THEORY OF ADAPTATION AND WORKER'S HEALTH IN HOME OFFICE IN THE COVID-19 PANDEMIC

TEORIA DA ADAPTAÇÃO E SAÚDE DO TRABALHADOR EM *HOME OFFICE* NA PANDEMIA DE COVID-19

TEORÍA DE LA ADAPTACIÓN Y LA SALUD DEL TRABAJADOR EN *HOME OFFICE* EN LA PANDEMIA DE COVID-19

Nathalia Henriques Veiga¹
Yan Zi Li Figueiredo Ten²
Vithória Paes Machado³
Magda Guimarães de Araújo Faria⁴
Mercedes de Oliveira Neto⁵
Helena Maria Scherlowski Leal David⁶

How to cite this article: Veiga NH, Ten YZLF, Machado VP, Faria MGA, Oliveira Neto M, David HMSL. Theory of adaptation and worker's health in home office in the COVID-19 pandemic. Rev baiana enferm. 2021;35:e37636.

Objetivo: refletir sobre as implicações do trabalho em *Home Office* no período da pandemia de COVID-19 na saúde dos indivíduos, sob a perspectiva da Teoria da Adaptação desenvolvida por Callista Roy. Método: estudo reflexivo baseado na aplicação da Teoria da Adaptação desenvolvida por Callista Roy relacionada às modificações do processo de trabalho impostas pela crise sanitária da pandemia de COVID-19, com ênfase no *Home Office*. Resultados: a Teoria da Adaptação de Callista Roy possui quatro modos adaptativos: fisiológico, autoconceito, desempenho de papel e interdependência. É possível verificar a interlocução de todas essas dimensões no trabalho em *Home Office* imposto pelo contexto da pandemia. Conclusão: a Teoria de Callista Roy subsidia as discussões sobre a possibilidade de adaptação neste novo contexto, seja de maneira pontual ou mediante transformações no processo de trabalho em longo prazo, superando limitações do indivíduo e descobrindo maneiras de se fazer e ser no campo do trabalho.

Descritores: Saúde do Trabalhador. Teoria de Enfermagem. Enfermagem. Pandemias. Infecções por Coronavírus.

Objective: to reflect on the implications of Home Office work in the covid-19 pandemic period on individuals' health, from the perspective of the Adaptation Theory developed by Callista Roy. Method: reflective study based on the application of the Adaptation Theory developed by Callista Roy related to changes in the work process imposed by the health crisis of the COVID-19 pandemic, with emphasis on the Home Office. Results: Callista Roy's Adaptation Theory has four adaptive modes: physiological, self-concept, role performance and interdependence. There is the interlocution of all these dimensions at Home Office work imposed by the pandemic context. Conclusion: Callista Roy's Theory supports discussions about the possibility of adaptation in this new context, either in a specific way or

Nursing Student. Universidade do Estado do Rio de Janeiro. Rio de Janeiro, Rio de Janeiro, Brazil. nathaliahveiga@gmail.com. http://orcid.org/0000-0003-4348-0713.

Nursing Student. Universidade do Estado do Rio de Janeiro. Rio de Janeiro, Rio de Janeiro, Brazil. http://orcid.org/0000-0002-8587-6460

Nursing Student. Universidade Estadual do Rio de Janeiro. Rio de Janeiro, Rio de Janeiro, Brazil. https://orcid.org/0000-0003-3345-3367.

⁴ Nurse. PhD in Nursing. Professor at the Universidade do Estado do Rio de Janeiro. Rio de Janeiro, Rio de Janeiro, Brazil. http://orcid.org/0000-0001-9928-6392.

⁵ Nurse. PhD in Nursing. Professor at the Universidade do Estado do Rio de Janeiro. Rio de Janeiro, Rio de Janeiro, Brazil. http://orcid.org/0000-0001-7529-9535.

⁶ Nurse. PhD in Public Health. Professor at the Universidade do Estado do Rio de Janeiro. Rio de Janeiro, Rio de Janeiro, Brazil. http://orcid.org/0000-0001-8002-6830.

through transformations in the long-term work process, overcoming limitations of the individual and discovering ways to do and be in the work field.

Descriptors: Worker's Health. Nursing Theory. Nursing. Pandemics. Coronavirus Infections.

Objetivo: reflexionar sobre las implicaciones del trabajo Home Office en el período de la pandemia de COVID-19 sobre la salud de las personas, desde la perspectiva de la Teoría de la Adaptación desarrollada por Callista Roy. Método: estudio reflexivo basado en la aplicación de la Teoría de la Adaptación desarrollada por Callista Roy relacionado con cambios en el proceso de trabajo impuestos por la crisis de salud de la pandemia de COVID-19, con énfasis en el Home Office. Resultados: La Teoría de la Adaptación de Callista Roy tiene cuatro modos adaptativos: fisiológico, autoconcepto, ejecución del papel e interdependencia. Puede verificarse la interlocución de todas estas dimensiones en el trabajo Home Office impuesto por el contexto de la pandemia. Conclusión: la Teoría de Callista Roy apoya discusiones sobre la posibilidad de adaptación en este nuevo contexto, ya sea de manera puntual o a través de transformaciones en el proceso de trabajo a largo plazo, superando las limitaciones del individuo y descubriendo formas de bacer y estar en el campo del trabajo.

Descriptores: Salud del Trabajador. Teoría de Enfermería. Enfermería. Pandemias. Infecciones por Coronavirus.

INTRODUCTION

COVID-19 was the name created to represent the set of symptoms caused by infection by the new coronavirus, SARS-CoV-2, which essentially affects the respiratory system⁽¹⁻²⁾. The advance of the disease culminated in the worldwide spread and ended up being known as the first pandemic in history caused by a coronavirus, announced on March 11, 2020⁽³⁾.

As a response of the current federal government, Law n. 13,979/20⁽⁴⁾ was created to establish the measures of the public health emergency to cope with the new coronavirus, including isolation, quarantine, compulsory performance of medical examinations, laboratory tests, etc. Therefore, through the implementation of these measures, especially social isolation, the Brazilian worker had to reinvent his/her work process, often needing to work at home, in the Home Office modality.

Home Office is characterized by the performance of professional activities in the same environment where one resides⁽⁵⁾. In this perspective, this modality has become a viable strategy for the maintenance of work activities related to compatible work processes. Although there are no data indicating the percentage of individuals working in Home Office, the isolation rates provided by the geolocation of telephone devices indicate that 48.9% of the

Brazilian population was in isolation on June 14, 2020, and part of them were developing work activities in their homes⁽⁶⁾.

One of the main concerns regarding this new reality is the worker's adaptive process in relation to the development of his/her functions, considering that the environment, relationships and even available resources are not the same in relation to those previously experienced. It is also important to think about the contradictory aspects of this work modality: at the same time the worker is self-protecting, there is the evident invasion, by work, of the time of non-work and family life. In view of this perspective, it is considered the possibility of associating the elements of adaptation to the Home Office with Callista Roy's Theory of Adaptation⁽⁷⁾.

Adaptive Theory points out some assumptions: The person is a biopsychosocial being; The person is subjected to constant changes due to interaction with the environment; The person's adaptation is an essential condition for a positive response of interaction with the environment; Everyone has adaptation elements (physiological needs, self-concept, functional role and interdependencies)⁽⁷⁻⁸⁾.

Therefore, the aim of this article is to reflect on the implications of home office work on individuals' health, from the perspective of the Adaptation Theory developed by Callista Roy. The relevance of this discussion is based on the need for socialization of theoretical perspectives that base workers' adaptation to this new reality intensified by the COVID-19 pandemic.

METHOD

Theoretical-philosophical reflection, based on the Adaptation Theory developed by Callista Roy. The reflections and notes presented in this article are the result of discussions between the authors, after the significant increase in the number of workers whose changes imposed by the pandemic in the work process culminated in the adoption of remote work as a viable strategy for the maintenance of work activities.

For this, there was no need for ethical appreciation, since there was no data collection with human beings. Moreover, it is noteworthy that the research sought to present a contemporary analysis of the implications of Home Office work, guided by the theoretical constructs of Callista Roy.

THEORY OF ADAPTATION AND HOME OFFICE

At the current moment of structural changes in the daily work of Brazil and countries facing the pandemic, there are several complaints from workers who are now in the Home Office modality. Therefore, to better understand this social context, a theoretical-professional view is necessary.

Nursing theories are articulated conceptions associated with reality, and aim to describe, predict and prescribe nursing practices⁽⁹⁾. The nursing theory that served as inspiration was the conceptual model of adaptation, developed by Callista Roy in 1970. This theory emphasizes that nursing aims to promote the adaptation of the individual during his/her disease and health, manipulating the environment and elements of the patient⁽¹⁰⁾.

The theoretician Callista Roy was born in Los Angeles in 1939 and graduated in Nursing from Mount St. Mary's College. In 1966, she acquired a Master's degree in Pediatric Nursing from the University of California, Los Angeles, completed her Master's degree in Sociology in 1973, and then her Doctorate in 1977. The application of her theory was based on nursing care and on how this care can adapt to the situation of each individual⁽¹¹⁾.

Adaptive Theory points to the human being as a biopsychosocial individual, who continuously interacts with the environment around him/her, which, in turn, is changing uninterruptedly, creating mechanisms in an attempt to adapt; what may or may not occur. The health-disease process, then, is closely linked to the result expected of this adaptation, which, when occurs, is considered a positive response to the internal and external stimuli that the environment provides⁽⁷⁻⁹⁾.

This theory has four adaptive modes that are produced or manifested, namely: physiological mode, self-concept mode, role performance mode and interdependence mode. In the physiological mode, the person reacts as a physical being to the stimuli that the environment generates, involving five basic needs, including oxygenation, nutrition, elimination, activity and rest⁽¹¹⁾.

It is important to analyze some variables involved in these basic needs. In nutrition, it is essential that the individual has a balanced diet, rich in nutrients and with the necessary amounts. In the Home Office modality, especially in the direct imposition by the COVID-19 pandemic, it is possible to observe two phenomena: the expected and the concrete.

The expected phenomenon was based on the expectation of a reduced food cost, as well as on the increased food quality, especially because of the greater temporal availability of the individual to prepare his/her own meals, which can be understood as a direct benefit to the worker⁽¹²⁾. However, the concrete phenomenon points to a significant loss of nutritional quality, since stress and the absence of activities that provide satisfaction for individuals lead them to eat foods that provide not only satiety, but also comfort,

such as carbohydrates that stimulate serotonin production⁽¹³⁾.

Moreover, it is emphasized that this new dietary pattern has been considered a risk factor for the onset and worsening of cardiovascular diseases, since it combines malnutrition with sedentary practices⁽¹⁴⁾.

The activity and rest variables are interconnected when addressing remote work. In the pandemic context, many professionals currently in Home Office mode undergo changes in their daily work, mixing work activities with hours of rest, in an eternal looping. Even the sleep pattern of workers was altered by the isolation situation, when the maintenance of the number of hours, changes in the sleep start time and decreased sleep quality were observed (15).

Although the work ubiquity has already been pointed out in other scenarios prior to the pandemic, it is observed that remote work is a risk factor for this situation⁽¹⁶⁾. The aforementioned risk is intensified upon analyzing it from a gender perspective. Culturally, women are responsible for a large part of the unpaid work within their homes, using part of the day in the care of children and the elderly who live in the same home, making the hours of rest a new work day⁽¹⁷⁾.

It is also worth mentioning that the financial issue, for example, is an important factor in determining the quality of the environment in its entirety, influencing housing, food and maintenance. In this sense, people with better financial condition tend to have a more appropriate environment for the Home Office modality and, therefore, it is clear that there is a difference in reality based on social and economic condition. That is, it is necessary to consider the variables of social and professional classes, how the ways of living change, and the resources of the worker to manage the production and reproduction of everyday life.

The self-concept mode is related to the psychological and spiritual aspects of the individual, a dimension that offers the freedom to choose the spiritual preferences and other issues related to the human psyche⁽⁸⁾.

It is important to emphasize that the self-concept mode is divided into two facets. The first is called "physical self" and concerns the individual's perception of all his/her physical characteristics⁽¹¹⁾, which can be impaired in a pandemic context, since, due to isolation, the absence of aesthetic treatments, the new food routine, and even the sedentary lifestyle experienced by many can modify the appearance and body perception.

The second facet is related to the "personal self" and is based on three aspects: the self-consistency, which is the individual's resistance to avoid imbalance; the self-ideal, related to what the person expects of oneself and the world; and the spiritual-ethical-moral self, which is based on beliefs and values⁽¹¹⁾.

By braiding the self-concept with the practice of the Home Office, it is possible to notice that the individual has greater management of his/her time, having the freedom to express in different ways from what occurs in person. If, on the one hand, isolation can affect physical perception, on the other hand, it is imagined that this can also be a fundamental strategy for connecting with one's own essence, the "personal self".

However, the flexibility of the work, expressed in the Home Office modality, when analyzed in depth, shows that there are important differences between the categories and types of work. A study in France, for example, found that the flexibility of working hours and the workplace is better supported when it comes to a work with a limited number of hours in the work day, but it becomes unbearable when there is the simple flexibilization of work that requires long hours⁽¹⁸⁾.

It cannot be neglected that the psychic side of individuals working in remote work can demonstrate fragility due to the lack of socialization, even with the increased family interaction at home, which can generate anxious symptoms, exaggerated concerns with family and friends and, above all, doubts about the future⁽⁵⁾. In the pandemic context, many individuals believe a new work process, in which remote work will be intrinsically incorporated, which

further increases the number of uncertainties experienced by these workers.

In this sense, among the possible affects to workers' health in remote work, mental/emotional illnesses are those of greatest expression in the current scenario. In this regard, there was an increased prevalence of anxiety and depressive symptoms in the population during quarantine (19), and this rate is twice as much as the population that was not experiencing quarantine (20).

The role performance mode is attributed to the social functions performed by the individual, and how he/she sees him/herself inserted in the social environment. At a critical moment, such as the pandemic, the physical insertion in this environment is difficult, which can generate difficulties in identifying the role played in society⁽²¹⁾.

It is understood that the roles played in society depend on the relationships between individuals, and social distancing can generate problems in understanding the roles. However, for the existence of the employee figure, the employer's role was necessary, however, currently, the employment relationship occurs in a way totally detached from the logical sense of face-to-face⁽¹¹⁾.

The interdependence mode focuses on interpersonal relationships and sentimental interactions (21). With the recommendation of social isolation made by the World Health Organization (WHO), millions of people stopped interacting socially with their family and friends, in order to avoid the spread of the new Coronavirus (1), and as a result of this isolation, a deficit in interpersonal relationships was generated, which can affect the mental and physical health of individuals. One solution found to try to maintain these relationships was the use of social networks with the help of technologies such as computers and smartphones.

Moreover, it should be considered that physical isolation occurred due to an imposed situation, that is, it was not the individual's option to live and work with these particularities, suffering influences from the environment in which he/she lives, but also with vulnerabilities

and deficiencies of access and management of existing technologies such as mediation in interaction and exchange for the production of each individual at work.

Nevertheless, every phase of change in individuals' lives generates an expanded need in relation to feelings of affirmation and respect, which are naturally found in physical social relationships ^(8,11). Therefore, the emergence of healthy relationships is emphasized, albeit in a virtual way, in order to meet this social demand, since, for many workers, these are the only possible interactions in the pandemic context.

Nursing plays a fundamental role in the follow-up of individuals at all stages of Callista Roy's Theory. Concerning the work developed in the Home Office context, there is the protagonism of the educational role of nursing, assisting in the establishment of strategies that facilitate all adaptive gear.

CONCLUSION

Professionals working in remote work, in the pandemic context, are interpenetrated in a complex and painful condition, such as tiredness, doubts and expectations about the future, which can bring several problems to their health, such as anxiety and stress.

Despite having greater time management and also increased family life, the Home Office work provokes vulnerabilities in relation to the interpretation of one's role in society, the fulfillment of the physiological needs, the understanding of the particular issues of intimate nature and the relationships that become differentiated with social distancing. Furthermore, Home Office is part of the flexible work modality, and incorporates changes that align with the proposals of a neoliberal model of society and economy, that is, there is need for more than only a naive adherence of the worker, even if imposed by a situation of health crisis, such as the pandemic.

It is necessary to observe the contexts related to specific population groups, in which occurs the greatest impact on health and on the adaptive 6

process, such as women, whose remote work routine culminated in the endless extension of the working day.

Callista Roy's Adaptive Theory supports discussions on the theme and the possibility of adaptation in this new context, either in a timely manner or through transformations in the long-term work process, overcoming personal limitations and discovering ways to do and be in the work field.

Collaborations:

- 1 conception, design, analysis and interpretation of data: Nathalia Henriques Veiga, Yan Zi Li Figueiredo Ten and Vithória Paes Machado;
- 2 writing of the article and relevant critical review of the intellectual content: Nathalia Henriques Veiga, Yan Zi Li Figueiredo Ten, Vithória Paes Machado, Magda Guimarães de Araújo Faria, Mercedes de Oliveira Neto and Helena Maria Scherlowski Leal David;
- 3 final approval of the version to be published: Nathalia Henriques Veiga, Yan Zi Li Figueiredo Ten, Vithória Paes Machado, Magda Guimarães de Araújo Faria, Mercedes de Oliveira Neto and Helena Maria Scherlowski Leal David.

REFERENCES

- Rafael RDMR, Mercedes Neto, Carvalho MMB, David HMSL, Acioli S, Faria MGA. Epidemiology, public policies and Covid-19 pandemics in Brazil: what can we expect? Rev enferm UERJ. 2020;28:e49570. DOI: http://dx.doi.org/10.12957/ reuerj.2020.49570
- Huang C, Wang Y, Li X, Ren L, Zhao J, Hu Y, et al. Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. Lancet. 2020;395:497-506. DOI: https://doi.org/10.1016/ S0140-6736(20)30183-5
- Pan American Health Organization. WHO Characterizes COVID-19 as a pandemic [Internet]. Washington, D.C. (USA); 2020 [cited 2020 Jun 15]. Available from: https://www.paho.org/hq/index. php?option=com_content&view=article&i

- d=15756:who-characterizes-covid-19-as-a-pandemic&Itemid=1926&lang=en
- 4. Brasil. Lei n° 13.979, de 6 de fevereiro de 2020. Dispõe sobre as medidas para enfrentamento da emergência de saúde pública de importância internacional decorrente do coronavírus responsável pelo surto de 2019. Diário Oficial da União [Internet]. Brasília (DF); 2020 [cited 2020 Aug 17]. Available from: https://www.in.gov.br/en/web/dou/-/lei-n-13.979-de-6-de-fevereiro-de-2020-242078735
- Rafalski JC, Andrade AL. Home-Office: Aspectos Exploratórios do Trabalho a partir de Casa. Temas Psicol. 2015;23(2):431-1. DOI: http://dx.doi.org/ 10.9788/TP2015.2-14
- InLoco. Mapa brasileiro da COVID-19. Índice de isolamento social [Internet]. Recife; 2020 [cited 2020 Jun 15]. Available from: https://mapabrasileirodacovid.inloco.com.br/pt/
- Roy C. Extending the roy adaptation model to meet changing global needs. Nurs Sci Q. 2011;24(4):345-51. DOI: https://doi.org/10.1177% 2F0894318411419210
- Roy C, Whetsell MV, Frederickson K.
 The Roy Adaptation Model and Research.
 Nurs Sci Q. 2009;22(3):209-11. DOI: https://doi.org/10.1177%2F0894318409338692
- Medeiros LP, Souza MBC, Sena JF, Melo MDM, Costa JWS, Costa IKF. Modelo de Adaptação de Roy: revisão integrativa dos estudos realizados à luz da teoria. Rev Rene. 2015;16(1):132-40. DOI: https://doi.org/10.15253/2175-6783.2015000100017
- Zavala-Pérez IC, Palacios-Fonseca C, Olea-Gutiérrez CV, Salas-Medina DL, Mercado-Rivas MX. Experiencias adaptativas de mujeres mastectomizadas: una mirada desde el Modelo de Callista Roy. Cult los Cuid Rev Enfermería y Humanidades. 2019;23(53):39-50. DOI: https://doi.org/10.14198/cuid.2019.53.05
- Batista AH, Santiago MAMT, Matias R de C. Teoria da Adaptação - Callista Roy. In: Braga CG, Silva JV, organizadores. Teorias de Enfermagem. São Paulo: Iátria; 2011.
- Haubrich DB, Froehlich C. Benefícios e Desafios do "Home Office" em Empresas de Tecnologia da Informação. Rev Gestão Conex. 2020;9(4):167-84. DOI: https://doi.org/10.13071/ regec.2317-5087.2020.9.1.27901.167-184

- Muscogiuri G, Barrea L, Savastano S, Colao A. Nutritional recommendations for CoVID-19 quarantine. Eur J Clin Nutr. 2020;47:850-1. DOI: https://doi.org/10.1038/s41430-020-0635-2
- Mattioli AV, Ballerini Puviani M, Nasi M, Farinetti A. COVID-19 pandemic: the effects of quarantine on cardiovascular risk. Eur J Clin Nutr. 2020;74:852-5. DOI: https://doi.org/10.1038/s41430-020-0646-z
- 15. Cellini N, Canale N, Mioni G, Costa S. Changes in sleep pattern, sense of time and digital media use during COVID-19 lockdown in Italy. J Sleep Res. 2020;e13074. DOI: https://dx.doi org/10.1111%2Fjsr.13074
- 16. Lara RC, Quartiero EM, Bianchetti L. Trabalho ubíquo na pós-graduação stricto sensu em educação: in/extensificação e multitarefa. Rev Bras Educ. 2019;24:e240014. DOI: http://dx.doi.org/10.1590/S1413-24782019240014
- 17. Organização das Nações Unidas. Policy Brief: The Impact of COVID-19 on Women [Internet]. New York (EUA); 2020 [cited 2020 Aug 15]. Available from: https://www.un.org/sites/un2.un.org/files/policy_brief_on_covid_impact_on_women_9_apr_2020_updated.pdf
- 18. Askenazy P. Shorter work time, hours flexibility, and labor intensification. East Econ J [Internet].

- 2004 [cited 2020 Jun 19];30(4):603-14. Available from: https://econpapers.repec.org/scripts/redir.pf?u=http%3A%2F%2Fwebholycrossedu%2FRePEc%2Feej%2FArchive%2FVolume30%2FV30N4P603_614.pdf;h=repec:eej:eeconj:v:30:y:2004:i:4:p:603-614
- Peng M, Mo B, Liu Y, Xu M, Song X, Liu L, et al. Prevalence, risk factors and clinical correlates of depression in quarantined population during the COVID-19 outbreak. J Affect Disord. 2020;275:114-21. DOI: https://dx.doi.org/10.1016% 2Fj.jad.2020.06.035
- 20. Lei L, Huang X, Zhang S, Yang J, Yang L, Xu M. Comparison of Prevalence and Associated Factors of Anxiety and Depression among People Affected by versus People Unaffected by Quarantine during the COVID-19 Epidemic in Southwestern China. Med Sci Monit. 2020;26:e924609-1. DOI: https://dx.doi.org/10.12659%2FMSM.924609
- Hamadé DC eleto H, Moraes CS, Costa CCP, Martins MOD. Diagnósticos de enfermagem com pacientes coronariopatas à luz da teoria de Callista Roy. Rev Pesqui. 2020;12:130-7. DOI: https://doi. org/10.9789/2175-5361.rpcfo.v12.7137

Received: June 29, 2020

Approved: August 13, 2020

Published: November 26, 2020



The *Revista Baiana de Enfermagem* use the Creative Commons license – Attribuition -NonComercial 4.0 International. https://creativecommons.org/licenses/by-nc/4.0/

This article is an Open Access distributed under the terms of the Creative Commons (CC BY-NC). This license lets others remix, adapt and create upon your work to non-commercial use, and although new works must give its due credit and can not be for comercial purposes, the users do not have to license such derivative works under the same terms.