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INTRODUCTION

It becomes necessary to strengthen the knowledge of the real link between the epidemic of occupational diseases in health professionals and the increasing number of adverse events to patients^{1,2}.

OBJECTIVE

To assess if the patient safety culture is related with individual and organizational factors, as well as with the job satisfaction, depression and burnout syndrome among healthcare workers.

METHODS

Study design

This is a observational analytical study conducted between August and November 2016 in a teaching hospital.

Setting

We conducted the research in a teaching hospital, in the northwestern area of São Paulo State, in Brazil. In 2016, institutional and hospital mortality rates were 5% and 6%, respectively, with a mean of 640 hospitalizations per month and 360 surgeries for the latter. This hospital is a reference in healthcare for 13 cities.

Participants

Professionals with an employment relationship \geq to three months were eligible. Individuals under notice, on medical leave or on vacation period were excluded.

Participants were recruited by random probabilistic sampling.

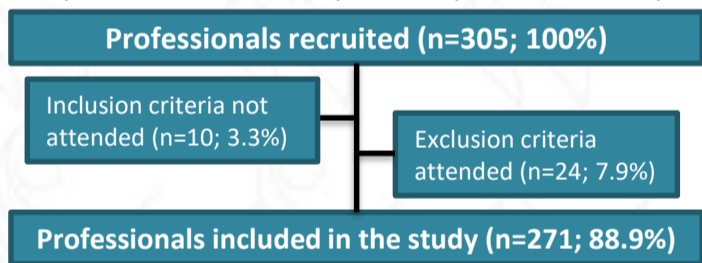
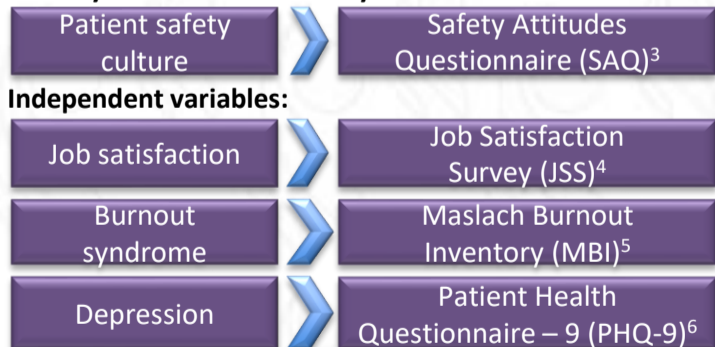


Figure 1. Composition of the study sample

Variables and data sources / measurement

Sociodemographic, economic and occupational characteristics were analyzed (electronic questionnaire: tablets).

Primary outcome of the study:



Study size

We calculated the number of participants (95% CI: 246). We reached a total number of 270 participants after 10% was added to our previous amount of individuals.

Statistical methods

Adjusted analyzes were performed and the prevalence ratio (PR) was calculated using a Poisson regression. Pearson correlation coefficient (r) and the structural equation modeling (PLS-SEM) were used for analysis. The confidence interval was set at 95% (95% CI) and the significance level at 5%.

Ethical aspects

The research was approved by the Research Ethics Committee (Protocol no. 1.644.886/2016).

RESULTS

Participants

271 professionals constituted the final sample of this study. Individuals were more frequently female (78.6%), with ages between 36-50 years (42.1%), from the nursing staff (46.1%) and with 5-10 years of work in the area (27.3%).

Association between sociodemographic and occupational variables with patient safety culture

The mean SAQ score was 68.2 (95% CI: 65.8-70.5), which demonstrates a below-optimal level of safety culture. It is possible to relate the time in the position, to safety culture (Table 1).

Table 1 - Adjusted (multivariate) analyzes.

| Characteristics | SAQ Average | SD | β | p-value |
|---------------------------|-------------|------|---------|---------|
| Time working (years): < 1 | 76.6 | 8.9 | Ref. | - |
| 11-20 | 63.5 | 14.7 | -13.1 | 0.05 |

SD, standard deviation; β , regression coefficient.

Association between patient safety culture with job satisfaction, burnout and depression

The Pearson coefficient analysis demonstrated the substantial link between the job satisfaction and safety culture ($r = 0.69$, $p < 0.001$; Fig. 2), just as the association – deemed moderate – between the emotional exhaustion and depersonalization (as defined by the MBI) and the safety culture ($r = -0.47$, $p < 0.001$; $r = -0.4$, $p < 0.001$, respectively).



Figure 2. Pearson's correlation coefficient between patient's safety culture and job satisfaction.

PLS-SEM confirmed the relationship of job satisfaction and the absence of burnout syndrome as predictive aspects of the patient safety culture ($p < 0.001$; Fig. 3).

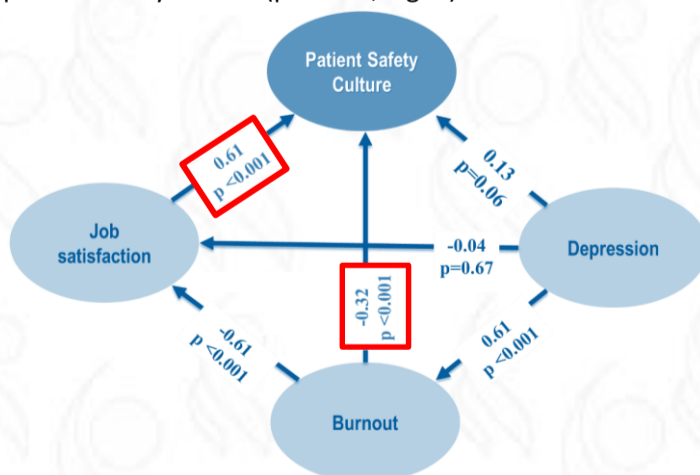


Figure 3. Pathways diagram of relationship between patient safety culture with job satisfaction, burnout and depression.

CONCLUSION

The patient safety culture is related to job satisfaction and burnout syndrome in hospital professionals. These findings suggest that psychosocial factors influence the quality and safety of care provided by health workers.

REFERENCES

1. Eisenberg JM, Bowman CC, Foster NE. Does a healthy health care workplace produce higher-quality care? *Jt Comm J Qual Improv.* 2001;27(9):444-57.
2. Hall LH, Johnson J, Watt I, Tsipa A, O'Connor DB. Healthcare Staff Wellbeing, Burnout, and Patient Safety: A Systematic Review. *PLOS ONE.* 2016;11(7):e0159015.
3. Carvalho REFLD, Cassiani SHDB. Cross-cultural adaptation of the Safety Attitudes Questionnaire - Short Form 2006 for Brazil. *Revista Latino-Americana de Enfermagem.* 2012;20:575-82.
4. Souza ACG, Milani D, Alexandre NMC. Adaptação cultural de um instrumento para avaliar a satisfação no trabalho. *Revista Brasileira de Saúde Ocupacional.* 2015;40:219-27.
5. Maslach C, Jackson SE. The measurement of experienced burnout. *Journal of Organizational Behavior.* 1981;2(2):99-113.
6. Kroenke K, Spitzer RL, Williams JBW. The PHQ-9: Validity of a Brief Depression Severity Measure. *Journal of General Internal Medicine.* 2001;16(9):606-613.