five 5-item scales (Emotional Symptoms, Conduct Problems Inattention-Hyperactivity, Peer Problems, and Prosocial Behavior), answered on a 3-point scale.

Statistical Analyses

For the statistical analyses of the EPQ-J, the Kuder-Richardson 20 coefficient and mean scores were calculated for each of the a priori subscales. Given the large sample size, exploratory factor analysis (EFA) was applied to a randomly split half of the sample ($n1 = 706$), whereas the other half ($n2 = 662$) was tested with confirmatory factor analysis (CFA) aiming at corroborating the EFA results on independent observations. Before applying the EFA with dichotomous data, Kim and Mueller's (1978) criterion of moderate

(.70) or lower metric correlations between the variables was applied. Several correlations that exceeded .70 were eliminated after the exclusion of three items, namely, P2, E51, and E65. Following Rothen et al. (2008) on the use of item–item Pearson product–moment correlation matrices for CFA of scales with dichotomous items, a decision was made to use structural equation modeling techniques such as CFA (Muthén, 1993), because no alternative

approach is unequivocally recommended-for example, methods such as the tetrachoric (Muthén, 1993) Downloaded from jpa.sagepub.com at PENNSYLVANIA STATE UNIV on March 6, 2016 4 *Journal of Psychoeducational Assessment XX(X)* and the phi point-symmetry adjustment (Hammond & Lienert, 1992) have not been collectively adopted (e.g., Liebetrau, 1983).

Results

Descriptive Statistics and Scale Psychometric Properties

Table 1 presents the means, standard deviations, and Kuder-Richardson 20 coefficients for each of the four scales of the Greek EPQ-J (84 items) and subscale intercorrelations. The strongest correlation was between P and L, whereas N was positively correlated with P and negatively correlated

with E and L. Reliabilities were satisfactory, with that of P and E being slightly lower.

International Journal of Research in Social Sciences
Vol. 9, Issue 3, March - 2019,
ISSN: 2249-2496 Impact Factor: 7.081
Journal Homepage: http://www.ijmra.us, Email: editorijmie@gmail.com
Double-Blind Peer Reviewed Refereed Open Access International Journal - Included in the International Serial Directories Indexed & Listed at: Ulrich's Periodicals Directory ©, U.S.A., Open J-Gate as well as in Cabell's Directories of Publishing Opportunities, U.S.A

Exploratory Factor Analysis

Principal axis factoring was used rather than principal components analysis (PCA) following recommendations by Moor et al. (2008). This method has been shown to be superior to PCA in the accuracy of recovering known population values of loadings (e.g., Widaman, 1993). Thus, 81 items (excluding P2, E51, and E65, as described above) were factorized and then rotated using the promax method requesting a four-factor solution based on the EPQ-J theoretical structure. Promax is an oblique rotation, that is, it allows for the produced factors to be correlated, thus producing a more realistic representation of the constructs (e.g., Russell, 2002). A cutoff point of .30 was set as the loading criterion for item retention. The KMO measure of sampling adequacy was .81, and Bartlett's test was highly significant ($p < .001$). The factors that emerged explained 20.50% of the variance, which may be attributed to the properties of dichotomous data (Shapiro, Lasarev, & McCauley, 2002), a finding that is not dissimilar from those of other studies using the Eysenck measures (e.g., Kuo, Chih, Soong, Yang, & Chen, 2004-22.7%; Ng, Cooper, & Chandler, 1998,-22.2%). The rotated structure matrix clearly depicted the four a priori dimensions of the Greek EPQ-J, with few items loading, however, on factors other than expected or having low loadings with their anticipated factor. Specifically, the Lie scale emerged almost intact (22 out of 24 items), as did the N scale (19 of 21). Less intact were E (12 of 20) and P (9 of 16). Overall, the four-factor structure of the Greek EPQ-J was reconfirmed.

Confirmatory Factor Analysis

Having established the existence of the a priori factors, we proceeded with CFA using the second subsample. Data were subjected to maximum-likelihood CFA using AMOS 7 (Arbuckle, 2006) to establish the construct validity of the Greek EPQ-J using the second subsample. Several fit indices were examined based on the recommendation of Browne and Mels (1992). Thus, the chisquare (c2) and its *p* value, the ratio of chi-square to degrees of freedom (c2/*df*), and the root mean square error of approximation (RMSEA) and its associated probability (PCLOSE) were examined. The c goodness of fit needs to be nonsignificant (Bollen, 1989) for the model to be acceptable. Nonetheless, c2 is sensitive to sample si (Bisho & Hertenstein, 2004). For a model to be acceptable, c2/*df* may be a better indicator of model fit (Tanaka, 1993), and should ideally be close to 1. The RMSEA is a nonsample dependent index for which values <.08 indicate a reasonable error of approximation and values <.05 indicating a close fit of the model (Browne & Cudeck, 1993). The PCLOSE is the probability that the RMSEA is not >.05. The four-factor model with the 81 items was tested. Only 550 cases were used in the CFA instead of 706, due to missing data (listwise

deletion). All loading but one were statistically significant at the .001 level with medium positive loadings accompanied by "reasonable" standard errors (Jöreskog, & Sörbom, 1989). The chi-square was significant (c2 = 6179.53, *df* = 3,153).

PURPOSE OF THE STUDY:-

The purpose of the present study was to compare the boys and girls of college student in respect to their Eysenck personality.

Review of literature

The review summarizes and analysis previous research and shows how the present study is related to this research. Without reviews of the literature, it would be difficult to build a body of accepted knowledge on a topic. Research signifies the search for the unknown and the establishment or rejection of the known. For this purpose, a thorough scrutiny of relevant and related literature is imperative to provide a scientific basis and to make logical interpretations. The research scholar, thus, has gone through all the relevant literature and research pertaining to the study in order to widen the horizon and body of knowledge on the subject, which was available at the "Indira Gandhi institute of Physical Education and Sports Sciences, New Delhi"; Central Reference Library, Delhi University; NCERT Library, Delhi; Kurukshetra University, Kurukshetra and Rajasthan University, Jaipur. The study made it imperative to screen the research quarterlies, journals, and periodicals, proceedings of various conferences, internet, newspapers and other research material available. The study of the related literature also implied locating, reading and evaluating reports / abstracts of research as well as casual observations and opinions of experts in the field. Some of the references directly or indirectly related to the present study have been categorized and cited in the succeeding paragraphs.

Ogilivie and Tutko(1966)16 conducted a study on personality traits of athletes. They found that "the athletes have need for achievements and tend to set realistic goals of highly organized, orderly and dominant nature. They have large capacity for trust, great psychological endurance, selfcontrol, low levels of anxiety and slightly high aggression." Along with this, they also concluded that female athletes show a greater tendency towards neuroticism, greater need for autonomy and tendency to show more creative than their counterparts (men) do. They are more reserved, cool, more experimental, and seek more independence than male.

Walter Krol(1967) 17 Studied "the Sixteen Personality Factor Questionnaire" in studying the personality profiles of ninety-four wrestlers of various abilities. In the first group, he used twenty-

eight wrestlers who either represented the United States on the Olympic Team, or were champions of either the "National Collegiate Athletic Association or National Association of Intercollegiate Athletics, or were place winners in these two National Tournaments." Thirty-three wrestlers, who were rated by their college coaches as being excellent wrestlers, composed the second group. The third group was composed of thirty-three wrestlers, who ranked average or below average in wrestling, according to their collegiate coach. Discriminate function analyses failed to establish profile differences. When the results of the testing, of the wrestlers, were compared to norms, the wrestlers demonstrated a significantly higher score on the factor indicating tough-mindedness, self-reliance, and masculinity. There was no support found for the suggestion that wrestlers may possess a neurotic profile.

Rai and Rao (1970) 18 randomly selected the scores of 100 male undergraduates on the Eysenck personality inventory from those of 665 Ss.These were then compared with those of 100 male stutters at a speech institute. 13 stutterers and 26 nonstuttere who received lie score of 7 or above were eliminated from the study. "Significant differences were found between the two groups on the neuroticism" and the stutterers and the item, which differentiated the two groups, indicated their closer affinity to neurotics than normal. As a group, the stutterers were more inclined to introversion and introverted neuroticism. It is suggested that factorial studies Interco relating the neurotic responses 97 of stutterers may further explicate the syndrome of stuttering. Implication of findings for behavioral therapy with stutterers is noted.

Kanekar and Mukherjee (1971)19 investigated "the possibility of personality differences among people of three states in India." Ss were 40 Maharashtrians, 40 Bengalies and 40 Madrasis. All were adult males. "The Eysenck personality inventory" had been taken to evaluate extroversion and neuroticism, 6 item short form of California f scale, to measure authoritarianism; and a 10-item misogyny scale, to measure misogyny."The Maharashtrians were found to be significantly more extrovert than the Bengalis; the Madrasis were intermediate between the two on extroversion."Across the 3 groups, authoritarianism and misogyny were found to be positively correlated. It, therefore, appears that Bengalis have more neurotic factors than Maharashtrians and Madrasis.

Thakur and Thakur (1980) 20 assessed "the personality differences between the athlete and non-athlete college male." Thirty six athletes and 36 non-athletes under graduate male students of Bihar constituted sample of the study; their main age being 18.64 years. "Seven cards of Thematic apperception Test (TAT) 1, 3BM, 4, 6BM, 7BM, 13MF and 16 were used to ascertain the differences of the two groups. Results indicated that the characteristics associated with the athletes

are happiness, cordial and affectionate relations, anxiety, achievement, dominance and superior organizational capacity whereas the characteristics related to nonathletes are guilt acquisition, assivity, rejection superior imagination implying that neurotic factors are present more in non-atheletes."

Sybil B.G.Eysenck (1982)21 aimed personality traits of adults and children of Hong Kong and England. "90-item adult version of the Eysenck Personality Questionnaire was translated into Chinese." 270 male and 462 female samples were selected from Hong Kong. "In a second study the 81- item version of the Junior EPQ (JEPQ) was translated into Chinese and given to 698 boys and 629 girls. Reasonably valid scales for use in Hong Kong are suggested for both adult and junior forms of the questionnaire. In a direct comparison of British and Chinese (Hong Kong) groups, using reduced scales comprising only items both scoring keys had in common.Hong Kong adults scored higher on Psychoticism and Social Desirability and lower on Extraversion than the British while children from Hong Kong scored lower on Extraversion and Neuroticism but higher on Social Desirability than their British counterparts. Indices of factor comparison were universally high, indicating that the major dimensions of personality were very similar in Hong Kong Chinese as in British subjects."

MA Schickit(1983)22 conducted the personality study on alchohlic and non alchohlic men. **"**The Eysenck Personality Inventory extroversion and neuroticism scores of 32 nonalcoholic young men with an alcoholic close relative and of controls were not significantly different. This implies that these personality attributes are not related to a predisposition to alcohol."

Singh (1984)23 administered the Eysenck personality inventory (EPI), 3scale (value orientation, manifest aggression and maladjustment) of the Jesness Inventory (JI) and the neuroticism scale questionnaire (NSQ) to fifty runaway and 50, no runaway Indian females (mean age 16yrs) to compare their home situations, parent-child relationships, and personality characteristics with their western counterparts. It was noticed that the majority of runaways belonged to psychologically broken homes and unsatisfactory parent-child relationship. Runaways also scored higher on the EPI, NSQ, and JI scales than no runaways. Finding suggests the need for developing adequate treatment and intervention programs for runaway Indian females as they have more factors that are neurotic.

Daino(1985) 24 "examined personality traits between a group of adolescent tennis players and a group of non-practicing sports adolescents."Eysenck personality questionnaire was used on a sample of 132 subjects.Investigation has exhibit that tennis players scored higher than non sports group in the will to win indicating that tennis players have more desire to reach excellence,

superiority, and achievement thereby scoring significantly high in extroversion, than non-sports group. Tennis players scored significantly lower in neuroticism, anxiety, depression, mood, and commoditization."

Rhodora D. Deatras (1985) 25 examined "Personality Traits of selected Athlete and Non-Athlete Students of The University of The Philippines: A Comparative study." The aim of this research was to compare the personality traits of selected athlete and non-athlete students with ages ranging from 17-23 enrolled in academic year 1984-1985 at the University of the Philippines. Specifically, this study aimed to construct group/individual profiles of groups, athlete and non-athlete, as measured by Cattell 16 P.F. Inventory. The study involved: a total of 88 athletes were selected from nine male and female varsity team sports namely: Basketball, Baseball, Soccer, Softball and Volleyball, which have been members of the regular playing team for at least one year; and 100 randomly selected male and female non-athletes from the group of students enrolled in service physical education courses (SY 1984-85) which have never been members of a team. They were asked to answer the Cattell 16 P.F inventory. "The data revealed that two groups

MATHODOLOGY

sample :- A sample of 200 M.K.S,College Chandauna student of Darbhanga districts than 100 boys and 100 girls were selected on the basis of incidental-cum-purposive sampling method.

Hypotheses:-

1. There is no significant gender difference in the Personality among boys and girls college student.
2. There is no significant Psychotics difference in the Personality among boys and girls college student.
3. There is no significant Extraversion difference in the Personality among boys and girls college student.
4. There is no significant neuroticism difference in the Personality among boys and girls college student.
5. Therer is no significant Lie difference in the Personality among boys and girls college student.

tools :- Eysenck personality Questionnaire adaptation (Hindi) was administered to measure the Personality dimension .

Results & Discussion

The result goes with the hypothesis:-There would be significant different on Eysenck personality. To test this hypothesis the mean and SD at the scores obtained by boys and girls of college students on nicety test were calculated Sparely.

International Journal of Research in Social Sciences
Vol. 9, Issue 3, March - 2019,
ISSN: 2249-2496 Impact Factor: 7.081
Journal Homepage: http://www.ijmra.us, Email: editorijmie@gmail.com
Double-Blind Peer Reviewed Refereed Open Access International Journal - Included in the International Serial Directories Indexed & Listed at: Ulrich's Periodicals Directory ©, U.S.A., Open J-Gate as well as in Cabell's Directories of Publishing Opportunities, U.S.A

Statistical method :-

Mean ,SD, t-ratio & significant level .05 and .01 to calculate Personality Boys and Girls College student.

Hypothesis No. 01:- 1. There is no significant gender difference in the Personality among boys and girls college student.

To test the significance at their mean differences test was run and the results obtained are presented in table below.

TABLE:- 01

Group	N	Mean	SD	't'
GIRLS	100	7.85	2.44	1.82
BOYS	100	8.66	3.65	

P<0.05 level

Hypothesis No. 02:- 2. There is no significant Psychotics difference in the Personality among boys and girls college student.

To test the significance at their mean differences test was run and the results obtained are presented in table below.

Group	N	Mean	SD	't'
GIRLS	100	7.85	2.44	1.82
BOYS	100	8.66	3.65	

TABLE:- 02

P<0.05 level

International Journal of Research in Social Sciences
Vol. 9, Issue 3, March - 2019,
ISSN: 2249-2496 Impact Factor: 7.081
Journal Homepage: http://www.ijmra.us, Email: editorijmie@gmail.com
Double-Blind Peer Reviewed Refereed Open Access International Journal - Included in the International Serial Directories Indexed & Listed at: Ulrich's Periodicals Directory ©, U.S.A., Open J-Gate as well as in Cabell's Directories of Publishing Opportunities, U.S.A

Hypothesis No. 03:- There is no significant Extraversion difference in the Personality among boys and girls college student.

To test the significance at their mean differences test was run and the results obtained are presented in table below.

TABLE:- 03

Group	N	Mean	SD	't'
GIRLS	100	7.56	2.65	.96
BOYS	100	7.34	2.25	

P>0.05 level

Hypothesis No. 04:- There is no significant neuroticism difference in the Personality among boys and girls college student. To test the significance at their mean differences test was run and the results obtained are presented in table below.

TABLE:- 04

Group	N	Mean	SD	't'

GIRLS	100	6.85	2.44	1.78
BOYS	100	7.66	2.65	

P>0.05 level

Hypothesis No. 05:- There is no significant Lie difference in the Personality among boys and girls college student.

To test the significance at their mean differences test was run and the results obtained are presented in table below.

TABLE:- 05

Group	N	Mean	SD	't'
GIRLS	100	7.85	3.65	1.82
BOYS	100	8.66	2.44	

P<.01 level

SUMMARY & CONCLUSION

The hypothesis proves Null hypothesis as scores on Eysenck personality show on significant difference between the two means (t-ratio 1.82;<0.01&0.05)

There is a significant gender difference in the personality of college students. Boys are found better personality than girls. Thus this hypothesis has been proved. So it can be concluded that girls do not always exhibit better personality as compared to boys The finding of the present study concluded that no different in their Eysenck personality.

LIMITATION OF THE PRESENT RESERCH :-

No doubt the study concluded was pioneering works in the study had several limitation as well.

There are

1. the sample of study constituted only one high school student.
2. The sample selected for this study was from rural are only.
3. The size of sample is a limit on

REFERENCE

Arbuckle, J. L. (2006). *Amos 7.0 user's guide.* Spring House, Bibou-Nakou, I., Kiosseoglou, G., & Stogiannidou, A. (2001). Strengths and difficulties of school-aged children in the family and school context. *Psychology: Journal of the Hellenic Psychological Society, 8*, 506-525.

Bishop, D. I., & Hertenstein, M. J. (2004). A confirmatory factor analysis of the Structure of Temperament Questionnaire. *Educational and Psychological Measurement, 64*, 1-11.

Bollen, K. A. (1989). *Structural equations with laten variables.* New York: Wiley. Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit.

In K. A. Bollen & J. S. Long (Eds.), *Testing structural equation models* (pp. 445-455). Newbury Park, CA: Sage. Browne, M. W., & Mels, G. (1992). *RAMONA user's guide.* Columbus, OH: Ohio State University Press.

Byrne, M. B. (2001). *Structural equation modelin with AMOS.* Mahwah, NJ: Lawrence Erlbaum.

Caruso, J. C., & Edwards, S. (2001). Reliabilit generalization of the Junior Eysenck Personality Questionnaire. *Personality and Individual Differences, 31*, 173-184.

Costa, P. T., & McCrae, R. R. (1992). *Revised NEO personality inventory and NEO five-factor inventory professional manual.* Odessa, FL: Psychological Assessment Resources.

Dimitriou, E. C. (1986). The Eysenck Personality Questionnaire (EPQ): The validity of the Greek, adult and Junior version. *Engefalos, 23*, 41-55.
Eysenck, H. J. (1994). The big five or giant three: Criteria for a paradigm. In C. F. Halverson & G. A. Kohnstamm

Eysenck, H. J., & Eysenck, S. B. G. (1975). *Manual of the Eysenck Personality Questionnaire (adult and junior).* London: Hodder & Stoughton.
Eysenck, H. J., & Eysenck, S. B. G. (1994). *Manual of the Eysenck Personality Questionnaire: Comprising*
the EPQ-Revised (EPQ-R) and EPQ-R Short Scale. San Diego, CA: EdITS.

Eysenck, H. J., & Gudjonsson, G. H. (1989). *The causes and cures of criminality*. New York: Plenum.

Eysenck, S. B. G., & Chan, J. (1982). A comparative study of personality in adults and children: Hong Kong vs. England. *Personality and Individual Differences, 3*, 153-160.

Eysenck, S. B. G., & Dimitriou, E. C. (1984). Cross-cultural comparison of personality: Greek children and English children. *Social Behavior and Personality, 12*, 45-54.

Francis, L. J., Lankshear, D. W., & Pearson, P. R. (1989). The relationship between religiosity and the short form JEPQ (JEPQ-S) indices of E, N, L and P among eleven year olds. *Personality and Individual*
Differences, 10, 763-769.

Goodman, R. (1997). The Strengths and Difficulties Questionnaire: A Research note. *Journal of Child*
Psychology and Psychiatry, 38, 581-586.

Hammond, S. M., & Lienert, G. A. (1992). Point symmetry adjustment of phi-coefficients in the factor analysis of psychometric test items.
Personality and Individual Differences, 13, 211-219.

Hu, L., & Bentler, P. M. (1995). Evaluating model fit. In R. H. Hoyle (Ed.), *Structural equation modeling:*
Concepts, issues, and applications (pp. 76-99). Thousand Oaks, CA: Sage. John, O. P., Caspi, A., Robins, R. W., Moffitt, T. E., & Stouthamer-Loeber,

M. (1994). The "Little Five": Exploring the nomological network of the five-factor model of personality in adolescent boys. *Child*

Development, 65, 160-178.

Jöreskog, K. G., & Sörbom, D. (1989). *LISREL 7 user's reference guide.* Chicago: Scientific Software. Katz, Y.

J., & Francis, L. J. (1991). The dual nature of the EPQ Lie Scale? A study among university students
in Israel. *Social Behaviour and Personality, 9*, 217-222.
Kim, J., & Mueller, C. W. (1978). *Factor Analysis: Statistical methods and practical issues*. Thousan Oaks, CA: Sage.

Kuo, P. H., Chih, Y. C., Soong, W. T., Yang, H. J., & Chen, W. J. (2004). Assessing personality features and their relations with behavioral problems in adolescents: Tridimensional personality questionnaire and junior Eysenck personality questionnaire. *Comprehensive Psychiatry, 45*, 20-28.

Lajunen, T., & Scherler, H. R. (1999). Is the EPQ Lie Scale bidimensional? Validation study of the structure of the EPQ Lie Scale among Finnish and Turkish university students. *Personality and Individual Differences, 26*, 657-664.

Lamb, M. E., Chuang, S. S., Wessels, H., Broberg, A. G., & Hwang, C. P. (2002). Emergence and construct
validation of the Big Five in early childhood: A longitudinal analysis of their ontogeny in Sweden. *Child Development, 73*, 1517-1524.

Liebetrau, A. M. (1983). *Measures of association.* Newbury Park, CA: Sage.

Mervielde, I., & De Fruyt, F. (2000). The Big Five personality factors as a model for the structure of
children's peer nominations. *European Journal of Personality, 14*, 91-106.