



## BRAIN. Broad Research in Artificial Intelligence and Neuroscience

e-ISSN: 2067-3957 | p-ISSN: 2068-0473

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Submitted: November 2<sup>nd</sup>, 2024 | Accepted for publication: January 5<sup>th</sup>, 2025

### Examination of Attachment of an Individual in Psychiatric Patients with a Diagnosed Neurotic Disorder

#### Jana Hubinská

University of Ss. Cyril and Methodius in Trnava, Slovakia.

jana.hubinska@ucm.sk

<https://orcid.org/0000-0002-8520-7793>

#### Dominika Doktorová

University of Ss. Cyril and Methodius in Trnava, Slovakia.

dominika.doktorova@ucm.sk

<https://orcid.org/0000-0001-8809-6745>

#### Michal Masár

University of Ss. Cyril and Methodius in Trnava, Slovakia.

Masar3@ucm.sk

<https://orcid.org/0000-0002-9287-1764>

**Abstract:** *The object of our research is to determine the connection of negative attachment in connection with an individual's personality. We focus on comparing attachment and personality characteristics in psychiatric patients and the general population. The research sample consists of 84 respondents (N = 84), of which 48 were men and 36 were women, aged 24 to 68 years and the average age of all respondents was 43.42. Within the methods, we chose two questionnaires: The Experiences in Close Relationships-Revised (ECR-R) to measure attachment and The Eysenck Personality Questionnaire-Revised (EPQ-R) to identify personality traits. We observed a statistically significant difference in the type of attachment between the study sample and the comparison group. We did not observe a statistically significant relationship between the neuroticism scale and the anxious/ambivalent type of attachment in the study sample. There was no positive statistically significant relationship between the neuroticism scale and the avoidant type of attachment in the study sample. We found a positive statistically significant relationship between the extraversion scale and the secure type of attachment in all respondents.*

**Keywords:** *personal traits; attachment-neuroticism; extraversion anxious scale; psychiatric patients.*

**How to cite:** Hubinská, J., Doktorová, D., & Masár, M. (2025). Examination of attachment of an individual in psychiatric patients with a diagnosed neurotic disorder. *BRAIN. Broad Research in Artificial Intelligence and Neuroscience*, 16(1), 22-30.

<https://doi.org/10.70594/brain/16.1/2>

## **1. Introduction**

Several studies have addressed the relationship between personality and attachment (Levy et al., 2015; Nofle & Shaver, 2006). Levy et al. (2015) argue that early childhood traumatisation is common in all personality disorders, specifically stating that 73% report abuse, of which 34% are sexual and 82% report a lack of care. They further state that the incidence of trauma (disorganised attachment) is the same for people with borderline personality disorder (Levy et al., 2015). Research by Nofle & Shaver (2006) suggests that anxiety is associated with chronic grief, distress, and recovery problems. They further found that neuroticism, as a personality trait, together with low self-esteem, are correlated with anxious attachment and chronic grief in individuals who experienced losing an attachment figure (Nofle & Shaver, 2006; Mikulincer & Shaver, 2007). According to Nofle & Shaver (2006), unfavourable types of attachments, such as anxious and avoidant personality characteristics, are positively related to neuroticism and negatively related to extraversion, while secure attachment is positively related to extraversion and negatively to neuroticism (Nofle & Shaver, 2006).

The above findings suggest that the negative effects of attachment figures, traumatic experiences, disorders in attachments, and selected personality characteristics form the basis for several psychiatric disorders, as well as the neurotic disorders we monitor.

Our research aims to determine the relationship between negative attachment and an individual's personality. We focus on comparing attachment and personality characteristics in psychiatric patients and the general population.

The researched area is the connection between personality and attachment. We consider the research problem to be the difference in the type of attachment that the child creates with an attachment figure or caregiver and the difference in personality characteristics in psychiatric patients and the general population (Levy et al., 2015).

### **Research objective and sub-objectives**

Our main and general research goal is to determine whether there is a connection between an unfavourable attachment with a focus on the individual's personality.

Sub-objectives:

We compare the attachment in psychiatric patients and the general population.

We find differences in personality characteristics between people with secure attachments and people with unfavourable, insecure attachments.

We have formulated hypotheses based on the research of Nofle & Shaver (2006), who state that unfavourable types of attachments, such as anxious and avoidant, are positively related to neuroticism and negatively related to extraversion. Secure attachment, which is positively related to extraversion and negatively to neuroticism, has the opposite effect (Nofle & Shaver, 2006).

H1: We assume there is a positive statistically significant relationship between the neuroticism scale and the anxious/ambivalent type of attachment in the study sample.

H2: We assume there is a positive statistically significant relationship between the neuroticism scale and the avoidant type of attachment in the study sample.

H3: We assume there is a positive statistically significant relationship between the extraversion scale and the secure type of attachment in all respondents.

## 2. Methods

### 2.1. Research sample

The research sample consists of 84 respondents (N = 84), of which 48 were men and 36 were women, aged 24 to 68 years and the average age of all respondents was 43.42. The research sample consisted of two groups. The first group was the study sample, which consisted of 42 psychiatric patients, of which 24 were men and 18 women, aged 24 to 68 years, and the mean age of the group was 44.59. The second group was the comparison group and consisted of the general population of 42 respondents, of which 24 were men and 18 were women, aged 24 to 68 years and the average age of the group was 42.25. In the interests of clarity, we present the individual data in a table. The groups were comparable in terms of age, gender, and education.

Table no. 1. Distribution of the research sample by groups, gender, and age

Group	Number of people		Age	
Study sample (psychiatric patients)	men	24	minimal	24
	women	18	maximal	68
	together	42	average	44.59
Comparison group (general population)	men	24	minimal	24
	women	18	maximal	68
	together	42	average	42.25
Together	men	48	minimal	24
	women	36	maximal	68
	together	84	average	43.42

(Source: Authors of the work)

Study sample = psychiatric patients  
 Comparison group = general population  
 Respondents = all research participants

### 2.2. Research process

The research took place from January to mid-March 2019. Data collection was performed by deliberate selection, and we collected data first from the study sample, which consisted of psychiatric patients diagnosed with neurotic disorder F40–F48. The patients were from the psychiatric department of the University Hospital with the Nové Zámky Polyclinic and were briefly acquainted with the purpose of the research. Then, based on the data collected, we distributed questionnaires and collected data from the comparison group consisting of the general population. The condition was age, from 24 to 68 years. The study and comparison groups were balanced in terms of the number, age, and gender of respondents. Data from psychiatric patients were collected by printed questionnaires which took approximately 45-55 minutes to complete. Data from the comparison group were mostly collected via the Internet, via social networks, and by e-mail, and the time for filling them in was slightly shorter, 35-40 minutes. A total of 90 questionnaires were distributed, but we could use 84 questionnaires, which were completed in full. The remaining ones were discarded due to incompleteness or failure to fill in some questions. The questionnaire battery we chose contained a total of 117 questions. Respondents participated in the data collection voluntarily and the data they provided to us were anonymous and used for research purposes.

### 2.3. Research methods

Within the methods, we chose two questionnaires: The Experiences in Close Relationships-Revised (ECR-R) to measure attachment and The Eysenck Personality Questionnaire-Revised (EPQ-R) to identify personality traits.

#### The Experiences in Close Relationships-Revised (ECR-R) Questionnaire

The ECR-R questionnaire is one of the most widely used questionnaires on attachment typology for adults. The authors of the questionnaire are Fraley, Waller, & Brennan (2000), as cited in Lečbych & Pospíšilíková (2012). The items in the questionnaire are made up of two factors - avoidance and anxiety. The method consists of 36 claims, where 18 claims form an avoidance scale, and the other 18 claims form the anxiety scale. By combining these two scales, four types of adult attachments emerge, namely: secure, anxious/ambivalent, disorganised/disoriented, and avoidant attachment. The respondent evaluates the individual statements on a seven-point Likert scale, where the number 1 = strongly disagree and 7 = strongly agree. It takes approximately 10 to 15 minutes to complete the questionnaire. The questionnaire can also be used to diagnose the relationships of individuals to their loved ones, which has its foundations in attachment that was formed in early childhood (Fraley, Waller, Brennan, 2000, as cited in Lečbych, Pospíšilíková, 2012).

*Table no. 2. Model of attachment in adulthood according to Brennan, Clark, and Shaver, 1998 (as cited in Lečbych, Pospíšilíková, 2012).*

Attachment type	Anxiety	Avoidance
Secure	-	-
Anxious / Ambivalent	+	-
Disorganised / Disoriented	+	+
Avoidant	-	+

#### The Eysenck Personality Questionnaire-Revised (EPQ-R)

To find out the respondents' personality traits, we chose an abbreviated version of the standardised revised Eysenck personality questionnaire EPQ-R. The author of the questionnaire is Eysenck (1992). This abridged version contains 48 items and 4 scales (P = Psychoticism, E = Extraversion, N = Neuroticism, L = Lies scale) for 12 questions. We have described the individual scales above in the text, just adding that the Lies scale detects dissimulation, i.e., deformation, even concealment manifested in the individual's effort to idealise, and embellish his answers to appear better than he is (Eysenck & Eysenck, 1993). In the questionnaire, the respondent is asked to answer questions about himself by choosing from the options Yes or No. We have deliberately chosen this abbreviated version, which takes approximately 10 to 15 minutes to administer, so as not to overburden psychiatric patients.

### 2.4. Research procedure and statistical methods

To obtain the necessary data, get answers to the research questions set by us, and verify the hypotheses, we performed correlation-comparative research. Using our chosen methods, we obtained answers to research questions and hypotheses, which we then evaluated with the programme SPSS, version 20. Within the statistical methods, we used the nonparametric Mann-Whitney U test (hypothesis No. 1, 2, and 3), which was used because the variable in one of the groups deviated significantly from the normal distribution.

### 3. Results

**H1: We assume that there is a positive statistically significant relationship between the neuroticism scale and the anxious/ambivalent attachment type in the study sample.**

We used the Mann-Whitney U test to test the hypothesis. Respondents from the study sample who had anxious attachment showed lower values on the neuroticism scale compared to those who did not show anxious attachment. The difference was small and statistically insignificant,  $U = 107.0$ ;  $Z = -1.296$ ,  $p = 0.195$ ,  $r = 0.199$  (Table 3).

Table no. 3. Descriptive statistics anxious attachment in the study sample  $\times$  scale of neuroticism

Presence of anxious/ambivalent relation bond	Neuroticism					
	<i>N</i>	<i>M</i>	<i>SD</i>	<i>Mdn</i>	<i>IQR</i>	
Yes	9	4.11	1.17	4.00	2.00	
Nope	33	4.97	1.83	5.00	3.00	

Note. In the group with the presence of anxious attachment, the score from the neuroticism scale was statistically significantly, positively skewed ( $p = 0.041$ ).

*Evaluation: Hypothesis no. 1 rejected (Source: Authors of the work).*

**H2: We assume that there is a positive statistically significant relationship between the neuroticism scale and the avoidant attachment type in the study sample.**

The Mann-Whitney U test was used to test the hypothesis. As in the previous case, the respondents from the study sample with avoidant attachment showed lower values on the neuroticism scale compared to the respondents who did not show avoidant attachment. The difference was not equally statistically significant,  $U = 82.5$ ;  $Z = -0.933$ ,  $p = 0.351$ ,  $r = 0.143$  (Table 4).

Table no. 4. Descriptive statistics avoidant attachment in the study sample  $\times$  scale of neuroticism

The presence of Avoidant relational attachment	Neuroticism					
	<i>N</i>	<i>M</i>	<i>SD</i>	<i>Mdn</i>	<i>IQR</i>	
Yes	6	4.17	1.72	4.00	3.00	
Nope	36	4.89	1.74	5.00	3.00	

Note. In the group with the absence of avoidant attachment, the score from the neuroticism scale was statistically significantly, positively skewed ( $p = 0.023$ ).

*Evaluation: Hypothesis no. 2 rejected (Source: Authors of the work).*

**H3: We assume that there is a positive statistically significant relationship between the extraversion scale and the secure type of attachment in all respondents.**

The hypothesis was tested using the Mann-Whitney U test. Respondents who reported secure attachment showed higher scores on the extraversion scale compared to those who did not

show secure attachment. This difference had a moderate effect and was statistically significant,  $U = 394.5$ ;  $Z = -3.724$ ,  $p < 0.001$ ,  $r = 0.406$  (Table 5). This result supports the statement from hypothesis no. 5.

Table no. 5. Descriptive statistics secure attachment among all respondents  $\times$  extraversion scale

The presence of a secure relationship bond	Extraversion				
	<i>N</i>	<i>M</i>	<i>SD</i>	<i>Mdn</i>	<i>IQR</i>
Yes	24	7.54	2.48	7.00	5.00
Nope	60	5.30	1.79	5.00	3.00

Note. In the group with the absence of a secure attachment, the score from the extraversion scale was statistically significantly deviated from the normal distribution ( $p < 0.001$ ).

Evaluation: We accept hypothesis no. 3 (Source: Authors of the work).

## 4. Discussion

### 4.1. Interpretation of results

We aimed to find out whether there is a connection between unfavourable attachment and the individual's personality. We focused on comparing the attachment between psychiatric patients and the general population. We examined the differences in personality characteristics between people with a secure, favourable attachment and people with an unfavourable, insecure attachment. We used the revised ECR-R questionnaire to determine the attachment and we measured respondents' personality traits with an abbreviated version of the standardised revised Eysenck personality questionnaire EPQ-R. As part of the research, we identified three hypotheses and subjected them to statistical testing.

In hypothesis no.1, we assumed that there was a positive statistically significant relationship between the neuroticism scale and the anxious/ambivalent type of attachment in the study sample. Eysenck & Eysenck (1993) report that individuals with high neuroticism scores are highly emotional, sensitive, anxious, and moody, as they worry most of the time. They respond to stimuli sensitively, inadequately, and sometimes incomprehensibly, as they cannot calm down and get into a mental balance (Eysenck & Eysenck, 1993). They are full of anxiety, and insecurity, and they have a much greater need for acceptance, security, and reliability of the feelings of those closest to them (Vágnerová, 1999). Cattell states that the neuroticism factor, in addition to the anxiety factor, forms a significant personality component involved in the formation of neuroses (as cited in Nakonečný, 1997). Individuals with higher levels of neuroticism have impaired control over their impulsivity and are less able to cope with stressful situations (Ruisel & Halama, 2007), which is also characteristic of individuals with anxious attachment type, as well as constant uncertainty and ambivalence (Mikulincer & Shaver 2007). Kokkinos, Kipritsi & Markos (2016) in a sample of 323 pupils aged 10 to 12 years found that students with anxious attachment type had much higher scores in neuroticism than their peers with secure attachment type. Gallo, Smith, & Ruiz (2003, as cited in Kokkinos, Kipritsi & Markos, 2016) examined adults and, among other things, found a correlation between anxious attachment and higher scores in emotional instability (neuroticism). The conclusion from the above research is that this unfavourable type of attachment is positively related to the individual's neuroticism. Due to the given facts, we assumed that there is a positive statistically significant relationship between the neuroticism scale and the anxious/ambivalent type

of attachment in the study sample. The research carried out by us did not show a significant relationship between the mentioned items. Here, too, the main reason may be the low number of respondents, since in the study sample we examined, only 9 out of 42 respondents had an anxious attachment type. Respondents from the study sample with anxious attachment showed lower values on the neuroticism scale compared to those who did not show anxious attachment. With a higher number of respondents connected in this way, the relationship could prove to be significant.

In hypothesis no.2, we assumed there was a positive statistically significant relationship between the neuroticism scale and the avoidant attachment type in the study sample. The relationship was not confirmed in the hypothesis, and this result, as well as its background, may be related to whether very strong neurotic tendencies will be found in the study sample with avoidant attachment. Even in this case, we did not record a statistically significant relationship between the variables. These hypotheses have a similar direction and result. We consider the biggest limitation and the reason for not proving a relationship to be the low number of respondents with an avoidant type of attachment in the study sample, which was only 6 out of 42 respondents. If there were a higher number of respondents with avoidant attachment in the study sample and we would compare them with an equally large group of individuals with a secure type of attachment, it would be more likely to assume greater significance between the scale of neuroticism and avoidant attachment (Shaver & Mikulincer, 2007).

In hypothesis no.3, we assumed there was a positive statistically significant relationship between the extraversion scale and the secure type of attachment in all respondents. Nofle & Shaver (2006) found that secure attachment is positively related to extraversion. Kokkinos, Kipritsi, & Markos (2016) found that students who had a secure attachment type showed higher scores on the extraversion scale compared to their peers with anxious or avoidant type of attachment. Gallo, Smith, & Ruiz (2003, as cited in Kokkinos, Kipritsi, & Markos, 2016) studied adults and the above findings were confirmed as well. The study by Mikulincer & Shaver (2007) found that individuals with a secure attachment have a real self and have a low level of anxiety and avoidance, making their self-esteem and self-confidence adequate and stable. It is typical for extroverts to be cheerful, social, and open, they like to seek the company of other people and like to get closer to them. They are communicative, active, optimistic, and do not like to get bored (Eysenck & Eysenck, 1993). We accept our hypothesis based on the research results. A secure relationship bond can eliminate the emergence of post-traumatic stress disorder and the emergence of anxiety disorders, eating disorders, and depression (Mikulincer & Shaver, 2012). Our research results are in line with the above research, and we can therefore say that secure attachment is positively correlated with extraversion. We agree with Huntsinger & Luecken (2004) that secure attachment is positively related to an active attitude to health (prevention) and has a protective effect on an individual's personality, while unfavourable types of attachment are more associated with health problems as well as risky behavior (alcoholism, narcotics) (Huntsinger & Luecken, 2004).

The resulting finding of our research is that a secure attachment, along with extraversion, is an important source of suppression of an individual's neurotic symptoms and emotional instability.

#### **4.2. Research summary**

- We observed a statistically significant difference in the attachment type between the study sample and the comparison group.
- We did not observe a statistically significant relationship between the neuroticism scale and the anxious/ambivalent type of attachment in the study sample.
- There was no positive statistically significant relationship between the neuroticism scale and the avoidant type of attachment in the study sample.

□ We found a positive statistically significant relationship between the extraversion scale and the secure type of attachment in all respondents.

□

#### **4.3. Research limits**

We consider the biggest limitation to be the low number of respondents with individual unfavourable attachment types in the study sample. For example, within the avoidant attachment in the study sample, we recorded only 6 out of 42 respondents, and from anxious/ambivalent attachment, there were 9 out of 42 respondents. With a higher number of respondents connected in this way, it would rather be possible to assume greater significance and generalisability of the results. Therefore, we perceive the results we have reached here rather as indicative and can serve as a stimulus for new similar research.

The limitation may also be that we had patients from only one psychiatric hospital. In the case of cooperation with others, we could obtain a higher number of respondents and thus get better results which would increase the research's value.

Our questionnaire battery is probably also limiting. Although we used relatively short questionnaires and an abbreviated version of one of them, the total number of questions was 117, which could be quite tiring and demotivating for psychiatric patients. The use of the questionnaire as a tool for obtaining data from respondents can also be considered a limit. The questionnaire is a fast form of data collection, but on the other hand, the results obtained may be inaccurate and skewed, as it is not a sufficiently objective method.

#### **5. Application of results for practice**

We consider the greatest benefit for practice to be the finding that a secure relationship was positively correlated with the extraversion scale and was most prevalent in the general population. An adult who is securely attached is a reasonably confident and balanced type of person. He can empathise with others, he has emotions under control, he is open, and he likes to share his feelings, joys, and worries with others (Hazan & Shaver, 1987, as cited in Mikulincer & Shaver, 2007). In the study by Mikulincer & Shaver (2007), we also know that individuals with a secure attachment have a real self-created, and therefore have a low level of anxiety and avoidance. As a result, their self-esteem and self-confidence are adequate and stable. They see themselves as capable and competent human beings (Mikulincer & Shaver, 2007). We know from theoretical knowledge that it is typical for extroverts to be cheerful, social, and open, to seek out the company of other people, and to get closer to them. They are communicative, active, optimistic, and do not like to get bored (Eysenck & Eysenck, 1993). Consequently, a secure attachment, along with extraversion, is an important source of suppression of neurotic symptoms and emotional instability in the individual. We consider this to be the biggest and most important finding of our research, which clearly shows that a favourable, i.e., secure attachment is the best and most appropriate form of care for a child that they can receive in the early days, which will then accompany them and form a basis for other relationships, be it personal, work, family, or simply any. Individuals connected in this way are generally happier and have a higher quality of life.

#### **References**

- Eysenck, H. J., & Eysenck, S. G. B. (1993). *Eysenckovy osobnostní dotazníky pro dospělé: Příručka*. Bratislava: Psychodiagnostika, s. r. o.
- Eysenck, M. W. (1992). *Anxiety: The cognitive perspective*. Lawrence Erlbaum Associates, Inc.
- Fraley, R. C., Waller, N. G., & Brennan, K. A. (2000). An item response theory analysis of self-report measures of adult attachment. *Psychological Assessment, 12*(2), 224–235. <https://psycnet.apa.org/doi/10.1037/0022-3514.78.2.350>



- Huntsinger, E. T., & Luecken, L. J. (2004). Attachment relationships and health behavior: The mediational role of self-esteem. *Psychology & Health, 19*(4), 515–526. <https://doi.org/10.1080/0887044042000196728>
- Kokkinos, C. M., Kipritsi, E., & Markos, A. (2016). Preadolescents' psychosocial functioning: The role of personality and attachment style. *Mental Health and Prevention, 4*(3–4), 105–114. <https://doi.org/10.1016/j.mhp.2016.11.001>
- Lečbych, M., & Pospíšilíková, K. (2012). Česká verze škály Experiences in Close Relationships (ECR): Pilotní studie posouzení vztahové vazby v dospělosti. *E-psychologie, 6*(3). Retrieved March 17, 2019, from <https://e-psycholog.eu/pdf/lecbych-pospisilikova.pdf>.
- Levy, K. N., Johnson, B. N., Clouthier, T. L., Scala, J. W., & Temes, C. M. (2015). An attachment theoretical framework for personality disorders. *Canadian Psychology / Psychologie canadienne, 56*(2), 197–207. <https://doi.org/10.1037/cap0000025>
- Mikulincer, M., & Shaver, P. R. (2007). *Attachment in adulthood: Structure, dynamics, and change*. London: The Guilford Press. ISBN: 1-59385-457-9.
- Mikulincer, M., & Shaver, P. R. (2012). An attachment perspective on psychopathology. *World Psychiatry: Official Journal of the World Psychiatric Association (WPA), 11*(1), 11–15. <https://doi.org/10.1016/j.wpsyc.2012.01.003>
- Nakonečný, M. (1997). *Psychologie osobnosti*. Praha: Academia. ISBN 80-200-0628-1.
- Noftle, E. E., & Shaver, P. R. (2006). Attachment dimensions and the big five personality traits: Associations and comparative ability to predict relationship quality. *Journal of Research in Personality, 40*(2), 179–208. <https://doi.org/10.1016/j.jrp.2004.11.003>
- Ruisel, I., & Halama, P. (2007). *NEO pětifaktorový osobnostný inventár* [NEO Five-Factor Personality Inventory]. Praha: Testcentrum – Hogrefe.
- Shaver, P. R. & Mikulincer, M. (2007). Attachment Theory and Research. Core Concepts, Basic Principles, Conceptual Bridges. In Kruglanski, A. W., & Higgins, E. T. (Eds.). *Social Psychology. Handbook of Basic Principles*, 650-677. New York: Guilford Press.
- Vágnerová, M. (1999). *Psychopatologie pro pomáhající profese, variabilita a patologie lidské psychiky* [Psychopathology for Helping Professions: Variability and Pathology of the Human Psyche]. Praha: Portál. ISBN 80-71782-149.