**CORRELATION BETWEEN SICKNESS ABSENTEEISM AND TEMPERAMENT OF EMPLOYEES IN THE PUBLIC ADMINISTRATION**

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ABSTRACT

The causes that lead to sickness absenteeism are numerous. Among the groups of the causes there is a set of factors tied to the individual or his/her personality traits. The article focuses on the aspect of the correlation between sickness absenteeism and temperament and presents the results of the research carried out in the public administration in Slovenia. The results of the research (February 2015) show that on average the employees who were temporarily absent from work for the fewest days were those with dominant temperament choleric (8.6 days) or phlegmatic (8.7 days), who also account for the largest number of employees in the public administration; those with a sanguine temperament were temporarily absent for slightly more days (10.8 days), while melancholics were absent for the largest number of days (15.8 days). On the basis of the results of the research, we find that in the total number of days of sickness absence we are unable to confirm statistically significant differences between individual employees with regard to their temperament. We can, however, confirm a statistically significant correlation in the overall average number of frequencies of sickness absenteeism among employees with regard to their temperament.

Keywords: sickness absenteeism, personality traits, temperament, public administration.

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**1 INTRODUCTION**

Employees who enter the working environment do so with different temperaments, expectations, needs, knowledge, abilities. Employees also react differently to events or conditions in the working environment: some adapt to factors of influence and accept them, while others are able to face difficulties. The consequences of the latter can be often also reflected in sickness absenteeism, in other words the temporary absence of employees from work because of sickness or injury or because they are caring for family members. While the causes of sickness absenteeism may vary – they are nevertheless related to each other. Although studies[[1]](#footnote-1) show that factors within the working environment (e.g. relationships with management and co-workers, physical working conditions, etc.) have the clearest effects on the phenomenon of sickness absenteeism, it should be emphasised that research into sickness absenteeism also focuses on factors that relate to the individual as a person and, deriving from this, the correlation between his or her personality traits and sickness absenteeism.

In the article we focus on a study of the causes (factors) that are linked to the individual or employee. We are interested in the issue whether personality traits[[2]](#footnote-2) that are reflected through the temperament of employees have an effect on the sickness absenteeism of employees in the public administration. This focus on the study of the correlation between sickness absenteeism in the public administration and the temperament of employees in the public administration is important above all because (1) it is possible to establish, on the basis of statistical data from the National Institute of Public Health (NIJZ) that the percentage of sickness absenteeism in the public administration is noticeably higher than the percentage for Slovenia as a whole,[[3]](#footnote-3) and (2) because we have not come across any research in the context of Slovenia covering the aspect of the correlation between sickness absenteeism and the temperament of employees in the public administration.

On the basis of NIJZ figures (2015) we have been able to establish that the percentage of sickness absenteeism in the public administration varied between 2009, the first year of the comparison, and 2013. In 2009, for example, 4.2% of calendar days were lost to sickness absence in the public administration, in 2012 the figure was 8.5%, and in 2013 the figure fell again by 1.7 percentage points in comparison to 2012. Expressed in terms of the number of calendar days, this means that in 2009 825,786 calendar days[[4]](#footnote-4) were lost in the public administration as a result of sickness absenteeism. The highest number of calendar days lost to sickness absence in the public administration was recorded in 2012, when the total amounted to 1,580,814 calendar days. These figures confirm a large number of calendar days in public administration – although this is no surprise, since in other countries around the world the share of sickness absenteeism is also larger in the public sector (the public administration) than in the private sector The basic purpose of the article is to show the correlation between sickness absenteeism and the temperament of employees in the public administration and, on the basis of theoretical findings and research results, show why it makes sense to take employee temperament into account in the context of sickness absenteeism. The article has the following aims: (1) to present the results of the study carried out in February 2015 on the correlation between sickness absenteeism and temperament in employees in the public administration in Slovenia and (2) to present the results of the correlation between the frequency of sickness absence of employees (how often/number of periods of absence) and the temperament of employees in Slovenia's public administration.

The article is structured as follows: it begins by introducing the concept of sickness absenteeism and temperament. It then presents the results of the study – i.e. results regarding the correlation between sickness absenteeism and temperament in employees in the public administration in Slovenia. The results presented cover both the number of days of sickness absence and the frequency (number of periods) of temporary absence of employees from work. The final part of the article consists of a discussion of the content of the results of the study.

**2 SICKNESS ABSENTEEISM**

The study of sickness absenteeism is multi-dimensional and research of the phenomenon involves experts from a variety of fields. A consequence of this is the existence of different definitions of sickness absenteeism. A review of the relevant literature reveals that numerous synonyms are used for the concept of sickness absenteeism. Vučković (2010, p. 10) explains that synonyms that appear for the concept of sickness absenteeism include temporary absence from work for medical reasons, sick leave, paid sick days, etc. We also come across the concept of absenteeism. Cascio (2003, p. 45) sees absenteeism as any failure of an employee to report for or to remain at work as scheduled, regardless of the reason. Lokke, Eskildsen and Jensen (2007, p. 15) explain absenteeism as an individual's lack of physical presence at a given location and time when there is a social expectation for him or her to be there. In the opinion of Toth (1999, p. 20), the concept of sickness absenteeism means the lost working days or the time in which an employee is temporarily unable to work because of sickness or injury. In this article, we understand sickness absenteeism as the phenomenon of the temporary absence of employees from work either because they themselves are sick or injured or because they are caring for family members.

The circumstances that arise when sickness absenteeism occurs are reflected above all through the negative[[5]](#footnote-5) aspect for the organisation (including the working collective of the employee who is temporarily absent), the country and also the temporarily absent employee. And in view of the fact that this phenomenon affects numerous actors, it is also evident from the history of the study of sickness absenteeism that (1) an increasing amount of attention and also financial resources are being dedicated to the issue, and (2) studies of the phenomenon are broadly or multi-dimensionally designed, since they focus on detecting the various causes of sickness absenteeism. It is in fact important to understand that the reasons for sickness absenteeism are manifold and, as is demonstrated by research,[[6]](#footnote-6) that the causes of the absence of employees from work are also mutually connected. For this reason it is sometimes difficult to identify the "true" causes, since sickness absenteeism always formally appears as absence on health grounds. It has been established by research[[7]](#footnote-7) carried out to date that it does not make sense to explain sickness absenteeism as a phenomenon that arises as the result of an "isolated" cause (the theory of the influence of an individual factor on the absence of employees from work), but instead that sickness absenteeism should be interpreted as a multi-dimensional construct. It is therefore difficult to separate the causes of the absence of employees from work and establish their isolated[[8]](#footnote-8) influence. Within the literature, the causes of sickness absenteeism are classified into three groups of causes or factors leading to sickness absenteeism. These are (1) factors of the external environment, (2) factors of the organisational environment and (3) factors linked to the individual.

Some authors[[9]](#footnote-9) suggest that the scale of sickness absenteeism is influenced above all by factors from the organisational environment. Even so, in this article we are interested in factors that are connected to the personality traits of employees or to their temperament, since we believe that the temperament of every individual can also be the factor of influence that indicates how an employee will act in the working environment and could potentially also affect an employee's rate of absence from or presence in the workplace.

**3 TEMPERAMENT**

Temperament represents the particular behavioural characteristics of an individual by which he or she is recognised from birth and in different life situations. Thus temperament is a matter of the behavioural style of an individual, or the way he/she responds in different situations (Bates in: Matthews, Deary & Whiteman, 2009, p. 70). The first typologies of temperament were defined by Hippocrates, who proceeded from the idea that temperament is the consequence of the relationship between the four basic elements and the corresponding bodily fluids or "humours", which are mixed together in every human being and create the temperament. The more they are balanced, the more balanced and healthy the individual's behaviour, while the more one humour predominates over the others, the more specific traits will be apparent in the individual's behaviour. Where a single humour is dominant, this is negative and indicates sickness (taken from Musek, 1993, pp. 116–117). The types of temperament defined by Hippocrates have been used in various aspects of research, eventually leading to the formulation of typologies.[[10]](#footnote-10) Among the typologies the more commonly used are those of Eysenck and Pavlov. Eysenck classified types of temperament in two dimensions: introversion–extraversion and emotional stability–emotional lability (neuroticism). Pavlov, on the other hand, explained temperament types by characteristics of the nervous system (see Ruch, 1992, pp. 1260–1263).

An individual temperament type is identified by the following characteristics (Littauer & Littauer, 1999, pp. 59–98; Ekstrand, 2014, pp. 1–7; Eysenck & Pavlov, in: Ruch, 1992):

* **choleric**:powerful cholerics do not need many friends. Actually they have very few of them. Their primary desire is to be in command of the situation and they are born to be "bosses". To have control over everyone, they need people who voluntarily submit to their leadership. They are very self-assured and also stubborn, and they have very few fears. Their strength is also in their decisiveness and in being highly organised (they organise everything in their heads). They love new challenges and cannot bear to be idle – simple things seem boring to them. They display strong self-confidence and can take the lead in any job. However, the degree of self-confidence is directly connected to the control they have over the situation. If they are not the protagonists, their self-confidence wanes rapidly. When "powerful" cholerics are too infatuated with their own abilities, their self-assurance becomes excessive and harms them. Excessively self-assured cholerics risk drowning in their own weaknesses, precisely because they are usually right. When they are not right, they are rarely to blame for this; and they do not like anyone drawing attention to the mistakes. The great weakness of cholerics is that they are arrogant and highly strung, and usually maintain control by manipulating people. They are capable of doing someone a favour, but only in order to win their favour. They can even go so far as to secretly gather information on an individual in a way that might look like blackmail. And in order to maintain their position, they need people who are subordinate to them, or those who are afraid of taking responsibility. They usurp authority, are unable to relax and are unemotional (Ekstrand, 2014, pp. 1–7; Littauer & Littauer, 1999, pp. 59–98).
* **sanguine**:the primary desire of those of sanguine temperament is to enjoy themselves and they like to be the centre of fun. They are highly extroverted and love people. They are quick to make friends and are very charming. They are gifted with the ability to talk about even the simplest incident in an entertaining way. They would like to ignore work completely, because work is only rarely fun. But since they have to work, they do best in jobs that allow them flexibility and contact with people. Flexibility is important, because they usually follow their emotions rather than sober judgement (taken from Littauer & Littauer, 1999, pp. 59-98). It is important to sanguines that they have friends and that others like them. For this reason they sometimes do several things simultaneously. This reveals one of their weaknesses: the fact that they do not know how to say "no" and sometimes find themselves drowning in a mass of projects that they are afraid they will never manage to finish. Their other weaknesses include looking for excuses, talking too much, being easily distracted, having no sense of time and not having clearly defined goals (Ekstrand, 2014, pp. 1–7).
* **phlegmatic**:characterised by remarkable composure, which can be an advantage or disadvantage (Eysenck & Pavlov, in: Ruch, 1992). In the workplace peaceful phlegmatics remain loyal and persistent in the midst of chaos and crisis. This means that we can rely on them to do their work despite the commotion. They are very balanced and friendly and very reliable. They hide their "iron" will and agree with everyone in order to avoid conflict, while in reality they are telling themselves that they have no intention of ever doing that. They have very few enemies and frequently find themselves in positions of power and authority, because they are consistent and reliable. Their important strengths include calm, perseverance, consistency, the ability to listen and the ability to delegate. Weaknesses include procrastination, lack of enthusiasm, unconcern, not getting involved in anything, lack of initiative, dislike of change and resistance to being moved. Although peaceful phlegmatics are very good at calming a situation down, they are sometimes too calm (Littauer & Littauer, 1999, pp. 59–98).
* **melancholic**: the primary desire of melancholics is to do things perfectly. Their goal is an orderly life. Although perfection is unattainable, perfect melancholics aspire to it. They like to work alone – this does not mean that they are loners, but they value a private workspace without noise or interruptions. They need a lot of time to prepare a project, and also to do it again if it turns out that it isn't perfect. They do not work well under pressure. They particularly enjoy analytical work and have a natural ability to see where the problem is and devise complex solutions, while sticking strictly to the rules. Their other strengths include honesty, precision and being organised. They also love beauty. Their weaknesses include in particular the fact that they are difficult to satisfy and the fact that they can quickly fall into depression as a result of pressure of work. They are extremely thrifty, excessively perfectionist and naïvely idealistic (Ekstrand, 2014, pp. 1–7; Littauer & Littauer, 1999, pp. 59–98).

The characteristics of all four temperaments clearly represent certain personality traits that are characteristic of people and on the basis of which people differ from each other. The question that raises itself in the context of our article is whether the temperament of employees and the public administration is linked to the sickness absenteeism of employees. In this context it is also important to understand that every individual is recognised in the environment by their unique personality or characteristic behaviour, which derives from their own temperament. This means that every human being is unique and unrepeatable, and therefore that people differ from each other. They differ on the basis of "personality", which causes or influences the specific behaviour that is characteristic of every individual in our society and by which others recognise us. Maddi (1976, p. 15) sees personality as a stable set of tendencies and characteristics determining those commonalities and differences in people's psychological behaviour (thoughts, feelings and actions) that have continuity in time and that may not be easily understood as the sole result of the social and biological pressures of the moment.

**4 STUDY OF THE CORRELATION BETWEEN SICKNESS ABSENTEEISM AND THE TEMPERAMENT OF EMPLOYEES IN THE PUBLIC ADMINISTRATION**

In the context of our study of the correlation between sickness absenteeism and employee temperament, we focused on four types of employee temperament and carried out a research within the Slovenian public administration in February 2015.

**4.1 RESEARCH METHODS**

In order to answer the research questions, to achieve the goals set and research the defined problem in more detail, we used a quantitative method of research, with the help of which we hoped to obtain reliable, objective, verifiable and accurate findings. Since the subject of the research was a complex one, we tackled it from a point of view that assumed the existence of a correlation between sickness absenteeism and the temperament of employees and the public administration.

For the empirical part of the research, we designed our own questionnaire, which consisted of the following categories:

* the first set of questions: includes six short questions, some open and some closed, relating to the sociodemographic characteristics of the respondents such as the organisation of employment, area of work, sex, year of birth (age), educational qualifications and length of service in the organisation where they currently work;
* the second set of questions: covers employees' temporary absence from work; these are seven short questions, some open and some closed, which establish whether the employee has been temporarily absent from work in the last 12 months, the reasons for it and the frequency of temporary absence from work in the last 12 months expressed in the number of days and the number of periods of absence ("how often");
* the third set of questions: includes 18 pairs of personality traits,[[11]](#footnote-11) where each pair consists of two opposite poles of personality traits. Respondents first indicated on a scale of one to five how well an individual pole describes their personality, and then did the same for their manager's personality. The pairs of personality traits were given randomly.

The collection of data took place with the help of an online questionnaire created using 1KA, a one-click survey tool.In the study we proceeded from the assumption[[12]](#footnote-12) that every individual has one dominant temperament and one secondary temperament or sub-temperament. Taking this as our starting point, in our analysis of the study we therefore determined both temperaments on the basis of the self-assessment of the respondents, where on a scale of one to five they expressed to what extent an individual personality traits describes them. Personality traits were defined in pairs of opposite poles, where each pole can only belong to one of the temperament categories. An individual temperament category is defined by personality traits, which also defines the individual temperament type and through which it is also possible to identify the temperament of every individual. Table 1 shows the personality traits that have been used in the study and with the help of which we have defined the individual temperament category.

**Table 2: Description of temperament category**

|  |  |
| --- | --- |
| **Temperament** | **Description of characteristics of temperaments** |
| sanguine | unreliability, carelessness, indecisiveness, disorganisation, openness, vivacity, loquacity, curiosity, joyfulness, sociability |
| choleric | restlessness, impatience, incivility (in the sense of arrogance), impulsiveness, openness, carefulness, heroism, curiosity, decisiveness, organisation, excitability, proactiveness |
| phlegmatic | passivity, incuriousness, (in)decisiveness, apathy, procrastination, reliability, carefulness, peacefulness, patience, politeness, composure, sobriety |
| melancholic | despondency, fear, taciturnity, pensiveness, sadness, reticence, organisation, sobriety |

Source: own data

In our understanding of personality traits, we must also be aware of the fact that individual personality traits can define more than one temperament (for example: openness is a characteristic of both sanguine and choleric individuals). On this basis, the determination of the dominant temperament and the sub-temperament is dealt with in this article from two points of view: one basic and one supporting. Seen from the basic point of view, the dominant temperament is the one whose personality traits on average best describe the individual; the sub-temperament, on the other hand, is defined as the temperament that best describes the individual immediately after the dominant temperament. In cases where it is not possible to determine either the dominant temperament or the sub-temperament, we introduce the supporting point of view, which defines the dominant temperament by stating that the personality traits that apply exclusively to this temperament on average best describe the individual. The supporting point of view serves to complement the basic point of view, since it only deals with personality traits that exclusively describe one individual aspect, and at the same time clarifies the dominant personality traits in comparative terms between just two temperaments.

**4.2 TARGET GROUP (SAMPLE) OF THE STUDY**

The study group includes employees in the public administration, meaning all those organisations that are part of the process of making decisions on public matters or that participate in the management of public matters. The public administration thus includes national government bodies, local administrative bodies and other bodies exercising public powers.[[13]](#footnote-13) During the process of obtaining data for our research, we obtained answers/data from 3,220 respondents.This means that our sample included 3,220 employees in the public administration, representing 8.1% of the total population of employees[[14]](#footnote-14) in the public administration. Since the main criterion of stratified sampling or the selection of units for the sample was the organisation of employment, the structure of the research sample was similar to the population structure of employees in the public administration. The research sample thus consisted of 69.7% of employees in national government bodies, 11.1% of employees in local administrative bodies and 19% of employees in other bodies exercising public powers.

The biggest share in the structure of the sample in our study consists of officials[[15]](#footnote-15) (58.9%), who are most strongly represented in national government bodies (60.5%). The next most frequently represented area of work is that of technical staff (26.7%), who account for the largest share in local government bodies (33.2%) and the lowest share in national government bodies (24.7%). Slightly under a tenth (9.1%) of respondents are officials in the position of head of an organisational unit with up to 30 direct subordinates. The other fields of work in the overall structure of the sample account for shares smaller than 2%.

Analysis of the research sample by sex shows that more than three quarters of respondents are women (76.1%) while less than a quarter (23.9%) are men. Employees aged between 35 and 44 accounted for the largest group of respondents in the study (36.9%), followed by those aged between 45 and 54 (34.7%). The average age of respondents was 45, while this is also the median value that divides respondents in the sample into two equally represented halves.

**4.3 RESULTS OF THE STUDY**

Within the context of analysis of results regarding the correlation of sickness absenteeism and the temperament of employees in the public administration, it should first be emphasised that with regard to temperament we are dealing on the one hand – with descriptive variables, while on the other we are dealing with the variables by which we have operationalised sickness absenteeism. For this reason we use the Kruskal–Wallis test in our analysis of the influence of temperament on sickness absenteeism and the Mann–Whitney U test in the series of post-hoc tests.

**Table 4: Dominant temperaments and sub-temperaments in employees**

|  |  |  |
| --- | --- | --- |
|   | DOMINANT TEMPERAMENT | SUB-TEMPERAMENTS |
| sanguine | choleric | phlegmatic | melancholic |
| f | % | f | % | f | % | f | % | f | % |
| sanguine | 41 | 2% |   |   | 15 | 36.6% | 26 | 63.4% | 0 | 0.0% |
| choleric | 1065 | 40% | 195 | 18.3% |   |   | 785 | 73.7% | 85 | 8.0% |
| phlegmatic | 1404 | 53% | 131 | 9.3% | 1046 | 74.5% |   |   | 227 | 16.2% |
| melancholic | 130 | 5% | 2 | 1.5% | 31 | 23.8% | 97 | 74.6% |   |   |
| TOTAL | 2640 |   | 328 | 12.4% | 1092 | 41.4% | 908 | 34.4% | 312 | 11.8% |

Source: own data

On the basis of self-assessment by respondents in the public administration (Table 2), we find that employees whose dominant temperament is phlegmatic are the largest group, accounting for more than half of respondents (53%), while cholerics also account for a high share (40%). Employees with a melancholic (5%) or sanguine (2%) temperament account for a significantly smaller share. In terms of sub-temperaments, the largest groups are once again cholerics (41%) and phlegmatics (34%). The combination most frequently found in employees in the public administration is phlegmatic as dominant temperament and choleric as a sub-temperament.

Below we examine whether employee temperament appears as a factor of influence on sickness absenteeism, when this is operationalised by the number of days of temporary absence, and later on by the number of periods of temporary absences.

The employees who were on average temporarily absent from work for the fewest days (Table 3) were those whose dominant temperament is choleric (8.6 days) or phlegmatic (8.7 days), who also account for the largest number of employees in the public administration; those with a sanguine temperament[[16]](#footnote-16) were temporarily absent for slightly more days (10.8 days), while melancholics were absent for the largest number of days (15.8 days). In the total number of days of sickness absence we are unable to confirm statistically significant differences between individual employees with regard to their temperament (p>0.05) – although it should be noted here that the distance from the threshold that is used in order to define differences as statistically significant (p<0.05), is minimal.

**Table 6: Descriptive statistics for the average number of days of absence and results of the Kruskal–Wallis test with regard to employee temperament and by individual grounds for sickness absenteeism**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | N | AM | SD | Kruskal–Wallis test |
| χ² | df | *p* |
| caring for or illness of dependent family member | S | 24 | 3.21 | 8.49 | 12.32 | 3 |  0.006  |
| C | 589 | 3.67 | 8.03 |
| P | 825 | 2.43 | 5.59 |
| M | 66 | 2.55 | 5.12 |
| own illness or injury (at or outside work) | S | 34 | 10.24 | 22.03 | 4.61 | 3 |  0.202  |
| C | 831 | 7.40 | 17.93 |
| P | 1181 | 7.82 | 19.54 |
| M | 109 | 14.45 | 35.58 |
| mental pressures and stress in the working environment | S | 17 | 0.06 | 0.24 | 23.91 | 3 |  0.000  |
| C | 394 | 1.37 | 7.31 |
| P | 585 | 1.15 | 9.69 |
| M | 52 | 5.21 | 17.89 |
| other cause of absence not related to illness, injury or pressure | S | 18 | 0.94 | 3.76 | 14.32 | 3 |  0.002  |
| C | 379 | 0.78 | 3.94 |
| P | 573 | 0.49 | 4.71 |
| M | 46 | 0.87 | 3.95 |
| TOTAL | S | 41 | 10.80 | 25.19 | 7.74 | 3 |  0.052  |
| C | 1065 | 8.59 | 18.95 |
| P | 1404 | 8.69 | 19.82 |
| M | 130 | 15.80 | 34.78 |

N – number of responses; AM – arithmetic mean; SD – standard deviation; χ² – chi-squared; df – degree of freedom; *p* – degree of statistical significance; S – sanguine; C – choleric; P – phlegmatic; M – melancholic

Source: own data

Despite the fact that we are unable to confirm statistically significant differences in the total number of days of sickness absence among individual employees with regard to their temperament, statistically significant differences do appear (see Table 3) among employees with regard to their temperament in the case of temporary absence from work due to caring for or illness of a dependent family member (χ²=12.32; p<0.01), where cholerics and sanguines were temporarily absent from work for the longest periods (3.7 days and 3.2 days respectively), while melancholics and phlegmatics were absent for slightly shorter periods (2.6 days and 2.4 days respectively). Statistically significant differences (χ²=23.91; p<0.01) are also noted in the case of temporary absence of employees from work due to exposure to mental pressures and stress in the working environment, as a result of which melancholics were temporarily absent from work for longest (5.2 days). Cholerics were temporarily absent from work on these grounds for statistically significantly less time (1.4 days) than melancholics, but statistically significantly more than phlegmatics (1.2 days), as can be seen in Table 3. Employees with a sanguine temperament were absent from work for the least time (0.1 days) as a result of mental pressures and stress in the working environment. Over the last 12 months no employee was temporarily absent from work for other reasons for longer than one day, but statistically significant differences do exist among employees with regard to their temperament (χ²=14.32; p<0.01).

On the basis of the figures presented in Table 4, we can state that cholerics and phlegmatics show a statistically significant difference (p<0.01) in the case of temporary absence from work due to caring for or illness of a dependent family member, mental pressures and stress in the working environment and other causes of absence not related to illness, injury or pressure.

**Table 8: Series of post-hoc tests (Mann–Whitney U test) between pairs of temperaments of employees with regard to the average number of days of sickness absence**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | S – C | S – P | S – M | C – P  | C – M | P – M |
|  | U | *p* | U | *p* | U | *p* | U | *p* | U | *p* | U | *p* |
| A | caring for or illness of dependent family member |
|  | 6434 | 0.402 | 9870 | 0.976 | 756 | 0.700 | 220249 | 0.000 | 18330 | 0.393 | 26123 | 0.513 |
| B | mental pressures and stress in the working environment (including management behaviour/conduct) |
|  | 3124 | 0.399 | 4959 | 0.961 | 369 | 0.124 | 107826 | 0.000 | 9230 | 0.047 | 12799 | 0.000 |
| C | other cause of absence not related to illness, injury or pressure |
|  | 3322 | 0.698 | 4759 | 0.082 | 414 | 0.989 | 103063 | 0.001 | 8510 | 0.590 | 12194 | 0.012 |

U – Mann–Whitney test value; *p* – statistical significance; S – sanguine; C – choleric; P – phlegmatic; M – melancholic, A – caring for or illness of dependent family member; B – mental pressures and stress in the working environment (including as a result of management behaviour/conduct); C – other cause of absence not related to illness, injury or pressure

Source: own data

Statistically significant differences also appear (Table 4) between cholerics and melancholics with regard to the duration of temporary absence from work due to mental pressures and stress in the working environment (U=9,230; p<0.05), where there are also statistically significant differences between phlegmatics and melancholics (U=12,799; p<0.01), who at the same time also differ with regard to temporary absence for other reasons (U=12,194; p<0.05).

Analysis of results on the correlation between employee temperament and the number of days of sickness absence in the public administration shows that melancholics and sanguines are temporarily absent from work for the largest number of days, and that melancholics are temporarily absent from work for the longest because of sickness (their own), stress and pressure in the workplace. The latter result indicates that, viewed from the point of view of sickness absenteeism, the public administration is clearly a less suitable working environment for employees in whom a melancholic temperament is dominant.

Table 5 shows the results of research into the frequency of sickness absence (how often someone is temporarily absent from work) with regard to employee temperament.Our findings show that in the total average number of periods of temporary absence from work, there are statistically significant differences among employees with regard to their temperament (χ²=8.07; p<0.05).

Those employees who were on average most frequently temporarily absent from work (Table 5) were those whose dominant temperament is sanguine (2.2 times). They are followed by melancholics (1.7 times) and cholerics (1.6 times), while phlegmatics were the least frequently temporarily absent from work (1.4 times). Differences among employees (Table 5) with regard to their temperament are also shown to be statistically significant in the number of periods of temporary absence due to caring for or illness of a dependent family member (χ²=11.51; p<0.01). Sanguines were, on average, the most frequently absent from work on these grounds in the last 12 months (twice), followed by cholerics (1.3 times) and melancholics (1.1 times), with phlegmatics the least frequently absent (0. 9 times). Differences in temporary absence from work because of mental pressures and stress in the working environment (χ²=24.6; p<0.01) and other causes of absence (χ²=12.26; p<0.01), are also shown to be statistically significant, where melancholics and cholerics were, on average, the most frequently absent on these grounds.

**Table 10: Descriptive statistics for the average number of periods of absence and results of the Kruskal–Wallis test with regard to employee temperament and by individual grounds for sickness absenteeism**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |   | N | AM | SD | Kruskal–Wallis test |
| χ² | df | *p* |
| caring for or illness of dependent family member | S | 24 | 2.00 | 3.43 | 11.51 | 3 |  0.009  |
| C | 586 | 1.26 | 2.54 |
| P | 823 | 0.89 | 1.76 |
| M | 66 | 1.09 | 1.94 |
| own illness or injury (at or outside work) | S | 34 | 1.03 | 1.59 | 4.40 | 3 |  0.221  |
| C | 825 | 0.97 | 1.40 |
| P | 1167 | 0.93 | 1.33 |
| M | 108 | 1.04 | 1.14 |
| mental pressures and stress in the working environment | S | 17 | 0.18 | 0.73 | 24.60 | 3 |  0.000  |
| C | 394 | 0.20 | 0.67 |
| P | 584 | 0.09 | 0.48 |
| M | 52 | 0.52 | 2.11 |
| other cause of absence not related to illness, injury or pressure | S | 18 | 0.11 | 0.32 | 12.26 | 3 |  0.007  |
| C | 379 | 0.20 | 0.94 |
| P | 574 | 0.08 | 0.55 |
| M | 45 | 0.20 | 0.76 |
| TOTAL | S | 41 | 2.15 | 3.81 | 8.07 | 3 |  0.045  |
| C | 1065 | 1.59 | 2.63 |
| P | 1404 | 1.37 | 2.08 |
| M | 130 | 1.69 | 2.30 |

N – number of responses; AM – arithmetic mean; SD – standard deviation; χ² – chi-squared; df – degree of freedom; *p* – degree of statistical significance; S – sanguine; C – choleric; P – phlegmatic; M – melancholic

Source: own data

A closer look at the differences between pairs of temperaments among employees shows (Tables 5 and 6) that, on average, cholerics were statistically significantly more frequently temporarily absent from work, in terms of overall absence, because of caring for or because of the illness of a dependent family member, because of mental pressures and stress in the working environment, and for other reasons, than phlegmatics were; while the latter were statistically significantly less frequently absent from work than melancholics, in terms of overall average absence, because of mental pressures and stress in the working environment.

**Table 12: Series of post-hoc tests (Mann–Whitney U test) between pairs of temperaments of employees with regard to the average number of periods of absence (sickness absenteeism)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | S - C | S – P | S – M | C – P  | C – M | P – M |
|  | U | *p* | U | *p* | U | *p* | U | *p* | U | *p* | U | *p* |
| A | caring for or illness of dependent family member |
|  | 7031 | 0.999 | 9163 | 0.468 | 772 | 0.828 | 219424 | 0.001 | 18731 | 0.637 | 25563 | 0.341 |
| B | mental pressures and stress in the working environment (including management behaviour/conduct) |
|  | 3165 | 0.490 | 4916 | 0.858 | 379 | 0.183 | 107301 | 0.000 | 9321 | 0.070 | 12782 | 0.000 |
| C | other cause of absence not related to illness, injury or pressure |
|  | 3334 | 0.739 | 4781 | 0.100 | 398 | 0.834 | 103383 | 0.001 | 8485 | 0.909 | 12215 | 0.070 |
| D | TOTAL |
|  | 21320 | 0.789 | 28040 | 0.765 | 2477 | 0.478 | 709278 | 0.021 | 65532 | 0.298 | 81794 | 0.038 |

U – Mann–Whitney test value; *p* – statistical significance; S – sanguine; C – choleric; P – phlegmatic; M – melancholic, A – caring for or illness of dependent family member; B – mental pressures and stress in the working environment (including as a result of management behaviour/conduct); C – other cause of absence not related to illness, injury or pressure; D – total

Source: own data

Results of the analysis of the influence of the average number of frequencies (periods) of sickness absenteeism and temperament thus showed that a statistically significant influence exists between the two constructs. This finding is useful to those responsible for shaping public administration policy above all in the sense that those most frequently temporarily absent from work in the public administration (in terms of number of periods of absence) are those employees who are characterised by a constant need for attention and social contacts (including among co-workers), energy, a positive outlook, etc. It may be that employees with such characteristics are more frequently absent from work because they miss all this in the environment of the public administration.

**4.4 DISCUSSION**

The essential purpose of this paper is to present the results of the research into the correlation between sickness absenteeism and the temperament of employees in the public administration in Slovenia. On the basis of our analysis of the results of the research, we have found that the temperament of employees in the public administration is a factor of influence in sickness absenteeism, where the only exception is temporary absence on the grounds of an employee's own sickness or injury. On average, those who were the most frequently temporarily absent from work and absent for the longest, were employees with a sanguine or melancholic temperament, while employees with a choleric or phlegmatic temperament were the least frequently absent and absent for the least amount of time.

We can understand and interpret the results of the research as showing that those who were the most often temporarily absent in terms of the number of days were all those employees who may be described by characteristics such as taciturnity, melancholy, reticence, pensiveness, etc. We can also include among their characteristics the frequent presence of fear (in many cases we can talk about permanent aspects of so-called unexplained fear or anxiety) and a clear correlation with depression. The latter result is unsurprising if we understand such a result in the sense that in recent years the environment of the public administration has always been characterised negatively in the public consciousness and presented as an "inefficient environment" and has been under the constant pressure of rationalisation and redundancies. If we view the environment of the public administration as somewhere where relations between employees are reserved and where there is perhaps not a high degree of trust among employees, or a positive climate, it is no surprise that those who are most often temporarily absent from work, in terms of number of days, should also be those who are characterised by sociability, talkativeness, openness, the need for contact with people, constant communication and vivacity. It is therefore reasonable to ask or consider whether employees of this type perhaps miss all of the above in the environment of the public administration, and whether they then seek a solution to compensate for this lack elsewhere.

The results of the research also indicate that a statistically significant influence exists between temperament and frequency (number of periods) of sickness absence. By analysing the correlation between two constructs of this kind, we followed and also realised one of the aims of the research, namely, to establish whether a correlation exists between the two constructs presented. All the employees who were on average most frequently temporarily absent from work were those whose dominant temperament is sanguine (2.2 times). They are followed by melancholics (1.7 times) and cholerics (1.6 times), while phlegmatics were least frequently temporarily absent from work (1.4 times). We can understand and interpret these results as indicating that sickness absenteeism is the most common among those employees who perceive the environment of the public administration as an environment in which (1) they are unable to satisfy their emotional need to socialise with co-workers, in which they do not perceive positive climate, trust among people, vivacity, constant "action" and (2) in which they feel pressures, fear, etc. On this basis, we can understand the latter from two points of view, as follows:

* employees in the public administration miss a positive climate, more open and genuine contacts with co-workers and more "action" – since they evidently do not receive this in the environment, they seek solutions through more frequent or earlier absence from work. In this context it is worth emphasising that it is precisely these employees who are most frequently absent from work in order to care for family members, and perhaps they find in the environment of the family the things they do not receive and which they miss in the environment of the public administration;
* secondly, employees feel too much tension, pressure and fear in the environment of the public administration and this affects them so strongly that they wish to avoid such an environment or seek an environment where they can revitalise themselves and find the strength to return to the working environment of the public administration. Perhaps employees seek a solution to this situation with the help of more frequent temporary absences from work. This idea is also confirmed by the results of the research that shows that among employees and the public administration and those who are the most frequently absent from work because of stress and pressure in the working environment are those in whom depression, fear, taciturnity, sadness, reticence, etc. are typically present.

In the context of understanding the results of the performed research, we find on the basis of the self-assessment of respondents that employees whose dominant temperament is phlegmatic or choleric are predominant in the public administration. Despite the fact that these two temperament types are diametrically opposed to each other, it is an interesting issue of the research that sickness absenteeism is the lowest precisely among employees with the personality traits that we can use to define those two types of temperament (measured by average number of days absence from work and by the average number of frequencies of absence from work).

**5 CONCLUSION**

As a result of economic, social and technological changes, the public administration is constantly faced with the challenges of changes or reform in numerous fields of work. Another challenge for the public administration can be the question of how to reduce sickness absenteeism on the part of employees, since statistics indicate that sickness absenteeism in the public administration is considerably higher than in other sectors. We therefore decided to present the results of the research designed to establish whether a correlation exists between sickness absenteeism and the temperament of employees in the public administration. We were interested in the question whether employees with different temperaments differ from each other in a statistically significant manner when it comes to temporary absence from work.

The results of the research confirmed that the temperament of employees in the Slovenian public administration is a factor of influence in sickness absenteeism, where the only exception is temporary absence on the grounds of an employee's own sickness or injury. On average, those who were the most frequently temporarily absent from work and absent for longest were employees with a sanguine or melancholic temperament, while employees with a choleric or phlegmatic temperament were least frequently absent and absent for the least amount of time. Such findings indicate that there is all the more reason to devote attention to the personality traits of those employees who are temporarily absent from work for the most days and the most frequently. On this basis, on the one hand, by changing or improving the attitude of management staff towards employees and developing a safe, challenge-based environment in the public administration it might be possible to reduce the share of sickness absenteeism (where attention should be devoted to the individual treatment of employees). On the other hand, it would be logical, taking into account positive psychology, to take steps to find and identify all those positive elements within the environment of the public administration as a result of which employees with choleric and phlegmatic temperaments are temporarily absent from work for fewer days and less frequently than those with sanguine and melancholic temperaments. The challenge should therefore also focus on the question of how to improve those elements as a result of which employees with a given type of temperament are more present in the workplace. On the basis of our analysis of the results of the research and our findings, we find that further research should also include the aspect of establishing a correlation between the temperament of the management of an organisation with sickness absenteeism among its employees.

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1. E.g. Jensen & Mcintosh (2007),Hilton, Sheridan, Cleary & Whiteford (2009), Hoxsey (2010), Rantanen & Tuominen (2011). [↑](#footnote-ref-1)
2. Ones, Viswesvaran & Schmidt (2003, p. 21) explain that a correlation exists between those who are conscientious (careful) and sickness absenteeism. Evans & Palmer (2000, p. 22) believe that emotionally unstable and anxious individuals have a greater propensity for temporary absence from work and those who are emotionally stable and introverted. Allebeck & Mastekaasa (2004, p. 40) also believe that anxiety and depression cause a situation in employees where they see temporary absence from work as a solution. [↑](#footnote-ref-2)
3. NIJZ figures (2015) show that the percentage of calendar days lost to sickness absence in Slovenia fell gradually from 2007 to 2013 (with 2012 the one exception). Thus 4.4% of calendar days were lost because of sickness absenteeism in 2007 compared to 4.08% in 2013. [↑](#footnote-ref-3)
4. On the basis of NIJZ figures (2015) we find that in the period under comparison the largest number of calendar days lost per employee in the public administration was in 2012 (30.9 candidates), while the smallest number was in 2011 (14.7 calendar days). In 2009, 2010 and 2013 the number of lost calendar days per employee amounted to 15.2, 16.5 and 24.9 respectively. [↑](#footnote-ref-4)
5. There are also positive aspects to sickness absenteeism (for example, employees who are absent have time for themselves and are not burdened by work obligations or faced with potential work-related stress; employers have the opportunity to be more flexible employees, etc.) – although the negative aspects are more pronounced. [↑](#footnote-ref-5)
6. See Evans and Palmer (2000); Ones, Viswesvaran and Schmidt (2003); Lokke Nielsen (2008); etc. [↑](#footnote-ref-6)
7. See the studies by Johns (1997); Evans and Palmer (2000); Allebeck and Mastekaasa (2004); etc. [↑](#footnote-ref-7)
8. The idea of an isolated cause of sickness absenteeism has been studied in particular by Rhodes and Steers (1990). [↑](#footnote-ref-8)
9. Harrison and Martocchio (1998); Evans and Palmer (2000); Johns (2003); etc. [↑](#footnote-ref-9)
10. Hippocrates may be considered to have been the first to define a significant typology in the history of psychological knowledge. [↑](#footnote-ref-10)
11. We have prepared the range of personality traits on the basis of the descriptions of characteristics of temperament types formulated by Eysenck and Eysenck (1985); Littauer and Littauer (1999, p. 99); Ekstrand (2014, pp. 1–7). [↑](#footnote-ref-11)
12. The latter is also explained by Ekstrand (2014, pp. 6–7). [↑](#footnote-ref-12)
13. Bodies exercising public powers include natural and legal persons, while those that are considered part of the public administration include public agencies, public funds, certain other public institutions (e.g. the Pension and Disability Insurance Institute, the Employment Service of Slovenia, social services centres, etc.) and professional chambers with compulsory membership (taken from Tičar & Rakar, 2011, pp. 225–230). [↑](#footnote-ref-13)
14. According to AJPES figures (2014), in December 2014 39,723 people were employed in the public administration, of which 73.7% were employed in the national administration, 12.1% in local administration and 14.1% in other bodies exercising public powers. [↑](#footnote-ref-14)
15. By officials in this sense we are thinking of the group of officials who do not perform management tasks or do not occupy the position of head of an organisational unit. [↑](#footnote-ref-15)
16. Owing to the low number of sanguines in the sample, particular caution is needed when interpreting the results for this temperament. [↑](#footnote-ref-16)