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MOTIVATING CORPORATE EMPLOYEES BY MEETING PSYCHOLOGICAL NEEDS IN A POST-CAVID ERA. A GROUNDED THEORY APPROACH

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Abstract: Following the pandemic crisis and the restrictions imposed due to it, the business environment has undergone major changes in terms of activities at work. According to researchers, due to the pandemic, there was a large increase in anxiety, stress, and burnout among employees. Thus, the purpose of the present study is to uncover the variables that can determinate both employees 'motivation and performance at work in a post-covid era where new needs arose. To answer the question "With what variables can we form a model of motivating employees in corporations to meet their needs in a post-covid era?", 22 in-depth interviews have been completed and analyzed using the Grounded Theory method. Following the analysis, a theoretical model of employee motivation at work has been created. Following the data analysis, 30 final categories that directly influence the motivation of employees in companies were highlighted, including: organizational climate, bureaucracy, leadership, teamwork, personal development, and organizational culture. Moreover, all these categories influence each other. The major conclusion of this study is that the needs of employees in a covid era are represented more by psychological needs than by material benefits. The research focuses on the psychological needs of corporate employees, outlining the importance of their psychological needs in a post-covid era. Also, this study represents a new approach in the field of employee motivation for western Romania.

Key words: post-covid era, neuroergonomics, communication, motivation, employees, psychological needs.

1. INTRODUCTION

Employees are a crucial resource for any organization, and the company's failure or success is often linked with its ability to attract, retain and reward talented and capable appropriately employees [1]. However, employees change jobs twice as often as three years ago due to inadequate leadership that does not meet the psychological needs of employees [2]. To understand the difference between usual needs and psychological needs, the literature outlines the difference between them. While needs " denotes the presence of a particular desire or preference" psychological needs are" a psychological nutrient that is essential for individuals' adjustment, integrity, and growthh the lack of fulfillment [3]. Also, of psychological needs increases the risk of passivity, ill-being, and defensiveness [4]. Moreover, some authors claim that material benefits do not always represent psychological needs although the desire to have them is very

high. The desire to have material benefits is not a characteristic of psychological needs but represents the satisfaction of the personal ego [5].

World Health Organization describes mental health as "a state of well-being and the ability to cope with the normal stresses of life, work productively..." [6]. On the other hand, mental illness is defined as a "significant disturbance in an individual's cognition, emotional regulation, or behavior". Several researchers have studied the correlation between mental health of employees and the organizations from the point of view of working hours [7], working environment [8] or internal communication mode [9]. Also, how environmental factors such as light, noise or temperature affect the wellbeing of employees has been studied by researchers [10]. Researchers also outline the occurrence of Covid syndrome stress characterized by fear of infestation [11]. Also, the workplace directly influences the physical and mental well-being of employees, playing an important role in the balance between professional and social life of people [12].

As we showed in a study, the mental health of employees is important for each organization in the process of their retention. Thus, one of the most important variables in the retention process is represented by the optimal psychological conditions which, if not fulfilled, are characterized by: burnout, post traumatic disorder, anxiety, stress, depression, and fright [13]. Moreover, they represent a threat to the well-being and perceived self-respect of employees [14].

According to the literature, motivation is the impulse to participate or not to participate in certain activities. Also, motivation is the employee's desire to work representing the foundation of his or her actions [15]. A study by Nehra, S.A. shows that motivation based on the person's psychological and intrinsic needs has a higher success rate than motivation based on material benefits [16].

According to researchers [17], among the most popular motivational theories is selfdetermination theory [STD]. This theory aims to prevent mental health problems by focusing on employee motivation and outlining the reasons why people invest time and effort in activities.

Self-determination theory postulates that all people have 3 primary psychological needs: autonomy, competence, and relatedness. Autonomy refers to the need for control, competence refers to how prepared the person is for certain activities and relatedness refers to the social framework of the person [18].

Thus, all these three psychological needs if not met cause the peripheral nervous system to weaken. However, the list of basic psychological needs is open, and others may be added. Also, some researchers [19] claim that at work motivation cannot be limited to 3 variables, and the good condition of employees depends on several factors that must be studied separately, and then as a whole.

Therefore, the main research questions of the present study are:

- With what variables can we form a model of motivating corporate employees to meet their needs in a post-covid era?
- How are these variables connected?

The research questions are designed to outline the theoretical model of employee motivation in a post-covid era. For this purpose, the qualitative Grounded theory approach has been chosen based on in-depth interviews with corporate employees.

2. METHODOLOGY

2.1 Research design and sample size

The methodological steps are shown in figure 1. To answer the research questions, a semistructured interview guide with 12 questions has been built. The interview was scheduled both in the physical environment [at the workplace of the participants] and in the online environment through the Zoom platform, depending on each participant. The interview took place in Timisoara, a city in the West of Romania. The interviews were implemented between March and April 2023, and each interview lasted between 60-90 minutes.

The participants of the interview were 22 employees, representatives of large companies situated in the Western part of Romania, adults, both women and men, aged between 22-34 years. They were informed of the processing of personal data, nevertheless in the study only their initials were used.

2.2 Data Collection

The research was carried out in Romanian, and the outcomes have been translated into English for international readership. The semistructured interview contains 12 questions. To collect the data, each interview was recorded with the consent of the participants. The first two questions were designed to find out how subjects perceive their work environment. The following questions [3,4] referred to how employees perceive appreciation at work. The questions in the middle of the interview [5,6,7] considered both the way they work in an environment that has stressful factors, the way they communicate in the organization both horizontally and vertically, but also the perception of the subjects on the fulfillment of the objectives.



Fig. 1. Methodological steps of the present research

Questions 8 and 9 referred to the material benefits that employees receive to shape their satisfaction. The penultimate questions [10, 11] referred to the organizational relationship [the relationship between employee and colleagues, the relationship between employee and manager], and the last question wanted to outline the expectations of employees related to the job. All questionnaire questions were designed to outline both psychological needs and material benefits. Highlighting them in the data analysis stage giving us a vision of what matters to employees.

2.3 Data analysis

The analysis began by transcribing all interviews in chorological order. After that, for each interview, a memo has been constructed. Memo- writing is the pivotal intermediate step between data collection and writing drafts of papers [20] and "constitutes a crucial method in Grounded theory because it prompts you to analyze your data and codes early in the research process" [21]. The constituent elements of the memos are presented in Figure 4 for one respondent.

Grounded Theory [GT] is a qualitative method of research, and qualitative analysis of data means to "manage words, language, and the meanings" [22]. Grounded theory emerged in the 1960's because of Glaser and Strauss's sociological research into American health institutions programs. The magnificence of this theory exists in its capacity to create rich descriptions of social life [23]; thus, the Grounded Theory is best suited to describe the social elements that contribute to mental health in the employee's workplace in a post-pandemic era.

Grounded Theory has been chosen because it gives us "a superior understanding of social life". The researchers also argue that organizations are complex entities and that their study needs to consider all the complexities of corporate work. Moreover, the Grounded Theory is used when researchers must deal with "qualitative data collected through observation, semi-structured or structured interviews..." [24].

Thus, the data analysis was done in three steps according to the Grounded Theory methodology: open coding, axial coding, selective coding. In all these stages, according to Corbin and Strauss ""the researcher is like a detective. He or she follows the leads of the concepts, never quite certain where they will lead, but always open to what might be uncovered" [25].

In the first phase of open coding, analysts immerse themselves in the data through line-byline analysis, "coding the data in an many ways as possible and writing memos about the conceptual and theoretical ideas that emerge during the course of analysis" [26].

The second phase of the method consists of axial data coding. At this stage, the methods use two key concepts: code and coding. Glaser has described the code as "the essential relationship between data and theory" and coding as a process that, "gets the analyst off the empirical level by fracturing the data, then conceptually grouping it into codes that then become the theory which explains what is happening in the data" [27].

The third phase is the process of using selective codes to "conceptualize how the substantive codes may relate to each other as hypotheses to be integrated into a theory" [28].

Throughout the present study information has been collected, which has been later coded and analysed to better understand factors that influence the psychological needs of employees in motivational process in the Western part of Romania.

Therefore, in the first stage of the coding [open coding] we transcribed the 26 interviews, making for each one a memo according to Figure 4. At this stage, 103 codes were outlined which describe the importance of significant psychological needs within the process of motivation at work in a post-pandemic era. Data analysis continues with the axial coding phase that compress the 103 codes into 30 categories.

In the final stage, the selective coding, the relationship between the 36 categories is outlined, highlighting their connection. For a better understanding of the relationship between the 30 categories, we made a graph using the tool SocNetV according to Figure 4.

3. RESULTS

Following the analysis of the results, 30 categories were highlighted. Figure 4 represents.

their graphical approach for a better understanding of the selection of codes and the relationships between them.

Thus, according to figure 4, the links between the 30 codes are multiple, influencing each other. To outline the importance of mental health at work for those interviewed the four codes [anxiety, stress, burnout, and fear] which describe the most common psychological disorders among those interviewed at work. Moreover, these mental states influence almost all other codes. The 30 codes highlighted in the in figure 4 represent the stage of the axial coding according to the Grounded theory.

Moreover, the codes unity, understanding, togetherness, collaboration, and horizontal relationship describe the importance of teamwork for employees. Also, both the organizational culture [job description, objectives, values, flexibility, benefits] and the organizational climate represented by the autonomy, freedom, safety, socialization, diversity, are important variables in the motivation of the employees. In addition, Figure 4 outlines an increased employee care for personal development because in interviews the codes were found to be recurrent are: competence, balance, and free time. To be able to achieve the theoretical model of motivating employees in the corporate environment in a post-covid era, all 30 codes were classified in 6 variables according to Figure 4.



Fig 2. The relationship between the 30 categories

The six variables that contain the psychological needs of employees and influence

the motivation process for employees in corporations are: teamwork, leadership, mental

health, organizational climate, organizational development. culture. and personal To emphasize the importance of the study and its novelty elements, the results of the data analysis have been compared to the literature studies. Teamwork is described in the literature as both a "diversity of the workplace" [31], but also as a method of preventing burnout among employees in the corporate environment [32]. Also, teamwork is closely related to performance at work [33]. Although the interviewed subjects consider that teamwork makes it easier for them to do what they must do, they refer to teamwork in terms of the social function it holds. Thus, this study underlines the importance of teamwork due to its character in meeting primary psychological needs such as socialization. Also, no studies on teamwork were performed as a psychological employees need of in corporations. Studies focus on employees or members of other sectors [34] in the public domain [35].

Leadership style is a central theme for researchers. However, most studies focus on the ethics of leadership in corporations [36], [37] or on increasing employee social responsibility through leadership. Thus, another study shows the importance of leadership in terms of employee performance [38], but not as a component of their psychological needs. The organizational climate represents "shared perception among employees of the organizational environment which they deal every day" [39] while organizational culture means the beliefs, values and attitudes of the corporation that influences employees [40].

Lately, numerous studies [41 - 43] have focused on the link between the organizational climate, organizational culture, and good employee well-being. Also, according to the data analysis, the subjects of the present study consider that the organizational climate must maintain a balance between the autonomy of each employee and the sensitivity of the company to their problems.

The personal development of employees is seen in the literature as a component of corporate social responsibility [44] or to provide employees with access to various programs that improve their workplace skills [45].



Fig. 3. The six variables that include psychological needs.



Fig. 4. The theoretical motivation of employees in companies in a post-Covid era.

However, for the subjects of the current study, personal development refers to the psychological need of each employee to perform other activities that are not related to the job.

Thus, Figure 4 graphically represents the theoretical model of the motivational process in corporations in a post-covid era. The theoretical model outlines the 6 variable variables represented, for the most part, by psychological needs. These needs, depending on their degree of satisfaction, affect the functions of the brain in a positive or negative way. Moreover, the science that deals with the study of brain functions and performance at work is neuroergonomics. [46]. Neuroergonomics is the science that deals with the study of the brain at work. Thus, the brain is affected at work by external factors like stress or anxiety [47].

4. FINAL DISCUSSIONS. CONCLUSION

To reach the current stage of the research, several analyzes have been carried out on the pandemic and post-pandemic context in relation to both corporations and their employees. Thus, at an early stage, we outline the context of the pandemic crisis in terms of risk management and law [47], both regional and international level comparing different rules of law and actions taken in the context of the pandemic. Subsequently, we corroborate the link between ergonomics and communication, to create a theoretical model of ergonomic communication that meets the needs of the employees.

Other studies conducted concluded what communication barriers are in organizations to have the opportunity to improve them and in a previous study we show how mental health influences the retention process of employees in corporations [45-49].

The current study is a novelty in the field of corporate research because the psychological needs found in the variables in the theoretical model in the process of motivating employees in a post-covid era outline "new era" of the corporate environment in which we are [55]. This qualitative research shows the interdependence of the variables and codes underlying them. Both psychological needs and neuroergonomics give researchers a new vision of motivating employees in corporations by emphasizing the importance of a new approach in a post-pandemic era.

5. REFERENCES

- Kurdi, B., Alshurideh, M. Employee retention and organizational performance: Evidence from banking industry. Management Science Letters, 10[16], 3981-3990, 2023.
- [2] Vansteenkiste, M., Ryan, R. M., Soenens, B. Basic psychological need theory: Advancements, critical themes, and future directions. Motivation and emotion, 44, 1-31. 2020.
- [3] Vansteenkiste, M., Ryan, R. M. On psychological growth and vulnerability: Basic psychological need satisfaction and need frustration as a unifying principle. Journal of psychotherapy integration, 23[3], 263, 2013.
- [4] Ryan, R. M., Deci, E. L. Self-regulation and the problem of human autonomy: Does psychology need choice, self-determination, and will?. Journal of personality, 74[6], 1557-1586, 2006.

- [5] Wayment, H. A., Bauer, J. J., & Sylaska, K. *The quiet ego scale: Measuring the compassionate self-identity.* Journal of Happiness Studies, 16, 999-1033, 2015.
- [6] Langeland, E. Emotional well-being. In Encyclopedia of quality of life and wellbeing research [pp. 1-3]. Cham: Springer International Publishing, 2022.
- [7] Shipman, K., Burrell, D. N., Huff Mac Pherson, A. An organizational analysis of how managers must understand the mental health impact of teleworking during COVID-19 on employees. International Journal of Organizational Analysis, 31[4], 1081-1104, 2023.
- [8] Naji, G. M. A., Isha, A. S. N., Alazzani, A., Brough, P., Saleem, M. S., Mohyaldinn, M. E., Alzoraiki, M. Do leadership, organizational communication, and work environment impact employees' psychosocial hazards in the oil and gas industry? International journal of environmental research and public health, 19[8], 4432, 2022.
- [9] Pischel, S., Felfe, J. "Should I Tell My Leader or Not?"—Health-Oriented Leadership and Stigma as Antecedents of Employees' Mental Health Information Disclosure Intentions at Work. Journal of Occupational and Environmental Medicine, 65[1], 74-85, 2023.
- [10] Gajšek, B., Draghici, A., Boatca, M. E., Gaureanu, A., Robescu, D. Linking the use of ergonomics methods to workplace social sustainability: The Ovako working posture assessment system and rapid entire body assessment method. Sustainability, 14(7), 4301, 2022.
- [11] Taylor, S., Asmundson, G. J. *Life in a postpandemic world: What to expect of anxietyrelated conditions and their treatment.* Journal of anxiety disorders, 72, 102231, 2020.
- [12] Su, L., Swanson, S. R. Perceived corporate social responsibility's impact on the wellbeing and supportive green behaviors of hotel employees: The mediating role of the employee-corporate relationship. Tourism management, 72, 437-450, 2019
- [13] Rommer, D. *The psychological ill-health* of frontline medical staff working with COVID-19 patients: burnout, anxiety, and post-traumatic stress disorder. Psychosociological Issues in Human Resource Management, 8[1], 13-18, 2020.
- [14] Harju, L. K., Rokka, J., Lopes, M. M., Airoldi, M., Raïes, K. *Employee well-being* profiles during COVID-19 lockdown: a latent

profile analysis of French and UK employees. Frontiers in psychology, 12, 645300, 2021.

- [15] Hajiali, I., Kessi, A. M. F., Budiandriani, B., Prihatin, E., Sufri, M. M. Determination of work motivation, leadership style, employee competence on job satisfaction and employee performance. Golden Ratio of Human Resource Management, 2[1], 57-69, 2022
- [16] Nehra, N. S. Can employee engagement be attained through psychological detachment and job crafting: the mediating role of spirituality and intrinsic motivation. Journal of Organizational Effectiveness: People and Performance, 2023.
- [17] Hosseini, L. J., Rafiemanesh, H., Bahrami, S. Levels of motivation and basic psychological need satisfaction in nursing students: In perspective of self-determination theory. Nurse Education Today, 119, 105538, 2022.
- [18] Šakan, D., Žuljević, D., Rokvić, N. The role of basic psychological needs in wellbeing during the COVID-19 outbreak: A selfdetermination theory perspective. Frontiers in Public Health, 8, 583181, 2020.
- [19] Riyanto, S., Endri, E., Herlisha, N. Effect of work motivation and job satisfaction on employee performance: Mediating role of employee engagement. Problems and Perspectives in Management, 19[3], 162, 2021.
- [20] Mohajan, D., Mohajan, H. Memo Writing Procedures in Grounded Theory Research Methodology, 2022.
- [21] Charmaz, K. Grounded theory: Main characteristics. Qualitative analysis: Eight approaches for the social sciences, 1, 195-222, 2020.
- [22] Smith, H. J., Chen, J., Liu, X. Language, and rigour in qualitative research: problems and principles in analyzing data collected in Mandarin. BMC medical research methodology, 8[1], 1-8, 2008.
- [23] Wronowski, M. L. Filling the void: A grounded theory approach to addressing teacher recruitment and retention in urban schools. Education and Urban Society, 50[6], 548-574, 2018.
- [24] Turner, B. A. The use of grounded theory for the qualitative analysis of organizational behaviour. Journal of management studies, 20[3], 333-348, 1983.
- [25] Corbin, J. *Theoretical sampling*. Journal of Qualitative Research, 49-63, 2007.

- [26] Holton, J. A. *The coding process and its challenges*. The Sage handbook of grounded theory, 3, 265-289, 2007.
- [27] Holton, J. A. *The coding process and its challenges*. The Sage handbook of grounded theory, 3, 265-289, 2007.
- [28] Glaser, B. G., Holton, J. Staying open: The use of theoretical codes in grounded theory. The Grounded Theory Review, 5[1], 1-20, 2005.
- [29] Hartigan, J. A. Representation of similarity matrices by trees. Journal of the American Statistical Association, 62[320], 1140-1158, 1967.
- [30] Ivascu, L., Mocan, M., Draghici, A., Turi, A., Rus, S. *Modeling the green supply chain in the context of sustainable development*. Procedia Economics and Finance, 26, 702-708, 2015.
- [31] Jiang, Z., DeHart-Davis, L., Borry, E. L. Managerial Practice and Diversity Climate: The Roles of Workplace Voice, Centralization, and Teamwork. Public Administration Review, 82[3], 459-472, 2022.
- [32] Galleta-Williams, H., Esmail, A., Grigoroglou, C., Zghebi, S. S., Zhou, A. Y., Hodkinson, A., Panagioti, M. *The importance* of teamwork climate for preventing burnout in UK general practices. European journal of public health, 30[Supplement_4], iv36-iv38, 2020.
- [33] Bharoto, V. W. W. The Effect of Teamwork and Work Discipline on Employee Performance with Organizational Commitment as A Mediation Variable [Empirical Study at Bumi Akpelni Polytechnic Semarang]. ProBisnis: Jurnal Manajemen, 14[2], 219-228, 2023.
- [34] Qaralleh, S. J., Rahim, N. F. A., Richardson, C. Job Resource and Job Performance Among Physicians in the Jordanian Health Sector: The mediating role of Job satisfaction. International Journal of Professional Business Review, 8[1], e0378e0378, 2023.
- [35] Toan, T. T. Opportunities and challenges for quality of human resource in public sector of Vietnam's logistics industry. International journal of public sector performance management, 2023.
- [36] Zhao, L., Yang, M. M., Wang, Z., Michelson, G. Trends in the dynamic evolution of corporate social responsibility and leadership: A literature review and

bibliometric analysis. Journal of Business Ethics, 182[1], 135-157, 2023.

- [37] Kumar Krishnan Kutty, K. *Establishing business ethics to insulate against scandals.* Electronic Journal of Business Ethics and Organization Studies, 28[1], 2023.
- [38] Hajiali, I., Kessi, A. M. F., Budiandriani, B., Prihatin, E., Sufri, M. M. Determination of work motivation, leadership style, employee competence on job satisfaction and employee performance. Golden Ratio of Human Resource Management, 2[1], 57-69, 2022.
- [39] Patterson, M. G., West, M. A., Shackleton, V. J., ... Wallace, A. M. Validating the organizational climate measure: links to managerial practices, productivity and innovation. Journal of organizational behavior, 26[4], 379-408, 2005.
- [40] Abu-Jarad, I. Y., Yusof, N. A., Nikbin, D. [2010]. A review paper on organizational culture and organizational performance. International journal of business and social science, 1[3], 2010.
- [41] Paz, M. G., Fernandes, S. R., Carneiro, L. L., Melo, E. A. Personal organizational wellbeing, and quality of organizational life: the mediating role of organizational culture. RAM. Revista de Administração Mackenzie, 21, eRAMD200122, 2020.
- [42] Findler, L., Wind, L. H., Barak, M. E. M. The challenge of workforce management in a global society: Modeling the relationship between diversity, inclusion, organizational culture, and employee well-being, job

satisfaction and organizational commitment. Administration in Social Work, 31[3], 63-94, 2007

- [43] Glisson, C. *The role of organizational culture and climate in innovation and effectiveness*. Human service organizations: management, leadership & governance, 39[4], 245-250, 2015.
- [44] Miethlich, B., Beliakova, M., Voropaeva, L., Ustyuzhina, O., Yurieva, T. Internal Corporate Policy: CSR and Employee Satisfaction. Employee Responsibilities and Rights Journal, 35[1], 127-141, 2023.
- [45] Nair, S., Kaushik, A., Dhoot, H. Conceptual framework of a skill-based interactive employee engaging system: In the Context of Upskilling the present IT organization. Applied Computing and Informatics, 19[1/2], 82-107, 2023.
- [46] Perrey, S. Grand challenges in physical neuroergonomics. Frontiers in Neuroergonomics, 4, 1137854, 2023.
- [47] Ayaz, H., & Dehais, F. Neuroergonomics. Handbook of Human Factors and Ergonomics, 816-841, 2021.
- [48] Harpan, I., Draghici, A. Debate on the multilevel model of the human capital measurement. Procedia-Social and Behavioral Sciences, 124, 170-177, 2014.
- [49] Gogan, L. M., Rennung, F., Fistis, G., Draghici, A. A proposed tool for managing intellectual capital in small and medium size enterprises. Procedia Technology, 16, 728-736, 2014.

Motivarea angajaților corporativi prin satisfacerea nevoilor psihologice în era postpandemică. O abordare folosind metoda Grounded Theory

Potrivit cercetătorilor, din cauza pandemiei, a existat o creștere mare a anxietății, stresului și epuizării în rândul angajaților. Astfel, scopul prezentului studiu este de a descoperi variabilele care pot determina atât motivația angajaților, cât și performanța la locul de muncă în perioada post-pandemică în care au apărut noi nevoi. Pentru a răspunde la întrebarea "Cu ce variabile putem forma un model de motivare a angajaților pentru a-și satisface nevoile în era post-pandemicăcovid?", au fost analizate 22 de interviuri aprofundate folosind metoda Grounded Theory. Astfel, a fost creat un model teoretic al motivației angajaților la locul de muncă și au fost evidențiate 30 de categorii finale care influențează direct motivația angajaților din companii, printre care: climatul organizațional, birocrația, leadershipul, munca în echipă, dezvoltarea personală și cultura organizațională. Concluzia studiul este că nevoile angajaților sunt predominant în domeniul celor psihologice decât cel al beneficiilor materiale.

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