



DEPARTAMENTO DE ENGENHARIA BIOLÓGICA
UNIVERSIDADE DO MINHO - ESCOLA DE ENGENHARIA



Universidade do Minho
Escola de Engenharia
Departamento de
Produção e Sistemas



CENTROALGORITMI

DEVELOPING A FOOD SAFETY ORGANIZATIONAL CULTURE ASSESSMENT MODEL

R. Gil ^{1,2}; P. Domingues ^{2,3}

¹⁾ Departamento de Engenharia Biológica, Universidade do Minho, Braga; Campus Gualtar, 4710-057, Portugal

²⁾ Departamento de Produção e Sistemas, Universidade do Minho, Braga, Campus Gualtar, 4710-057, Portugal

³⁾ ALGORITMI Centro de Investigação, Escola de Engenharia, Universidade do Minho, Guimarães, Campus Azurém, 4800-058, Portugal

Introduction

A food safety culture is a specific form of organizational culture, which represents a way in which an organization treats food security and has been defined as “an aggregation of prevailing, constant learned, shared attitudes, values, and beliefs that contribute to hygiene and safety behavior standards used in a specific food handling environment” (CJ Griffith, 2010).

Most food safety interventions today are designed to promote safe food handling practices through training, enforcement and implementation of food safety management systems. The literature is fuzzy about the outcomes of interventions (Mitchell *et al.*, 2007) and even less persuasive about the effectiveness of knowledge-driven food safety training (Egan *et al.*, 2007; Kassa, Silverman & Baroudi, 2010). Researchers have found that greater knowledge about food safety is not necessarily translated into improved practices (Luby, Jones, & Horan, 1993; Pilling V. K. *et al.*, 2008; Roberts C. A. *et al.*, 2008.).

Authors have stated that the importance of safety culture in improving worker behavior is a concept that can be applied to the food industry (Christopher J Griffith, 2010; Yiannas, 2009) and recognize that there are food safety issues in the food industry that are partly caused by behavioral problems, including those that involve organizational culture (Christopher J Griffith, 2010; Yiannas, 2009)

Objetives

- Define indicators / metrics that will popularize each of the dimensions presented;
- Define the importance of each indicator/metric;
- Development of the food safety culture evaluation model;
- Model scale validation.

Methods

Initially, the project is being carried out with the help of data collection programs such as *LinkedIn*, *LimeSurvey* and *GoogleForms*, which allow to obtain and analyze the results of respondents who should preferably be FoodExperts. In addition to completing the information obtained, audit reports were analyzed, and a thorough literature review was performed on the metrics used for the good performance of organizations.

An online survey is currently underway through *LimeSurvey*, which is available through the QRcode in this poster (Fig.2).

Conclusion

Currently, as the study is ongoing, there are no definite conclusions yet, so there is no discussion of the results. In the near future, and with the development of this evaluation tool already finalized, the objective will be to be able to implement it within companies in order to reach its peak performance in food hygiene and safety behaviors when handling foodstuffs.

Bibliography

- Egan, M. B., Raats, M. M., Grubb, S. M., Eves, A., Lumbers, M. L., Dean, M. S., & Adams, M. R. (2007). A review of food safety and food hygiene training studies in the commercial sector, 18, 1180–1190. <https://doi.org/10.1016/j.foodcont.2006.08.001>
- Griffith, C J. (2010). Food safety culture : the evolution of an emerging risk factor? <https://doi.org/10.1108/00070701011034439>
- Kassa, H., Silverman, G. S., & Baroudi, K. (n.d.). Effect of a Manager Training and Certification Program on Food Safety and Hygiene in Food Service Operations, 13–20.
- Luby, S. P., Jones, J. L., & Horan, J. M. (1993). A large salmonellosis outbreak associated with a frequently penalized restaurant, (1993), 31–39.
- Mitchell, R. E., Fraser, A. M., Bearon, L. B., Mitchell, R. E., Fraser, A. M., & Preventing, L. B. B. (2007). Preventing food-borne illness in food service establishments : Broadening the framework for intervention and research on safe food handling behaviors, 3123. <https://doi.org/10.1080/09603120601124371>
- Pilling, V. K., Brannon, L. A., Shanklin, C. W., Roberts, K. R., Barrett, B. B., & Howells, A. D. (2008). Food Safety Training Requirements and Food Handlers ' Knowledge and Behaviors, 28(3), 192–200.
- Roberts, C. A. (2001). *The food safety information handbook*.
- Yiannas, F. (2009). *Food Safety Culture*.

The research theme “Developing a Food Safety Organizational Culture Assessment Model” is a topic that is less explored, but with growing interest today. However, the theme “Food Safety Culture” has been addressed by many authors over the last few years. After an extensive and comprehensive literature review on the subject, it was concluded that few authors have developed evaluation models for the food safety culture, and that those that exist are not specific and very rudimentary.

The present study is based on the document proposed by the GFSI on the culture of food safety - “A culture of food safety - A preposition paper from the global food safety initiative (GFSI, V1.0; 4/11/18)”, where characterizes it in five dimensions: 1) Mission and Vision; 2) People; 3) Consistency; 4) Adaptability; 5) Hazards and Risk Awareness; each with their associated critical factors. (Fig.1)

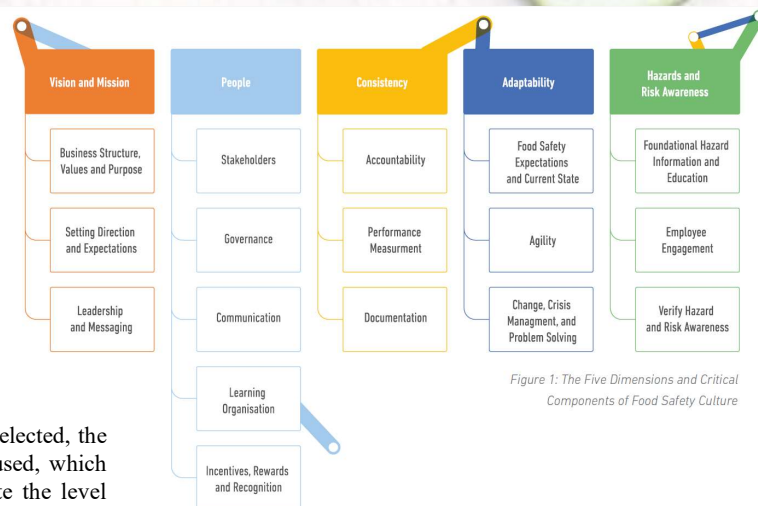


Figure 1: Dimensions proposed by GFSI assessment of food safety culture. Source: Paper "Food Safety Culture, 2017"



Figure 2: QRcode for access to the Food Safety Culture Assessment Questionnaire in Portuguese and English