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Work Stress: A Literature Review

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Abstract: **Stress has aroused the interest of researchers in the health area, due to its consideration as the "disease of the twentieth century", a phenomenon that is currently in the 21st century and considered important in Colombian legislation as an occupational disease, derived from jobs with quantitative overload, repetitive work, jobs with psychosocial effects, etc. The relationship established between stress and work with psychosocial effects refers to the concepts of psychosocial factors, psychosocial risk factors and psychosocial risks. This research is a review study, where it has a defined and structured question, consults relevant data information, using secondary sources of information, necessary to answer the research question, in which also "an analysis is carried out and a conclusion under an orderly and reproducible method".**

Keywords: **Physical Fitness, Human Development**

I. INTRODUCTION

Stress has aroused the interest of researchers in the health area, due to its consideration as the "disease of the twentieth century" [1], a phenomenon that is current in the 21st century and considered important in Colombian legislation as an occupational disease, derived from jobs with quantitative overload, repetitive work, jobs with psychosocial effects, etc. The relationship established between stress and work with psychosocial effects refers to the concepts of psychosocial factors, psychosocial risk factors and psychosocial risks; Following sakurai at al., [2], psychosocial factors are those conditions, both intra-work and extra-work, and of the individual that influence the appearance of stress when Laal [3] constitute psychosocial risk factors. In this sense, work stress has been defined as the result of the appearance of psychosocial risk factors, or as a psychosocial risk that by itself has a "high probability of significantly affecting the health of workers and business operations at medium and long term " [1]. Various studies define stress as a pattern of the body's responses to external demands. For their part, McGrath and Altman [5] define stress as a "substantial imbalance between demand and response capacity". It is also defined as a state with psychological, physical or social symptoms, where it is difficult for the person to establish a link between their abilities and the expectations set in them [6]. In summary, the definitions of stress revolve around the adaptation of the human being to external demands, the body's ability to cope with it and a state of the body with physical, psychological symptoms, etc .; Cuevas et al., (2012) speak of the frequent use of this concept despite the absence of a common conceptual definition of work stress. On the other hand, there are models to explain work stress, such as the effort-reward imbalance model of Siegrist [7], the demands-control model of Karasek [8], these being the basis for defining stress in many studies, assigning greater value to the model description than to the general concept of stress, which further leads to broadening its conceptualizations. Likewise, the association of the concept of stress with variables such as job satisfaction is observed [9] and musculoskeletal problems [10] that lead us to think of stress as a cause or consequence of these variables. Another relevant aspect is the use of the term stress which, like the term tension, translates into Spanish tension, the following questions arise: if strain and stress refer to the same phenomenon of stress? tension? What is the difference between them? From the aspects raised in the previous paragraphs, the interest of this research arises to answer the question, what is the conceptualization of work stress, its explanation models and related variables? This question is developed during the discussion of the results of this study and leads to the analysis of The definition of work stress, its causal models and relevant factors, taking into consideration studies over the last 5 years. Finally, this research focuses on the tertiary sector of the economy, where a higher profile of risks of organizational and psychosocial origin has been observed, indicating that they are real risks, with effects on the health and lives of, with special attention to health personnel such as doctors and nurses.

This research is a review study, where it has a defined and structured question, consults relevant data information, using secondary sources of information, necessary to answer the research question, in which also "an analysis is carried out and a conclusion under an orderly and reproducible method ". A search strategy is established, which includes articles that have the following keywords in the title or summary: work stress, occupational stress; in English: occupational stress, work stress, job stress, or that they will talk about explanatory models of work stress, taking into account as occupational group nurses, doctors or other health care personnel (healthcare workers), the social services sector or social services, or also where it is not mentioned to which sector the population under study belongs; and studies that focus on burnout, qualitative studies or quantitative-descriptive type are excluded. In the present study, critical reading instruments were used for review studies, cohorts and cases and controls.

II. METHOD

The search begins in the APA Psyc NET thesaurus with the keywords: "occupational stress, work stress, healthcare workers, social services, job stress, work stress, occupational stress, working condition, nurse, medical, physician". With the use of Boolean terms like and, or, not and different combinations are made. It is determined that the scope of the research is of articles published between 2011 and 2013, in doctors, nurses and health personnel, published in English and Spanish. In the Science Direct, EBSCO, DOAJ, BASE databases, filters are applied to publications related to the social sciences and health carers, in journals, in analytical studies, in addition to those that they did not mention the population. Then the articles are read and those that, through critical reading through the CASPe instrument, obtain a score that places them in the Q1 quartile are excluded.

III. RESULT

Table 1 shows the initial search of the articles with the keywords and filters mentioned. It is observed that the total of articles was 1082, of which 87 were selected after reading the title and abstract. From the complete reading of these 87 articles, 13 were excluded, because although they were mentioned in the title and abstract, the inclusion variables in the development of the study were not focused. Of the remaining (74) a critical reading was performed, selecting 62 that met quality criteria according to the CASPe format

Table 1: Number of articles reviewed

Articles	Number
Total found	1082
Total selected when reading abstract and titles	87
Total selected when reading in full	74
Total selected after critical reading	62

Source: Compiled by Author

Table 2 shows that the year with the highest frequency in articles on stress was 2013, the language with the highest publication is in English and the country with considerable publication on the subject was Brazil and Spain.

Table 2. Distribution of the frequency of articles taking into account year, language and country

Variable		**N**	**%**
Year	2011	12	19
	2012	11	17
	2013	16	25
	2014	13	21
	2014	11	17
Language	English	63	100
By country	Brazil and Spain	22	35
	U.S	17	27
	Germany, Australia and Romania	10	16
	Iran and Japan	8	13
	Canada, Chile and Italy	6	10

Source: Compiled by Author

Table 3 shows the process of eliminating articles by critical reading that were located in the Q1 quartile (25%), in this way for cross-sectional studies the Q1 quartile placed articles with a score between 0 and 5, for review studies between 4 and 4.9 and for cohort studies between 2 and 4.24. In this way, for cross-sectional studies, 8 were eliminated, from revision 1 and cohorts 3 articles.

Table 3. Cut-off points for article removal

		Cross-sectional	Review Cohorts	Cohorts
N		54	8	12
Minimum		0	4	2
Maximum		8	8	8
Percentiles	25	6	5	4.25
	50	8	7	6
	75	8	8	6

Source: Compiled by Author

Table 4 shows the definitions of work stress in 29 articles of the total of those read, of which two very common definitions are found, firstly stress as a result of demands that exceed the worker's capacity for labor control according to the following. [11]; [12] [13] [14]; and secondly as the biological and psychological response of the person to the demands of the environment [16] [17] [18].

Table 5 shows the instruments most used in the study of work stress with their respective author and dimensions evaluated, it is observed that the Karasek work content questionnaire (JCQ) is presented in 11 studies, followed by the ERI questionnaire (Effort Reward Imbalance) by Siegrist in 6 studies and finally the Copenhagen Psychosocial Questionnaire (CoPsoQ) in 4 studies.

Table 4: Main concepts on work stress

Authors	Concept
Duygulu, et al., (2013); Kaya, et al., (2013).	Result of role ambiguity and role conflict.
Cuevas et al., (2012, p. 2).	"Despite the frequent use and breadth of publications on stress, there is no common conceptual definition"
De Souza, et al., (2011); Khodabakhshi (2013); Aniţei, et al., (2013).	Result of lawsuits that exceed the worker's capacity for labor control.
Pasca & Wagner, (2012), p. 379; (Khalatbari, Ghorbanet al., (2013), p. 860	Psychological state that is accompanied by physical symptoms and social dysfunctions; the result of physical, mental and social pressures.
Lu, Sun, et al., (2013); Arshadi et al., (2013); Mora, et al., (2012)	Biological and psychological response of the person to demands from the environment.
Castillo, Torres, et al., (2013)	Illness resulting from work experiences.
Dargahi and Shaham, (2012), p. 138	"Physical, chemical, or emotional factor that causes bodily or mental stress and may be a factor in the cause of disease," as Merriam-Webster defines it.
Bellagamba, et al.,(2014), p. 357	"Several studies have shown that job stress (JS) is an important component of stress at work"

Source: Compiled by Author

Table 5: Main instruments that measure work stress.

Name	Author	Dimensions
Job content questionnaire (JCQ).	Karasek et al. (1998).	labor (skill discretion, decision-making authority) and social support from work (social support, co-worker, social support supervisor) (Bellagamba, et al., 2013, Tsai and Liu , 2012; Ansoleaga, 2013.
Effort-reward imbalance questionnaire.	Siegrist et al. (2004).	Assesses the dimensions of effort (ie time pressure, interruptions and disruptions, accountability, working overtime, physical demands and increasing demands) and reward (eg salary, respect , promotion, work, safety and support) (Gao, Newcombe, et al., 2013), (Siegrist et al., 2010; Tzeng, et al., 2012).

Copenhagen Psychosocial Questionnaire (CoPsoQ).	Kristensen TS, Hannerz H, Högh A, Borg V. The National Institu- te for Occupational Health in Copenhagen (2005).	This instrument assesses work demands, harmful forms of work organization, job satisfaction, work climate and work-private life conflict (Brattig, et al., 2013; Martínez, et al., 2012; García-Rodríguez et al., 2013).

Likewise, it is identified that the most widely used theoretical models are Karasek's JDC (Job Demands-Control), followed by Siegrist's ERI model and finally the Lazarus and Folkman transactional model. Also the variables most related to work stress are work demands and control, social support, cardiac and musculoskeletal problems, work effort and reward, coping strategies and personality characteristics.

Finally, a search was also carried out for two representative authors on the subject, one of them is Gao [19], who states that stress is a specific reaction to nonspecific factors, that is, it can be produced by any agent; and Robert [20] who poses stress as an internal state, and that as he himself says, his model does not measure it directly.

Discussion This review has focused on articles from the last five years that report research on work stress; It is observed at the conceptual level that some approaches are common based on the interpretations of Kaya [21] studies, such as stress as a response of the individual where the demands exceed their ability to control. However, Kaya [21] with his model does not intend to measure stress (as an internal state of the person), but rather his model speaks of 4 quadrants where there are 4 combinations between labor demands and the worker's latitude of control These are: passive jobs where there is low control and low demand; active jobs where there are high demands and high control; low voltage work with low demands and a lot of control; and finally, jobs with high voltage where there are many demands but little labor control. Many of the investigations carried out in stress are carried out with the reference of Kaya quadrant of jobs with high tension. Clarifying that tension can not only be understood as a result of aspects of the work environment, but also of the joint effects of work demands and freedoms in worker decision-making faced with these demands [24].

This shows that Karasek already makes a distinction between stress as an internal state of the person and work tension as the result of the interaction between demands and worker control, which according to what was found in Stoica [25] it is also understood that stress is a state of the organism that is manifested by a syndrome, the General Adaptation Syndrome (GAS), which is made up of the alarm phases (the alarmogen or agent that interrupts the stable functioning of the organism), adaptation and resistance (the organism it tries to return to its normal state of equilibrium) and exhaustion (it occurs when the adaptation and resistance phase are overcome by the action of the alarmogen). The author refers that not all stress states reach the exhaustion phase, which is where the organism's disease can be generated by weakening the adaptation response.

Stoica [25] also states that, although there is confusion when considering stress as tension, it is not nervous tension, despite the fact that in this state there may be tension when the body tries to adjust to the perception of an alarming factor; understanding that anything in everyday life can be alarming; therefore, perhaps as stated by Bellagamba, et al., [26] Khodabakhsh [27] "work stress (JS) is an important component of stress at work" but not it is the stress itself. On the other hand, the most frequently mentioned stress models are Karasek's demand-control model, followed by Siegrist's effort-reward imbalance model, where stress is generated when there is an over-effort of the worker and few rewards; and finally the Lazarus and Folkman transactional model, which although it is a stress model, in general analyzes stress in terms of cognitive assessment where "the individual is the one who evaluates the environment as stressful (threatening) or not stressful (opportunity) "(Cuevas-Torres and García-Ramos, 2012, p. 4), assessment influenced by individual ways of coping.

Two of the models mentioned above are the most used in research and construction of instruments to measure stress; first, the demand-control model whose instrument is the job content questionnaire (JCQ) by Karasek et al [8] who assesses demands, control and social support at work; second, the effort-reward imbalance model that justifies the questionnaire of the same name by Siegrist et al.[7]. Likewise, these two models theoretically support the Copenhagen Psychosocial Questionnaire (CoPsoQ) by Kath et al., [28], which mainly assesses harmful forms of work organization.

Finally, given the stress models, it can be understood that variables such as demands and job control, individual coping forms, effort and reward are perhaps analyzed as variables that are involved in the onset of job stress, while job satisfaction [9]; [29]; emotional intelligence [10] and musculoskeletal problems [10] are variables frequently associated with work stress.

IV. CONCLUSIONS

There are numerous studies on work stress and some of them have defined this phenomenon as a response to threatening situations, however, and according to the approaches given by Gao [19] and Karasek [8], stress is a state of the organism

different from the tension generated by the result between the interaction of external demands and the subject's level of control.

Regarding stress models, it is observed that they have played an important role in the study of stress, being the basis for its conceptualization and explanation. Likewise, they have been the theoretical basis for the construction of the most used instruments that measure work stress. Finally, work stress has been associated mainly with variables such as job satisfaction, emotional intelligence and musculoskeletal problems and with variables that make up the explanatory models of stress such as work demand-control, reward-effort and individual coping modes.

V. LIMITATIONS

As limitations of this research, the difficult understanding of some articles published in English from non-English speaking countries is observed, this makes it difficult to understand some of the ideas raised in the texts. It is also identified that the limitation in the time range of the chosen articles (the last 5 years) has possibly left aside articles from previous years with relevant contributions to this research.

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