

Patterns of Personality according to Age and Gender in Basque Speakers

**Mikel Haranburu, Itziar Alonso-Arbiol,
Arantxa Gorostiaga, and Nekane Balluerka**

Faculty of Psychology

University of the Basque Country, Spain

(Abstract) The most important changes in personality dimensions seem to take place under the age of 30. Nevertheless, the influence of work status has not been systematically assessed in the examination of when these big changes happen. Besides, gender differences in some personality dimensions are still not conclusive. The aim of this study was to examine the age differences in personality dimensions when work status (students vs. workers) for young adults is taken into account, as well as to examine possible gender differences in the Basque speakers'

This research has been supported by a grant from the Gipuzkoa Provincial Council and European Union (FEDER) within the Gipuzkoan Network of Science, Technology and Innovation Programme(OF863/2004). Parts of this paper were presented at the 13th European Conference on Personality, July, 2006, Athens, Greece. Correspondence concerning this article should be addressed to Dr. Mikel Haranburu, Faculty of Psychology, University of the Basque Country, 20018 Donostia, Spain. Electronic mail may be sent to him at mikel.haranburu@ehu.es.

population. Participants were 1,441 Basque speakers (students and civil servants) whose ages ranged from 16 to 65 years. Results showed that younger students had higher scores in Extraversion, regardless of the work status. However, the work status variable was more important than the age effect to explain changes in Neuroticism and Conscientiousness. Besides, women showed higher scores for Neuroticism and Conscientiousness, although there were not gender differences for other dimensions.

[Key words: Ageing, Basque population, Five Factor model, Gender, Personality]

Personality profile tends to be relatively consistent and specific within each person namely the particular structure of personality traits makes each individual unique. However, some differences arise in certain traits according to age (McCrae, Costa, Hrebickova, Urbanek et al., 2004) and gender (Costa, Terracciano, & McCrae, 2001; Feingold, 1994) that seem to follow some patterns across cultures.

Although these differences do not risk the relative singularity of personality profile for each individual, they point out us the fluctuations which have occurred in personality as people grow older and the particularities that each gender may have. Thus, looking into the pattern of changes in the personality dimensions related to each age and to an individual's gender allows us to know the defining characteristics of each developmental stage more deeply.

The study of the personality has been approached from several frameworks but recently, the Five Factor Model has become salient among others since research conducted in a number of countries had shown its applicability across very different cultures (McCrae et al., 2005).

Personality as Related to Age and Gender

Five-Factor Model of Personality

Costa and McCrae (1992) have described the characteristics of each of the Five Factors, which we briefly outline here:

Neuroticism. This reflects an individual's emotional instability or his/her proneness to experiencing negative emotions such as fear, anger, culpability or shame. Those scoring high in neuroticism are more prone to having psychiatric problems, which does not necessarily imply that neuroticism should be considered as an indicator of psychopathology.

Extraversion. This is the tendency to attend parties and social gatherings frequently, to engage in social relationships, to seek intense emotions, and to experience positive emotions. It is displayed through assertiveness and the level of energy for activity.

Openness to experience. This reflects a person's interest in the inner and outer world, in new ideas, and in non-conventional values. This dimension is related to divergent thought, which is at the foundations of creativity. People who score high in this dimension usually do not act following habits, have a tendency to criticise authority, and easily accept innovative ideas.

Conscientiousness. This reflects an individual's sense of competence or self-efficacy. It shows a tendency towards order, towards responsibility, towards the level of aspiration established in duties, towards the self-determination to finish tasks, and the extent to which an action which is planned before being carried out.

Agreeableness. This captures the extent to which a person is altruistic, shows confidence in others and empathizes with them, as well as the extent of a person's willingness to help others without being noticed.

Personality and Ageing

Personality traits experiment some changes over time, and this evolution follows patterns that are considered universal. Thus, as evidenced by studies conducted in different cultures from the Five-Factor model, the levels of neuroticism, extraversion and openness to experience decrease in the transition between adolescence and late adulthood, whereas the levels of agreeableness and conscientiousness increase in this stage (Costa et al., 1986; McCrae & John, 1992; McCrae et al., 1999; McCrae et al., 2000; Yang, McCrae & Costa, 1998). Besides, Costa et al. observed in a study conducted with people whose ages ranged between 32 and 88 years that the scores for neuroticism, extraversion and openness were lower in older people.

In general, Costa and McCrae (2002) found that the most important changes mentioned (decrease in neuroticism, extraversion and openness, and increase in agreeableness and conscientiousness) took place in late adolescence or young adulthood and that, after the age of 30 years, changes happened more slowly. Nevertheless, contradictory findings have also appeared in some dimensions of personality. Thus, McCrae et al. (2004) pointed out that it is not yet clear whether these differences in literature are artificial, reflecting sampling biases or cohort effects, or whether they accurately represent different developmental paths in different cultures and samples. For instance, even though a positive relationship between age and conscientiousness has been claimed in young adulthood (McCrae et al., 1999), the age where the biggest changes take place cannot be so clearly drawn by researchers (e.g., Srivastava, John, Gosling, & Potter, 2003).

One possible reason for these contradictory findings is that another variable related to age, work status (i.e., being a student

Personality as Related to Age and Gender

vs. worker), may be confounding this relationship between age and personality dimensions, as previous studies failed to look into the effect of this work status variable (e.g., Costa et al., 2001; Helson, Jones, & Kwan, 2002; McCrae et al., 2004; Srivastava et al., 2003). Since most studies have been conducted with young adults who were students (for a set of samples, see Costa et al., 2001), a close look at young adulthood should be taken into account to examine whether the change in personality dimensions that take before 30 is just due to age or, on the contrary, is due to the work status of those young adults.

Personality and Gender

As for gender, data obtained in several cultures have shown a differential pattern of personality in men and women. Women tend to show higher scores in neuroticism and agreeableness, and in some facets or sub-dimensions of extraversion and conscientiousness (Costa et al., 2001). Results for openness are less conclusive because women have higher scores in some facets, but men have higher scores in other facets, which led to the nonexistence of gender differences in the total score of the dimension (Rubinstein, 2005). However, Costa et al. also showed that the magnitude of gender differences vary across cultures.

The Basque-speaking population is part of the whole community living in the Basque Country, situated in the north of Spain and the south-west of France¹⁾, and Basque is a non-Romance, pre-Indo-European language spoken in that region. Costa et al. (2001) suggested that the magnitude of gender differences might be related to Hofstede's (1980) masculinity dimension of culture, and

1) This study was conducted only with Basque-speakers living in the Spanish part of the Basque Country.

Hofstede (1998) stated that gender differences are higher in masculine countries. According to Hofstede's ranking of countries, Spain is a more egalitarian or feminine country than, for example, the United States. Moreover, based on indirect indexes, it could be stated that the Basque region of Spain is even more egalitarian and feminine, in Hofstede's sense, than is the rest of Spain (Alonso-Arbiol, Shaver, & Yáñez, 2002). For that reason, it may be of great interest to see whether the gender differences in personality patterns shown in other cultures also apply to this culture or, on the contrary, lower gender differences are drawn in such a more egalitarian society as the Basque one.

Previous findings from a preliminary study with a Basque sample provided a pattern that conforms to the general picture of personality shown across cultures (Costa et al., 2001; Feingold, 1994) but, as expected, some differences were also found. When the big five dimensions as a whole were considered, women showed scores consistently higher than men in neuroticism and agreeableness, whereas they scored higher only for some sub-dimensions of extraversion and openness to experience (Balluerka, Gorostiaga, Alonso-Arbiol, & Haranburu, 2006). However, as mentioned before, the sample was quite small to allow us to draw any conclusive statement, and in some cases the effect size was also low. Therefore, a study conducted in a larger sample would be needed to allow us to analyse the gender effects in the Basque population and its comparison with other cultures.

Thus, the aim of our study was twofold: a) To examine the differences in the personality profile according to age, but also taking into account the work status for younger adults (under 30 years); b) and to examine whether the gender differences in the personality profile of Basque speakers were in line with those found in other cultures.

Method

Participants

The sample consisted of 1,441 Basque speakers (868 women and 573 men) whose ages ranged from 16 to 65 years. As for work status, 69.67 % were secondary and university students, and 30.32% were Basque civil servant.

Instrument

A Basque version of the Revised NEO Personality Inventory (NEO PI-R; Balluerka et al., 2006; Costa & McCrae, 1992) was used. It is a 240-item questionnaire assessing 30 specific facets that define 5 basic factors of personality: Neuroticism, extraversion, openness, agreeableness, and conscientiousness. Information about gender, age, and work status (student/worker) was also collected. We scored the NEO PI-R in an intuitive metric known as percentage of maximum possible (POMP) scores (Cohen, Cohen, Aiken, & West, 1999). A POMP score is a linear transformation of any raw metric into a 0 to 100 scale, where 0 represents the minimum possible score and 100 represents the maximum possible score.

Procedure

Data was collected in participants' classrooms and work places by two trained assistants from the research team. During the whole process participants were completely free to participate or not, as they chose, in line with the deontological (ethics) code of the Spanish Colegio Oficial de Psicólogos (COP; Official Committee of Psychologists). Anonymity was also assured.

Results

Age-work status relationship and personality dimensions

Taking into account age and work status variables, participants were assigned to 6 groups: 1) Students between 16 and 18 years; 2) Students between 19 and 25 years; 3) Workers between 18 and 30 years; 4) Workers between 30 and 39 years; 5) Workers between 40 and 49 years; and 6) Workers between 50 and 65 years. In order to assess age and work status differences, Kruskal-Wallis tests were calculated for the 5 dimensions (see Table 1), and post-hoc analyses were conducted when differences emerged.

Age-work status differences emerged for the neuroticism, extraversion and conscientiousness dimensions but, according to the small effect sizes, no differences were found for openness and

Table 1. Differences in Age/Work Status for NEO PI-R Personality Dimensions

Dimensions	Mean rank						χ^2	η^2
	Students		Workers					
	16~18	19~25	18~29	30~39	40~49	50~65		
N	780.9	854.7	583.3	503.9	543.7	403.2	156.01	.11
E	823.0	731.1	785.6	613.5	513.1	381.2	124.96	.09
O	664.2	804.8	776.6	766.6	720.4	618.7	31.52	.02
A	629.5	754.4	781.1	823.0	841.9	785.4	62.49	.04
C	607.5	683.0	955.6	926.6	899.1	952.3	150.17	.10

Note. N = neuroticism; E = extraversion; O = openness; A = agreeableness; C = conscientiousness.

All χ^2 tests were $p < .001$

Personality as Related to Age and Gender

agreeableness dimensions of personality. Nevertheless, post-hoc analyses showed two different patterns: while, regardless of the age, the two groups of students scored higher in neuroticism and lower in conscientiousness than workers; the age effect was present and work status became unimportant in the extraversion dimension, where secondary students scored higher than both university students and workers over 30.

Gender and personality dimensions

Non-parametric Mann Whitney's U-tests were conducted to assess possible gender differences in the five dimensions (see Table 2). Differences were only found for the neuroticism and agreeableness dimensions, where women scored higher than men. There were no gender differences for the extraversion, openness, and conscientiousness dimensions of personality, as evidenced by the small effect sizes found.

Discussion

The first aim of our study was to assess the changes in personality patterns related to age, paying attention to an aspect

Table 2 Gender Differences for NEO PI-R Personality Dimensions

	Male	Female	Mann-Whitney's U	η^2
Neuroticism	613.0	840.7	187403.50	.06
Extraversion	673.2	801.2	223167.00	.02
Openness	644.2	820.2	205921.00	.04
Agreeableness	606.1	845.2	183292.00	.07
Conscientiousness	711.2	776.3	245720.50	.01

Note. All U s were $p < .001$.

neglected so far, namely the effect of work status; the second aim was to look into the gender differences in personality in Basque culture. A precise understanding of these aspects would allow us to predict the changing pattern in personality dimensions of people who are getting older.

Our data confirmed Costa and McCrae's (2002) results pointing out that the most important changes in personality take place before the age of 30. Nevertheless, as expected, our study showed that not only age should be taken into account, but also young adults' work status should be considered in order to explain personality changes. Thus, while the age effect is true for extraversion, the decrease in neuroticism and the increase in conscientiousness goes beyond this age effect. In these two personality dimensions, it is the work status, becoming a worker and acquiring new responsibilities, which really makes a difference for the change.

As for gender differences, in line with the results obtained in other cultures, women showed higher scores of neuroticism and agreeableness. The dimensions that have more clearly emerged in literature as different according to gender are the same ones appearing in our study (Costa et al., 2001). No gender differences, however, were found in the Basque population for extraversion, openness, and conscientiousness dimensions of personality. A possible explanation relies on the cultural difference. Conscientiousness is a dimension in which gender differences have barely been analysed (Costa et al., 2001) but, as for extraversion and openness, more variation across cultures has been found. As Costa et al. noted, cultures vary in the degree to which sex roles are emphasized and it can be thought that the more egalitarian the cultures are from Hofstede's (1980) perspective, as is the case with the Basque population, the less perceptible the gender differences

Personality as Related to Age and Gender

are; whereas in some cultures gender differences are evident and bigger, in other cultures these gender differences are masked. An alternative explanation for these results may rely on the differential functioning of the facets underlying these dimensions. Therefore, future research may address this topic.

The results obtained here allow us to discern the changing patterns of personality dimensions according to individuals' developmental stage and also based on their work status. Thus, we can conclude that age is not the only element that brings an inflection point, but working or not is also an important aspect of personality change. Therefore, future studies should examine the differences in personality patterns of elderly people who are still working as compared to those retired ones.

References

- Alonso-Arbiol, I., Shaver, P. R., & Yáñez, S. (2002). Insecure attachment, gender roles, and interpersonal dependency in the Basque Country. *Personal Relationships, 9*, 479-490.
- Balluerka, N., Gorostiaga, A., Alonso-Arbiol, I., & Haranburu, M. (2006). La adaptación de instrumentos de medida de unas culturas a otras: Una perspectiva práctica [Test adaptation into other cultures: A practical approach]. *Psicothema, 18*, 848-857.
- Cohen, P., Cohen, J., Aiken, L. S., & West, S. G. (1999). The problems of units and the circumstances for POMP. *Multi-variate Behavioral Research, 34*, 315-346.
- Costa, P. T., Jr., & McCrae, R. R. (1992). *NEO PI-R, Profesional Manual. Revised NEO Personality Inventory (NEO PI-R) and NEO Five Factor Inventory (NEO-FFI)*. Odessa, FL: Psychological Assessment Resources.
- Costa, P. T., Jr. & McCrae, R. R. (2002). Looking backward:

- Changes in the mean levels of personality traits from 80 to 12. In D. Cervone & W. Michel (Eds.), *Advances in personality science* (pp. 219-237). New York: Guilford.
- Costa, P. T., Jr., McCrae, R. R., Zonderman, A. B., Barbano, H. E., Lebowitz, B., & Larson, D. M. (1986). Cross-sectional studies of personality in a national sample: 2. Stability in neuroticism, extraversion, and openness. *Psychology and Aging, 1*, 144-149.
- Costa, P.T., Jr., Terracciano, A., & McCrae, R. R. (2001). Gender differences in personality traits across cultures: Robust and surprising findings. *Journal of Personality and Social Psychology, 81*, 322-331.
- Feingold, A. (1994). Gender differences in personality: A meta-analysis. *Psychological Bulletin, 116*, 429-456.
- Helson, R., Jones, C., & Kwan, V. S. (2002). Personality change over 40 years of adulthood: Hierarchical linear modeling analyses of two longitudinal samples. *Journal of Personality and Social Psychology, 83*, 752-766.
- Hofstede, G. (1980). *Culture's consequences*. Newbury Park, CA: Sage.
- Hofstede, G. (1998). *Masculinity and femininity*. Thousand Oaks, CA: Sage.
- McCrae, R. R., Costa, P. T., Hrebickova, M., Urbanek, T., Martin, T. A., Oryol, V. E., Rukavishnikov, A. A., & Senin, I. G. (2004). Age differences in personality traits across cultures: Self-report and observer perspectives. *European Journal of Personality, 18* (2), 143-157.
- McCrae, R. R., Costa, P. T., Jr., Lima, M. P., Simões, A., Ostendorf, F., Angleitner, A., Marusic, I., Bratko, D., Caprara, G. V., Barbaranelli, C., Chae, J. H., & Piedmont, R.L. (1999). Age differences in personality across the adult life span: Parallels in five cultures. *Developmental Psychology, 35*,

466-477.

- McCrae, R. R., Costa, P. T., Jr., Ostendorf, F., Angleitner, A., Hrebrickova, M., Avia, M. D., Sanz, J., Sánchez-Bernardos, M. L., Kusdil, M. E., Woodfield, R., Saunders, P. T., & Smith, P. B. (2000). Nature over nurture: Temperament, personality, and lifespan development. *Journal of Personality and Social Psychology*, 78, 173-186.
- McCrae, R. R., & John, O. P. (1992). An introduction to the Five-Factor Model and its applications. *Journal of Personality*, 60, 175-215.
- McCrae R. R., Terracciano A., & Personality Profiles of Cultures Project. (2005). Universal features of personality traits from the observer's perspective: Data from 50 cultures. *Journal of Personality and Social Psychology*, 88, 547-561.
- Rubinstein, G. (2005). The big five among male and female students of different faculties. *Personality and Individual Differences*, 38, 1495-1503.
- Srivastava, S., John, O. P., Gosling, S. D., & Potter, J. (2003). Development of personality in early and middle age: Set like plaster or persistent change? *Journal of Personality and Social Psychology*, 84, 1041-1053.
- Yang J., McCrae R. R., & Costa P. T., Jr. (1998). Adult age differences in personality traits in the United States and the People's Republic of China. *Journal of Gerontology: Psychological Sciences*, 53B, P275-P383.

(논문접수일: 2006년 10월 2일)

(수정논문접수일: 2006년 10월 25일)

(논문게재승인일: 2006년 11월 6일)