A new decade for social changes
The relationship between personality traits and optimism in pet owners

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Abstract. Interaction with pets influences the social interaction between people and helps to develop self-confidence and confidence in others, empathy and a positive mood. This study aims to identify correlations between personality traits and optimism in people who have pets. The objective pursued is the following: establishing the state of affairs regarding the existence of correlations between personality traits and the level of optimism of people who have pets.

Keywords. Empathy, social interaction, pets owners

1. Introduction

Interaction with pets influences the social interaction between people and helps to develop self-confidence and confidence in others, empathy and a positive mood.

Researchers at several universities in the United States (University of Berkeley in California, Texas University in Austin, Caroll University in Wisconsin) have conducted studies comparing the personality traits of lovers of dogs, cats and other pets, of which we mention horses, snakes, turtles, domestic birds.

The obtained results showed that cat lovers have personalities characterized by an increased desire for autonomy, less dominant natures and a low level of altruism. Dog-loving men had high scores on aggression and a dominant attitude, while dog-loving women proved to be dominant, but low on aggression. A study of 4,565 volunteers at the University of Texas at Austin found that people who say they are attached to dogs are more extroverted, more pleasant, more fun, and more conscientious than people attached to cats. Dog owners also tend to follow the rules closely.

A study conducted at Carroll University in Wisconsin found that dog lovers were not only more extroverted, but also more energetic. "It makes sense that a dog-loving person will be more alive, because he will want to be out there, talking to people, bringing his dog," said Denise Guastello, Carroll University professor of psychology. 47% of American households have at least one dog and about 37% of American households have at least one cat. The Texas
study found that while cat-loving people were more creative, adventurous, and open-minded than people with dogs, they were even more neurotic.

Researchers at Carroll University have found that “cat owners are smarter than introverted and sensitive dog owners. Cat owners also tended to be non-compliant, breaking the rules more often than dog owners.”

The personality traits of horse owners have been an interesting subject of study for American researchers. It was found that horse lovers are determined people, inclined to introspection, less open to teamwork, sometimes with problems of social adaptation. Regarding the manifestation in society; horse-loving men proved to be generally aggressive and dominant, while horse-loving women were found to be calm and understanding.

Americans raise about 5 million snakes and 2 million turtles as pets. According to studies, frog breeders are determined, hardworking, trustworthy people. Snake owners are nonconformist people, looking for something new and adventurous, reluctant to follow the rules.

Those who have domestic birds, as pets, are altruistic, sociable people with a high level of self-esteem.

Also, in addition to the connection with personality traits, in the last decade, it has become widely accepted that the possession of pets and the assistance of animals in therapy and education can have a multitude of positive effects on humans. In conclusion, we can say that all the studies listed have shown that there is a link between the personality of the individual and the pet he owns.

The results of 69 studies on human-animal interaction (HAI), conducted at the "National Biotechnology Information Center" in the United States, on samples of people of different ages, with or without special medical or mental conditions, have highlighted benefits for: social behavior, interpersonal interactions, attention, mood; some parameters related to stress (cortisol - steroid hormone with a role in increasing blood sugar levels, metabolism and mood; heart rate, blood pressure); relieving fear and anxiety; physical and mental health, especially for cardiovascular diseases.

There is limited, less conclusive, evidence for the positive effects of human-animal interaction on: reduction of epinephrine and norepinephrine (stress-related parameters responsible for increasing heart rate); improving the function of the immune system; pain management; self-confidence and confidence in others; reducing aggression; increased empathy and improved learning. Research has also shown that the human-animal interaction influences the level of oxytocin - a hormone stored in the neurohypophysis, responsible for reducing fears, increasing confidence, the emergence of maternal instinct.

The aspects described in the paragraphs above aroused our interest and determined us to initiate this research that aims to pursue the relationship between personality traits and optimism in people who have pets. Our study was conducted on a sample of 202 subjects, men and women, residing in Europe (Romania, Germany, United Kingdom, Norway)

**The study of personality traits**

Over time, people have struggled to understand personality. For this reason, many theories have been developed to explain how it develops and how it influences behavior. “It is the personality that gives life to the psychic mechanisms, orients and directs them, forces them to actively interact, to differentiate and stabilize, to reunite and empower in order to achieve their goals. It facilitates the selection of different means for putting the mechanisms into operation, it ensures their use in a certain way, different from one individual to another, finally,
it values differently (positive or negative), not only the selected mechanisms, but also the products obtained from their use " (Zlate M., 2009).

In Adler's view, the group is indispensable in the development and survival of the human being from the moment it is born. Adler's conception of human nature is optimistic (Ichiro Kishimi, 2020).

In contrast to Freud's theories, Adler considers that the ideals towards which the human being is heading are decisive for its evolution. The influence of the past is minimized. Social factors have a decisive influence on personality modeling. The most important of these being considered the family, the interaction between family members and the child's position in the family cell. (Ewen, R. B., 2012). Carl Jung believes that personalized types, which he also calls psychological types, are the result of a combination of ego attitudes and psychic functions. The attitudes of the ego have two forms of manifestation: introversion and extroversion. Psychic functions are classified by Jung into rational functions (thinking and affectivity) and irrational functions (perception and intuition). The eight resulting psychological types are: extrovert - thinker, extravert - affective, extravert - perceptive, extravert - intuitive, introvert - thinker, introvert - affective, introvert - perceptual and introvert - intuitive (Ewen, R. B., 2012). The theories listed above try to explain the development and performance of the personality, without identifying the features whose interaction defines the general personality.

Gordon Allport is making a difference. He divides the system of personality traits into microscopic, singular, and identifiable behavioral characteristics.

Allport was a pioneer in human personality research. At a time when behaviorism dominated US psychology departments and psychoanalytic approaches dominated elsewhere, Allport advocated an empirical methodology that considered the influences of current context and conscious motivations, without rejecting the possible contribution of unconscious memories, and behavior. His views on traits value both behavior and early experience and social experience.

However, Allport believes that none of these explanations are sufficient to fully explain the uniqueness and complexity of the personality. Depending on their importance and intensity in personality structure, Allport divides personality traits into several categories: cardinal traits, central traits, and secondary traits. The cardinal features bring together the dominant features, specific to a person's character. Central features are found in most people, but to varying degrees. Secondary traits are those that manifest only in certain contexts.

This theory is the basis for understanding and analyzing the Five-Factor Personality Inventory (FFPI), Gordon Allport started his research from the ideas of Sir Francis Galton, who believed that in human language we would find everything important in the human world, including personality traits. Allport studied dictionaries and divided vocabulary into a list of personality traits. He chose over 4,000 words that could characterize personality traits.

Later, psychologist Raymond Cattell shortened Allport's list and created a taxonomy of 16 different personality traits that could be used to describe and explain the individual differences between people's personalities. Cattell's personality factors are included in the Sixteen Personality Factors Questionnaire (16PF), which is widely used today for career counseling in education.

In business, it is used in the selection of staff, especially for the choice of managers. It is also used in clinical diagnosis and therapy planning by assessing anxiety, adjustment, and behavioral problems. Born in 1905, Cattell witnessed the emergence of many twentieth-century inventions, such as electricity, telephones, cars, and airplanes. He was inspired by these innovations and was eager to apply the scientific methods used to make such discoveries in the
human mind and personality. Personality, he believed, was not just a mystery unknown and untested. It was something that could be studied and organized.

Through scientific study, human characteristics and behaviors could be predicted based on the underlying personality traits. Cattell worked with psychologist Charles Spearman, known for his pioneering work in statistics. Cattell will later use the factor analysis techniques developed by Spearman to create his own personality taxonomy.

The following list of personality traits describes some of the descriptive terms used for each of the 16 personality dimensions described by Cattell: abstraction - imaginative versus practical; presence - worried versus confident; dominance - dominant versus submissive; emotional stability - calm versus panic; vivacity - spontaneous versus inhibited; openness to change - flexible versus familiar attachment; perfectionism - controlled versus undisciplined; private - discreet versus open; reasoning: abstract versus concrete; awareness of the rule - compliant versus non-compliant; self-confidence - self-sufficient versus dependent; sensitivity - tender versus harsh; social audacity - uninhibited versus shy; tension - overexcited versus relaxed; vigilance - suspicious versus confident; heat - open person versus reserved person. Cattell developed an assessment based on these 16 personality factors.

The test is known as the 16PF Personality Questionnaire and is still commonly used today, especially in career counseling, marital and business counseling for employee testing and selection. The test consists of forced choice questions in which the respondent must choose one of three different alternatives. Personality traits are then represented by an interval and the individual's score falls somewhere on the continuum between the highest and lowest extremes. Scores can be interpreted using a number of different systems, depending on why the test is used. Some interpretive reports take a clinical approach to personality, while others are more focused on topics such as career selection, teamwork development, and leadership potential.

Psychologist W. T. Norman was the first to divide Cattell's 16 factors into five representative personality traits: communication, culture, agreeableness, conscientiousness, emotional stability. Psychologist Lewis Goldberg researched and developed this classification, obtaining the Big Five model consisting of: communication, agreeableness, conscientiousness, emotional stability and intellect. At the same time, each of these features is made up of more specific features. Scientists have developed various personality tests based on this model. Communication or openness ("O" openness) refers to a person's ability to seek new experiences, assimilate them and visualize the creative future. Extremely open people are imaginative and appreciate art. They cooperate well with other people. They are also curious and prefer variety to routine. Those with a low score in this category are people closed to new experiences. He prefers safety and conventionalism. They find it difficult to adapt to new things, which is why they prefer a rigid schedule. They tend towards technical activities. Conscientiousness or the "C" factor refers to the ability to self-control and the ability to act effectively. It is related to planning, organizing and executing skills. Conscientiousness is also linked to perseverance, the ability to pursue goals and punctuality.

People who get a high score on this factor are often organized. Others see them as trustworthy and meticulous. In the end, people with this trait are perfectionists and can be hardworking. They have a great need for success. Extroversion, another personality trait, is the ability to relate to others and enjoy their company. Extroverts like to have company and feel comfortable in a group setting. They work well in teams and are optimistic and enthusiastic. When I'm with other people, I'm like a fish in water. At the other end, we have introverts, who work better on their own. Introverts generally feel a certain distrust or caution towards other people. They prefer small circles of friends and do not feel comfortable in large groups.
A person's capacity for empathy is also called the "A" factor (agreeableness). Those who get a high score in this factor are understanding and tolerant of other people. They are very good at understanding the needs and feelings of others. Those at the opposite end of the spectrum are difficult and combative. He enjoys debates and arguments and tries to impose the opinions of others. Hostility is their trademark. This type of people are very good at competitive activities and get energy from being in front of people. Neuroticism or emotional instability addresses the ability or inability to cope with difficult situations in life. People who get a high score on this factor tend to behave unpredictably. They do not behave constantly and their reactions vary greatly, although it is not clear why. On the other hand, we have stable, prudent and moderate people. It behaves this way even in times of crisis.

People like this are calm and confident in their ability to cope with hardships and mistakes. In general, they are positive and remain positive, regardless of weights. According to this model, the result of the personality test is a score in each category that places the subject in a high, medium or low level for each trait. It is sometimes used in the job selection process. Educators use it with students to help them figure out a profession that suits their personalities. It is also used in certain clinical situations

3. Optimism versus pessimism

People are categorized as optimistic or pessimistic depending on their attitude towards the life situations they encounter every day. But what does it mean to be optimistic and what does it mean to be pessimistic? For an answer from the literature, I turned to the Dictionary of Clinical Psychology. According to him, optimism means hope, "the attitude according to which good things will happen, and people's desires or goals will eventually be fulfilled." (VandenBos, G., 2020). Optimists are people who predict positive results for the actions they take. To achieve their goals, they rely on effort, perseverance and chance. Most of us are between maximum optimistic and maximum pessimistic, with clear trends in one direction, depending on the situation (factors involved, known information). Pessimism, according to the same dictionary, is "the attitude that things will go wrong and people's desires or goals are unlikely to be fulfilled." (Vanden Bos, G., 2020). Pessimistic people lack confidence in achieving the goals they set for themselves and have the feeling that unpleasant things are going to happen, either to them or to acquaintances.

According to Seligman's theories, the author of "Optimism is Learned", the defining characteristic of pessimists is that they tend to believe that unpleasant events will last a long time, will destroy everything they do and only they are guilty of their appearance. Optimists facing the same difficulties think of their troubles from a completely different perspective. They consider that the failure is only a temporary obstacle, and its reason is strictly limited to that situation.

Optimists believe that failure is not their fault: the situation, bad luck or something else is the cause of the failure. These people are hard to beat. When she is in an unfavorable situation, they see it as a challenge and do their best to overcome it. Hundreds of studies have shown that pessimists are more likely to give up and often feel frustrated. Experiments also show that optimists perform better in schools, universities, jobs and on the sports field. They usually exceed the predictions of aptitude tests. When applying for a job, the optimist is chosen by the employer, to the detriment of the pessimist. The health of optimists is exceptionally good. In old age, age-specific pain is much lower.

There is evidence that optimists live longer than pessimists. The root of pessimism is another phenomenon, the feeling of helplessness. "Helplessness means the state of affairs in which nothing you choose to do affects what is happening. The pessimistic or optimistic style
of thinking can actually increase or decrease the control we have over life. Thinking habits do not have to be eternal. " (Seligman, M., 2004). One of the most important discoveries of psychiatry is that individuals can choose their way of thinking. This can affect personal achievement and health. Jobs and school operate under the traditional premise that success is the result of a combination of talent and desire. Failure occurs due to the lack of one of the two factors. However, failure can be determined by a lack of optimism, even in the presence of talent and desire. Optimism and pessimism have almost as obvious effects on health as other physical factors. Most people believe that physical health depends entirely on genetic inheritance, healthy habits and the most effective way to avoid contact with viruses, bacteria, microbes.

They believe that heredity can be improved through healthy eating habits, exercise and regular medical examinations. This traditional view ignores a very important factor for our health - our own cognitions. We can have more personal control over our health than we suspect. The way we think (especially the way we think about health) affects our health. Compared to pessimists, optimists have fewer infectious diseases, better care habits and stronger immune systems. There is evidence that optimists live longer than pessimists. Optimism is not a panacea, but it can protect us from depression, increase success, increase physical health, and be more pleasurable than pessimism.

2. Research objectives and hypotheses
This study aims to identify correlations between personality traits and optimism in people who have pets. The objective pursued is the following: establishing the state of affairs regarding the existence of correlations between personality traits and the level of optimism of people who have pets.

Hypotheses:
1. It is assumed that there is a positive correlation between extraversion and optimism in people who have pets.
2. It is assumed that there is a correlation between emotional stability and optimism in people who have pets.

3. Presentation of the sample and the tools
Sample description
The sample used in this study consists of 202 persons, of which 95% are women and 5% are men. The participating age categories were represented as a percentage: 51% of the subjects were between 36 and 50 years old, 19.8% were between 26 and 35 years old, 14.9% were between 18 and 25 years old and 14.4% are between 51 and 65 years old. According to data collected through Google Forms, 60.4% of participants are married, 28.2% are unmarried, 10.4% are divorced and the difference up to 100% are widows. According to another criterion, we found that 56.9% of the subjects are with children and 43.1% of the subjects are without children. Of those surveyed, 92.6% have pets and only 7.4% do not have pets. Depending on the number of pets they have, the subjects were grouped as follows: 51% have a single pet, 22.3% have 3 or more pets, 19.3% have two pets and 7% do not have pets. The participants are either relatives and friends of the experimenters, or members of groups on social networks.

In order to ensure the ethical aspects of the research, the subjects agreed to participate in this study, by writing “yes” to the first question in the applied questionnaire. The research
was conducted online. The personal data of the participants were secured by encrypting their identity. Below we have the graphical representation of the sample from the point of view of the variables gender, age, domicile, pets and their type.

4. Description of the instruments
The study used the Five - Factor Personality Inventory Questionnaire (FFPI) and the

Optimism Assessment Questionnaire (OPT).

Five - Factor Personality Inventory (FFPI)
This questionnaire is based on the Big Five model and evaluates five factors: Extraversion (E), Kindness (A), Conscientiousness (C), Emotional Stability (S), Autonomy (D). The calibration of the questionnaire was done for a non-clinical population, consisting of people aged between 14 and 65 years. In the present study, participants were between 18 and 65 years old. The questionnaire was administered online, individually, without time limit.

Optimism evaluation questionnaire (OPT)
The design of this research is the OPT questionnaire that was developed after the model of the ASQ (Attributional Style Questionnaire), built by Seligman (2004). The purpose of this questionnaire is to evaluate the explanatory style, optimism vs pessimism. It has proven to be a useful tool in the field of education, clinical and health psychology, as well as in the diagnosis of personality. The calibration of the questionnaire was done for a non-clinical population, consisting of people aged between 15 and 40 years. In the present study, participants were between 18 and 65 years old. The questionnaire was administered online, individually, without time limit.

5. Interpretation of the obtained results
Before presenting the results obtained in the FFPI questionnaire, we consider it appropriate to present a brief definition of the two personality dimensions that were measured as described in the questionnaire.

Extraversion: Special psychological inclination towards things outside one's own person, orientation of attention towards the physical and social environment (objects and people in the environment). Intense desire to act on the environment, orientation to action, ease of communication, sociability, the need for continuous experimentation.

Interpretation of high scores. He feels good in society. Participate actively in fun. She likes to talk. Easily make contacts with others.

Interpretation of low scores. He isolates himself from others. He is silent.

Emotional stability: The ability to maintain emotional balance even in stressful situations without presenting extreme manifestations and inconsistent with the situation.

Interpreting high scores: Think positive. He is optimistic. He controls his emotions. He has confidence in his own strength.

Interpretation of low scores: Worries about anything. He is always anxious. In stressful situations it gets lost.

The testing of the research hypotheses was done by correlating the data in SPSS. According to the table of normality of the distribution of scores (Kolmogorov-Smirnov*) in the correlation of personality traits we have a normal distribution in the case of emotional stability, the rest being non-normal distributions.
The table aggregates information on the descriptive data accumulated by the tested sample:
- the average of extraversion 68, 77;
- average kindness 80.71;
- average conscientiousness is 76.89; the average emotional stability is 67.67;
- autonomy 76.50;
- optimism plus average is 12.28;
- optimism minus 13.05.

The objective being to establish the state of affairs regarding the existence of correlations between personality traits and the level of optimism of people who have pets, we started to correlate personality traits with optimism according to the stated hypotheses.

**Hypothesis 1** - It is assumed that there is a correlation between extraversion and optimism in people who have pets.

Qualitative and quantitative interpretation.

**Tabel 1**– Calculating the normality of the distribution of scores - extraversion / optimism

<table>
<thead>
<tr>
<th>Tests of Normality</th>
<th>Kolmogorov–Smirnova</th>
<th>Shapiro–Wilk</th>
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<tr>
<td></td>
<td>Statistic</td>
<td>df</td>
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<td>201</td>
</tr>
<tr>
<td>opt_plus</td>
<td>.070</td>
<td>201</td>
</tr>
</tbody>
</table>

Following the application of the Kolmogorov-Smirnova normality test, a non-normal distribution for extraversion and optimism plus results, in which context we will apply a non-parametric Spearman test to test this correlation hypothesis.

**Fig. 1**– Distribution of extraversion scores

**Fig. 2**– Distribution of optimistic plus scores
The hypothesis is confirmed: The correlation between extraversion and optimism in people who have pets is statistically significant.

Based on the results of previous research, optimism was presumed to be positively related to extraversion, which also results from the correlation of the present study.

The hypothesis is correlational, unilateral. Significance threshold Sig. (2-tailed) is <.001 so the value of the correlation coefficient $r = .467$ is statistically significant and is a positive association.

The conclusion is that the significance threshold indicates a statistically positive association between the extraversion dimension and the optimism of pet owners.

**Hypothesis 2** - It is assumed that there is a correlation between emotional stability and optimism in people who have pets.

Applying the Kolmogorov-Smirnov normality test results in an emotional stability score of .200 * higher than 0.05 and means that we have a normal distribution and for optimism plus we have a score of 0.017 which is less than 0.05 non-normal distribution, context in which to test this correlation hypothesis we will proceed to apply the nonparametric Spearman test.
The hypothesis is confirmed: The correlation between emotional stability and optimism in people who have pets is statistically significant.

Based on the results of previous research, optimism was presumed to be positively related to emotional stability, which also results from the correlation of the present study. The hypothesis is correlational, unilateral. Significance threshold Sig. (2-tailed) is <.001 so the value of the correlation coefficient \( r = .567 \) is statistically significant and is a positive association.

The significance threshold indicates a statistically positive association between the emotional stability dimension and the optimism of pet owners.

6. Conclusions
The present study tried to identify correlations between personality traits and optimism in people who have pets.

We conclude that the two hypotheses with which we started this research were confirmed, resulting in a significant correlation. With the help of this study, we met the goal we set, to establish the existence of correlations between personality traits and the level of optimism of people who have pets.

The fixed and confirmed hypotheses are the following: hypothesis 1, according to which there is a positive correlation between extroversion and optimism, in people who have pets; hypothesis 2, according to which there is a correlation between emotional stability and optimism, in those who have pets. The results of the study "Attitudes and behaviors of Romanians in urban areas regarding pets", conducted by the Romanian Association of Pet Food Producers (ARPAC) in August 2020, show that the lockdown period caused by the COVID-19 pandemic has influenced the purchase or adoption of a pet. The main factor that determined the purchase of a pet is the emotional one. The feelings of closeness that influence the purchase are also reflected in the placement of the animal in the context of the family and other acquaintances, the pet becomes a member of the family.

Studying the correlation between personality and optimism of pets, we wanted to see more details on how personality traits affect different aspects of human life and on the optimism of people.

The ideas of happiness / personality, especially introversion / extroversion, were at the center of many researches to which we also referred at the beginning of the current paper. Popular culture in particular appreciated optimism and attached a stigma to depression and lack of optimism. Pets can positively influence the well-being, raise the level of optimism and could influence various aspects of personality.

People who have pets are forced to move more, to walk them. Thus, they meet other people who have pets, become more casual in conversations, a small social circle is formed and we are talking here especially about those who have dogs. According to Carroll University professor of psychology Denise Guastello, people who own cats are more introverted than those who have dogs, as mentioned at the beginning of the paper.

As the relationship between emotional stability and optimism has been confirmed, we find psychological research studies involving pets and often examine how they affect happiness and / or well-being on different participants such as ordinary people, psychiatric patients and the elderly. Often, the results of these studies show that pets have a positive impact on health and well-being (Serpell, 1991; McConnell, Brown, Shoda, Stayton, & Martin, 2011).

A key study on happiness, pets was conducted by McConnell and others. The paper established that all pet owners, especially dog owners, scored higher on emotional stability and
well-being. Not everyone is prepared enough to take on more responsibility than the current ones. Because adopting a pet in the family involves a whole lot of responsibilities.

The presence of pets has proven beneficial in many situations. Many people have benefited from improved mental health treatment outcomes due to animal-assisted therapy. Children who have pleasant experiences with animals will develop positive and empathetic behaviors. We believe that this field of study of psychology deserves a thorough exploration to highlight the positive influence of pets on people's personality and optimism.

A future study idea that we found interesting would be to assess the optimism of the subjects before having pets and after they have assumed this role.

References