Teachers Facing Psychosocial Risks: Adaptation of a French Context Questionnaire to Egypt

Fatiha Tali[1,2][a], Christine Lahoud[3][b], Elsa Negre[4][c] and Marie-Hélène Abel[5][d]
[1]*EFTS, Université de Toulouse Jean Jaurès, Toulouse, France*
[2]*LINE, Université Côte d'Azur, France*
[3]*UFEID Lab, Université Française d'Egypte, Cairo, Egypt*
[4]*Paris-Dauphine University, PSL Research University, CNRS UMR 7243, LAMSADE, Paris, France*
[5]*HEUDIASYC, Université de Technologie de Compiègne, Compiègne, France*

Keywords: Education, Questionnaire, Data Analysis, Information Systems.

Abstract: The internationalization of university studies has led to reforms which may have produced significant changes in the working conditions of teachers. This situation can lead to the development of factors promoting the emergence of psychosocial risks (PSRs) that can have significant implications on the health of these teachers. One of the well-known PSRs is the stress that teachers may experience due to heavy workloads, lack of social support and limited resources. This can lead to frustration, lack of motivation and/or burnout, which can affect the quality of teaching and student outcomes. Although many studies exist in France to identify the PSRs in order to prevent them, it is yet limited in Egypt. This work is in line with the objectives of the Imhotep project in order to prevent teachers from psychosocial risks at work. The aim of this study is to present the process of adapting and validating a French questionnaire for assessing psychosocial risks in the Egyptian context.

1 INTRODUCTION

The world is now facing great difficulties in educational systems due to the Covid19 pandemic and the warnings and restrictions it imposed on the whole world. These restrictions imposed on teachers and learners different methods from what they were previously accustomed to in the educational process, which necessitated the use of different methods in the education process that teachers had not previously used, which creates problems on their part in how to use these methods in the best way to perform their tasks. The difficulties teachers face are not limited to the consequences of the Covid19 pandemic, but there are other difficulties represented in the different classes and social cultures of the learners according to the residential areas in which they grew up and the psychological factors of the learners in terms of the learner being a member of a family consisting of many individuals and income of the family and whether the learner suffers from psychological or family problems, etc., which may affect other learners as well as affecting the teacher himself. All these factors affect, in some way, teachers in performing their tasks and how they deal with the learners, as well as the families of the learners.

Furthermore, teachers are increasingly confronted with problems (work overload, stress, management of difficulties in and out of class, lack of time...), it seems important to be able to measure psychosocial risks in order to be able to better prevent them. Our study aims to propose a questionnaire for the Egyptian context in which these psychosocial risk issues have been little studied to our knowledge. Based on a questionnaire in French, we propose here to make a qualitative validation of a questionnaire that could be used for these purposes of measurement and prevention of PSRs.

The present document is structured as follows. In section 2, we present an overview of research on

[a] https://orcid.org/0000-0003-2823-6755
[b] https://orcid.org/0000-0002-4520-634X
[c] https://orcid.org/0000-0001-6401-3837
[d] https://orcid.org/0000-0003-1812-6763

Tali, F., Lahoud, C., Negre, E. and Abel, M.
Teachers Facing Psychosocial Risks: Adaptation of a French Context Questionnaire to Egypt.
DOI: 10.5220/0012059600003470
In *Proceedings of the 15th International Conference on Computer Supported Education (CSEDU 2023) - Volume 1*, pages 417-426
ISBN: 978-989-758-641-5; ISSN: 2184-5026

psychosocial risks in the educational domain, including risk measurement and questionnaire development. Section 3 presents an existing questionnaire that was selected for adaptation in a French context. Section 4 describes the adaptation process of the French questionnaire to an Egyptian context, including the adaptation protocol, the obtained questionnaire, and the results of the pre-test. Section 5 provides a detailed discussion on the validation of the questionnaire. Finally, section 6 concludes the paper and highlights future work that is expected in this area.

2 RELATED WORKS

In an exponentially changing world, the education system regularly undergoes significant restructuring in order to respond to social and cultural changes with the aim of increasing the academic success of students. The national education system in Egypt has put in place various plans to bring as many students as possible from the same age group to the baccalaureate level. However, despite various reforms, we note that students' academic success is still linked to the socio-economic contexts of the students, their places of residence and schooling (Bouhali, 2021).

According to the Ministry of Education's teacher guidelines, teachers must support students and respond to their difficulties by implementing differentiated teaching methods and by considering their special educational needs. These ministerial prescriptions are combined for the teacher according to the areas in which he or she works, and the teacher must constantly adapt to different contexts, which led to changes in teachers' working conditions (Bodin et al., 2018).

The use of digital technology is part of the recommendations and expectations in terms of teaching from the point of view of the Ministry of Education. However, teachers have difficulty integrating digital education, in particular because of a lack of training, a lack of support for use, and technical problems (Dias-Chiaruttini et al., 2020). The pandemic crisis has globalized the obligation for teachers to use digital technology, and many of them have been put at risk by injunctions that are sometimes poorly supported in practice (Tera & Rabie, 2020). The difficulties have been accentuated on the one hand by the problems of training and use of teachers, but also by the inequalities in access to digital technology for students. The teachers were then caught in the tension of the obligation of pedagogical continuity, but without being able to act effectively with their students due to a lack of materials or skills. For example, faced with the emergency caused by this pandemic, academic institutions asked teachers to carry out their mission via the Internet without any prior preparation (Vidal, 2020). Thus, teachers were confronted with many questions: How to prepare an online course, with which materials? Do I have the necessary skills to use these materials effectively? How do I build and run a course that will be delivered online? Who provides the necessary materials? How do I make sure that the learners are in the right conditions to access the course that I will produce online? Etc. Finally, the experience of the pandemic has had an impact on the mental health of teachers. For example, an increase in stress and anxiety has been reported. Moreover, teachers may also face mental health problems such as depression and anxiety due to job-related factors such as lack of support or excessive demands (Zhang et al., 2020).

All these issues have accentuated the physical and moral exhaustion that teachers are facing, essentially linked to their lack of means and training to carry out their mission. In fact, mental health contributes greatly to an individual's well-being and enables him or her to cope with tensions of all kinds, perform productive work and participate in the life of his or her community (OMS, 2023). Thus, the set of injunctions presented above can lead to psychosocial risks. One of the most well-known PSRs in the work environment is stress. Indeed, (Berlanda et al., 2019) found that stress is one of the main psychosocial risks for teachers. Factors contributing to stress include excessive workloads, lack of social support and resources, as well as unrealistic expectations. Furthermore, Jégo & Guillo, (2016) indicated that primary and secondary school teachers, due to their direct contact with children and adolescents, are more likely to be confronted with PSR factors than higher education teachers, who are confronted with adults. This study shows that primary school teachers experience more psychosocial stress in their work, particularly in terms of intensity, complexity of work and lack of hierarchical support. Moreover, teachers in their thirties or more experienced are more affected by these PSR factors than younger teachers, which may be explained by the fact that they have experienced fewer professional difficulties during their short careers.

Egyptian teachers face various psychosocial risk factors, including workload, professional pressure, lack of support, and interpersonal conflicts. Teachers also face high levels of professional stress,

harassment, and discrimination, which can have negative consequences on their well-being and mental health (Desouky & Allam, 2017). Similarly, (Khalifa et al., 2022) examined the impact of school violence on the mental health of Egyptian teachers and found that school violence is associated with high levels of stress, depression, and anxiety among teachers. (Desouky & Allam, 2017) showed that teachers working in private schools are faced with higher levels of psychosocial risk factors than those working in public schools. In addition, teacher burnout is another significant psychosocial risk for educators. (El Helou et al., 2016) highlighted that teachers may experience burnout due to excessive workloads, isolation, lack of recognition, or conflicts with students or parents. Another issue is school violence. Factors such as lack of support from colleagues and administrators, as well as negative attitudes from students and parents, may contribute to the increase in school violence (ibid, 2016).

The findings of these studies underscore the importance of implementing measures for preventing and managing stress, violence, harassment, and discrimination in both public and private Egyptian educational institutions.

Regarding these PSRs, which are truly at the heart of societal problems and the world of education, it appears that, to our knowledge, there is no questionnaire for evaluating these risks among the teaching population in the Egyptian context. Indeed, the PSR factors researches we found in Egypt focused more on teachers' health problems such as muscular (Fahmy et al., 2022) or voice (Bolbol et al., 2017) disorders related to working conditions. Therefore, the objective of our article is to present the process of translation and adaptation of a questionnaire specific to these risks among teachers in Egypt.

2.1 Measuring Risks

The best-known model for measuring job stress for nearly thirty years has been presented by (Karasek, 1990). This model is based on three dimensions:

- Social support: refers to help and recognition from colleagues and/or supervisors.
- Psychological demands: refers to the psychological workload (quantitative and qualitative).
- Decision latitude: is divided into two sub-dimensions, skill use and decision autonomy. It refers to the ability to use and develop one's skills and personal qualifications through freedom of work styles and participation in related decisions.

Decision latitude and social support have been identified as positive key factors that reduce the adverse health effects of psychological demands. Thus, low demands with high autonomy refers to relaxed work, and high demands with low autonomy refers to an overloaded work or "jobtrain". This situation would lead to high stress and risk of illness.

However, Karasek's model lacks contextualization because it is based on general measures of the different variables present in the model. The JDR model (Bakker et al., 2003) overcomes this general aspect of Karasek's model by proposing two categories: on the one hand, demands, which include workload and risk factors for mental health, and on the other hand, resources, which cover the dimensions of social support and latitude that support the process of motivation at work.

Predictors of mental health at work were studied using the Karasek measurement scale combined with specific teacher-researcher scales in the JDR model to measure the physical and/or psychological costs that teachers may face (Youmou, 2022). Indeed, this study shows that resources at work, through the freedom to make decisions at very high levels, can have curvilinear effects, which can negatively affect the health of teacher-researchers.

In our questionnaire, resources were added to the sections "working environment", "Personal and Professional Development", "Lack of Interest in Work" and "Hostile Behaviours" to find out if the working environment allows the teacher to develop their skills (training, seminars, conferences, etc.), if they have the necessary resources to do their work properly, if their work is recognized (colleagues, hierarchy, etc.). While the demands were expressed by the section "Intensity and Complexity of Work", to know the workload of teachers.

In this work, two methods were used to measure PSRs at work:

- A qualitative method, to evaluate the questionnaire by the Egyptian community. This step will be detailed in the "pre-test" section.
- A quantitative method, to collect data from teachers and analyse them and propose a prediction model of PSR in order to prevent them. This step will be the object of future works.

2.2 Creating Questionnaire

This work is a part of the project Imhotep which aims to prevent teachers from PSRs. To achieve this objective, this first work will allow the detection of these risks by establishing a questionnaire adapted to

the Egyptian context. The questionnaire is an adaptation of a French questionnaire to collect information about the psychosocial risk that teachers may face in Egypt. This questionnaire is combined with another questionnaire (Nashed et al., 2022) in order to collect the basic information about teachers (profile, living environment, working environment, personal and professional development, and advancement of students), and published as online questionnaire.

It should be noted that more and more researchers are turning to online survey methods to collect data. The concept of online survey is generally opposed to more conventional/traditional methods of polling by mail, telephone or face-to-face. However, there is no universal definition of what constitutes an online survey. (Lehdonvirta et al., 2021) uses this term to designate surveys where respondents are not only recruited via Internet but must also complete an online questionnaire.

Like traditional surveys, online surveys must recruit participants. There are two modes of recruitment: (i) probabilistic, where participants are chosen and targeted so that the results are generalizable to a wider population of interest and (ii) non-probabilistic, where the probability that an individual from a population of interest belonging to the sample is unknown (Lehdonvirta et al., 2021). In the case of a probabilistic online survey, it is possible to control the sampling by only distributing the questionnaire to a closed list of email addresses, or by recruiting participants by more traditional methods (phone, face-to-face, etc.) and by providing them with Internet access if necessary to respond to the questionnaire (Durand, 2013; Lehdonvirta et al., 2021). Conversely, during an online survey with non-probabilistic recruitment, the sampling is not controlled (e.g. invitations to the survey posted on platforms and then relayed via social networks without supervision, etc.). (Bigot et al., 2010) names the latter, which corresponds to our own survey method, “unrestricted self-selection survey” (known as “river sampling”). The use of online survey with non-probabilistic recruitment has many advantages (e.g. decorrelation of survey costs from sample size, reduction of collection times and geographic constraint, etc.) (Durand, 2013) but also disadvantages (e.g. coverage error linked to the digital divide and self-selection of respondents).

Many studies, including (Mellon & Prosser, 2017), show that regular users of social networks are hardly representative of the national population. Thus, the use of social media as a dissemination platform can considerably bias the representativeness of a sample of respondents. However, traditional survey methods also come up against problems of coverage and exclusion (e.g. quality of the telephone network, etc.). In all cases, generalizing to a larger population the results of studies obtained from a sample of non-probabilistic respondents requires a precise understanding of the socio-demographic differentiation operated by these different coverage filters. However, in the case of online survey methods using river sampling, these sources seem to be still poorly understood, making the results difficult to generalize and vulnerable to possible misappropriation (Lehdonvirta et al., 2021).

To the bias induced by the exclusion of less connected individuals is added the self-selection bias originating from a non-probabilistic recruitment mode. One speaks of self-selection when respondents choose to participate in a survey themselves. It is therefore a frequent occurrence in the survey world, which is not limited to the case of online surveys. The research carried out on this subject presents certain points of consensus: the self-selected respondents are more interested in the subject treated than the rest of the population, feel more concerned, and are more likely to have strong opinions concerning the themes of the survey (Frippiat et al., 2010; Hwang & Fesenmaier, 2004).

Unfortunately, if these trends are commonly identified, many authors note that it is difficult to correct the biases induced by uncontrolled voluntary participation (Bigot et al., 2010; Frippiat et al., 2010).

It should be noted that the biases identified in our survey do not impact the quality/validity of the results but give some characteristics of the respondents.

3 EXISTING QUESTIONNAIRE CARRIED OUT IN A FRENCH CONTEXT

In France, measures of psychosocial risks among teachers were only considered relatively late with dedicated tools from the 1990s onwards (Niedhammer et al., 2000). We note the first ministerial orders issued in 2013 in the civil service to draw up a plan for the assessment and prevention of psychosocial risks for implementation in 2015. In this context, the Ministry of Education called on the Directorate for Evaluation, Forecasting and Performance (DEPP) of the Ministry of National Education, Higher Education and Research, which offered a new statistical approach. Building on the initial work presented in the survey report conducted

by a panel of experts (Collège d'expertise, 2011), the DEPP evolved the evaluation protocol by incorporating a correspondence factor analysis. The Collège d'expertise identified six dimensions for analysing PSRs: work intensity; emotional demands; autonomy and room for manoeuvre; social relations at work; conflicts of values and meaning of work; socio-economic insecurity.

The six dimensions of PSR factors of the Collège d'expertise taken up by the DEPP:

- Work intensity includes risk factors related to work under pressure, pace constraints, difficulty in reconciling work and personal life, or high skill requirements.
- Emotional demands are linked to the need to control one's emotions, especially in front of an audience.
- Autonomy and room for manoeuvre refer to the possibility in one's work to be an actor, to participate in decisions, to use one's skills and to develop oneself.
- Social relations at work deal with the relationship between the employee and his/her hierarchy or colleagues, but also with the recognition of his/her work.
- Value conflicts and the meaning of work refer to situations where a person is asked to act in contradiction with their professional or personal values.
- Economic insecurity includes the risk of losing one's job and uncontrolled changes in the task or working conditions.

The DEPP in turn adapted this questionnaire by analyzing the common factors on the many items of the survey and recommended seven indices of exposure to PSR factors, which cover the six dimensions identified by the Collège d'expertise. Therefore, the objective is to be able to calculate an overall index of exposure to PSR factors, tested on the items relating to the state of health declared by the questioned staff. The interest of this DEPP questionnaire is that it targets the population of teachers in primary, secondary and higher education. The choice of this questionnaire is therefore relevant as it corresponds perfectly to the target population of Egyptian teachers at the three levels of education, which is the focus of the Imhotep project in Egypt.The initial questionnaire was adapted by transforming some items and recalculating associated scores for some axes. In total, 74 variables grouped into seven factors following the CFA were used to calculate synthetic indices of exposure to PSR factors: Factor 1: Work intensity and complexity; Factor 2: Lack of interest in work; Factor 3: Hostile behaviour; Factor 4: Lack of hierarchical support; Factor 5: Emotional demands; Factor 6: Tension in the management of personnel; Factor 7: Lack of support from colleagues.

The main interest of this questionnaire, which has been adapted, tested and validated by the DEPP, is that it can be used to assess PSRs in the teaching population at all levels of education. In addition, the factors selected make it possible to cover all the dimensions related to PSRs, which is what we are seeking to address in our research. This questionnaire was therefore chosen for adaptation to the Egyptian cultural context.

4 CASE STUDY: ADAPTING THE QUESTIONNAIRE

4.1 France vs. Egypt

The procedures for accessing field studies differ from one country to another. In Egypt, data collection and surveys must be submitted to the Central Agency for Public Mobilization and Statistics for approval, in accordance with Republican Decree No. 2915 of 1964 regarding the establishment and organization of the Central Agency for Public Mobilization and Statistics (Article No. 10). And the decision of the head of the agency No. 231 of 1968 regarding conducting statistics, censuses, referendums and surveys (Article No. 2). The request must include: (1) a letter from the applicant's research institution addressed to the Director General of the General Directorate of Security at the Central Agency for Public Mobilization and Statistics requesting the implementation of the research specifying the field of study or research, its purpose, the target audience, the regions targeted by the study and the number of samples desired, (2) a signed form with a photocopy of the national number or passport of the persons who will be authorized to collect the data, (3) an Arabic translated copy in case the submitted questionnaire is in a foreign language.

However, before accessing field studies in Egypt, researchers should be aware of the cultural and societal norms of the research area in order to conduct respectful and effective research. This task is a challenging one for women and not recommended since she could face some concerns around safety, gender-based discrimination, or limited access to certain facilities or resources.

On the other hand, it should be mentioned that on July 15, 2020, the Egyptian government has introduced the first stand-alone privacy law (No. 151) aimed at regulating and protecting citizens' online data. The terms of the new law are modelled on the European Union's General Data Protection Regulation (GDPR), with similar concepts and definitions.

4.2 Adaptation Protocol

In order to be able to use the questionnaire developed by the DEPP, we had to adapt it to the cultural and linguistic context of Egypt (Harkness et al., 2003, Kamppuri, 2011). As the Imhotep project is aimed at building a platform of recommendations for the prevention of PSRs in Egypt among the teaching population, it was necessary to set up an adequate protocol. We chose to use an inter-rater method to select the items to be kept in the Egyptian version of the questionnaire. In order to respect the accepted protocols in terms of translation of the questionnaire, we refer to the recommendations of (Bouletreau et al., 1999). Two indispensable steps: a literal translation and an adaptation to the cultural context, life habits and idioms of the target population. This second step constitutes the cross-cultural validation of the document. It is essential for items dealing with social or psychological dimensions. The choice of translating this questionnaire into English is explained by the fact that the main language of instruction in higher education in Egypt is English.

(Bouletreau et al., 1999) recommend four stages of questionnaire translation in order to limit the various problems related to vocabulary and usage in the target country during the transfer from one language to another. We are therefore involved here in a qualitative evaluation of the questionnaire which was carried out in three stages that we adapted from the recommendations of (Bouletreau et al., 1999).

Stage 1 involved four persons, three teacher-researchers and a doctoral student (two French associate professors, one Egyptian associate professor and one doctoral student), three of them were completely bilingual (French/English). First, we had to select the items considered relevant to the Egyptian context. Some questions had no cultural meaning or were not accepted as a type of questioning (considered too intrusive with regard to the cultural practices of the country). In order to proceed with this step, it was decided that for each item, each judge would choose independently whether to keep the item or not.

Step 2 allowed us to cross-reference the choices of the different items on the French questionnaire and to retain only those that had been selected by at least 3 of the 4 judges in step 1.

Step 3 consisted in translating the items selected in step 2 into English by the two bilingual Egyptian judges.

Step 4 allowed two other bilingual judges (a French University Professor and an associate professor living in Egypt) to take back the translations made in step 4 and possibly remove some items or reword them. At this stage, the items referring to the "Hostile Behaviours" factors were reworked.

4.3 Obtained Questionnaire

In total, out of the 74 variables grouped on seven factors of the initial questionnaire, three main factors were retained with regard to the Egyptian context with 16 variables adapted and translated into English: Factor 1: Intensity and complexity of work (Figure 1); Factor 2: Lack of interest in work (Figure 2); Factor 3: Hostile behaviors (Figure 3).

The questionnaire was created using limesurvey and posted online with the UTC domain [5]. The questions are closed-ended questions of two types: Yes/No responses, and Likert scale (Range from 1 to 5 with different semantic scales such as Never, Not very often, Sometimes, Very often, Always). This choice was made, on the one hand, to offer teachers simple, quick and easy to answer questionnaires, and on the other hand to limit the possibilities of answers and therefore collect consistent answers facilitating their analysis.

4.4 Pre-Test

The objective of this study was to validate the translation and the adaptation of the French questionnaire on the Egyptian context. To achieve this objective, four questions has been added at the end of the questionnaire as an evaluation process (Figure 4). Two of questions are closed-ended to evaluate the complexity and the length of the questionnaire and two questions are open-ended to let the participants express themselves freely, and allow them to reflect on their experiences. The evaluation process was therefore carried out from an anonymous survey posted online and distributed via emails (due to the GDPR, we have limited ourselves to our professional mailing lists). As part of our evaluation process with probabilistic recruitment, six results has

[5] https://limesurvey.utc.fr/index.php/387696?lang=en

been collected for a period of two days only from sending the emails to teachers (2 women, 4 men, 2 professors and 4 associate professors).

This process follows a qualitative measure to evaluation the perception of Egyptian teachers of the questionnaire in order to modify it if necessary before publishing it on a large scale, and collect a large quantity of data.

The six collected results show that the questionnaire is not complex (66,66% answered level 1, and 33,33% answered level 2). Although that the questionnaire was combined with another questionnaire (section 2.3), teachers found that it is not too long (3 neutral answers, 2 disagree, 1 agree). Furthermore, 100% found that no questions bother them and 16,66% (1 person) was bothered by a question about self-behavior from the combined questionnaire (Nashed et al., 2022). Table 1 shows that 100% of teachers responded the questionnaire without any fear as it is anonymous and one of them hope that this study will improve their career.

Table 1: Answers of question 4 of the evaluation questions.

No, as long as it is anonymous
No, since it is anonymous
None
No. it is more or less a questionnaire. Why I should worry filling it! In opposite way around, I participated to help colleagues who are actively doing their research. No sources of fear at all :)
No, it is not. We as professionals have to cooperate and help each other. Meanwhile I hope the results of such questionnaires will help improving our careers.
No.

5 DISCUSSIONS

The validation of a questionnaire is a crucial step in ensuring the quality of data collection and ensuring the validity and reliability of the collected data, especially when adapting a questionnaire from one cultural context to another (Harkness et al., 2010; Van de Vijver & Leung, 2021).

In our study, we adapted a questionnaire on psychosocial risks among teachers to the Egyptian culture and conducted a qualitative validation to assess the relevance and validity of this adaptation. We involved bilingual French researchers and Egyptian teachers to evaluate the relevance of the questionnaire items and to identify culturally specific concepts that needed to be added or modified (Sousa & Rojjanasrirat, 2011).

Our qualitative validation identified some items that were less relevant for the Egyptian context and were therefore deleted or modified. We verified that the instructions and question formulations were understandable for Egyptian respondents (Li, 2016). Pre-tests were conducted with six Egyptian teachers from different disciplines and diverse backgrounds to ensure that they encountered no obstacles when using the questionnaire or understanding the items presented therein.

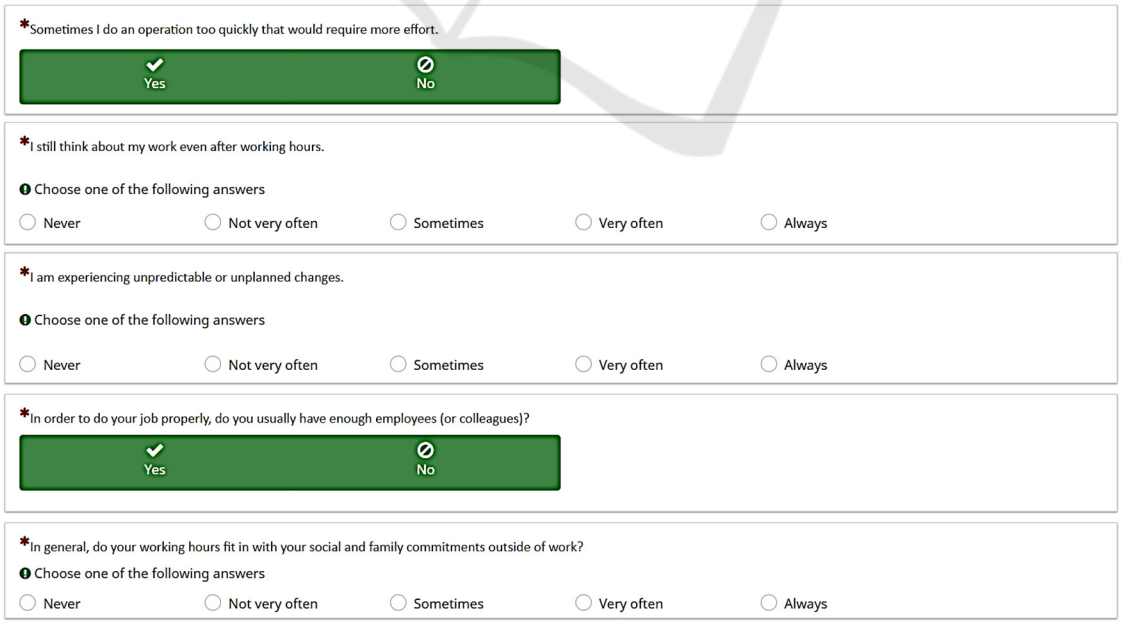

Figure 1: Intensity and Complexity of Work questions.

Figure 2: Lack of Interest in Work questions.

Our results showed that the adapted questionnaire was relevant and valid for evaluating psychosocial risks among Egyptian teachers. This qualitative validation is in line with the recommendations of experts for questionnaire validation in intercultural adaptation (Harkness et al., 2010; Van de Vijver & Leung, 2021).

6 CONCLUSIONS AND FUTURE WORKS

Our study aimed to propose the adaptation of a French questionnaire, for measuring psychosocial risks, to the Egyptian context. The proposed innovative approach involved working on the translation with five bilingual academic researchers from both countries, three of them lived in Egypt and were knowledgeable about the cultural and societal elements of teachers. The resulting questionnaire was then tested on a sample of Egyptian teachers, allowing us to produce a precise questionnaire that addressed cultural and usage limitations of future respondents.

This study allowed for a qualitative validation of the questionnaire, and we will continue this work with a quantitative validation by subsequently submitting the same questionnaire to a large panel of teachers to verify its statistical coherence and validity. The initial findings of this approach allowed us to identify the significant differences in research approaches within a country undergoing significant political and societal changes, which can have repercussions on the psycho-social risks that teachers may face and need to prevent.

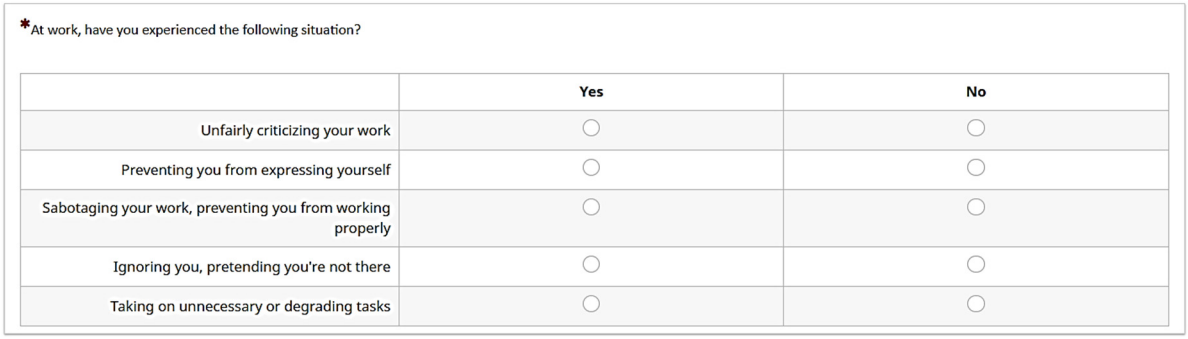

Figure 3: Hostile behaviors questions.

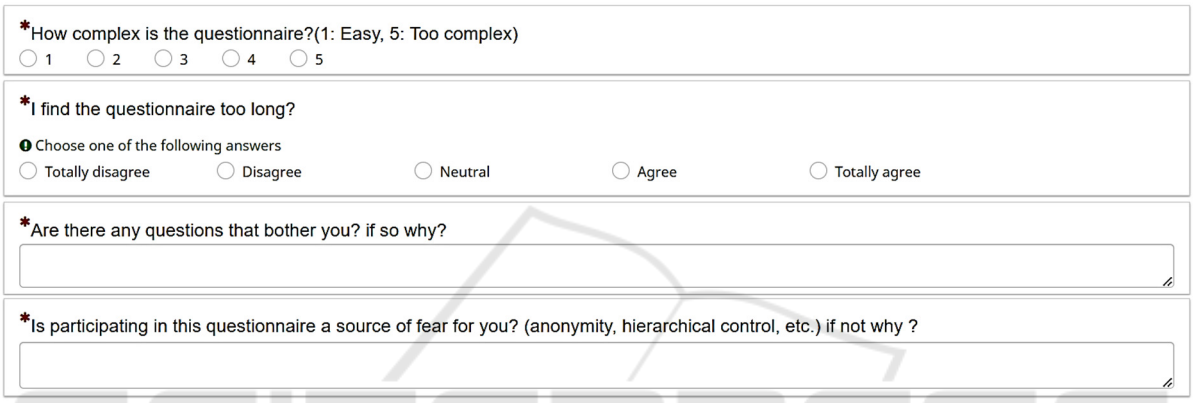

Figure 4: Evaluation questions.

This approach can help identify potential pitfalls of conducting research in the Egyptian context on this particular topic and therefore requires caution in the formulation of questions and in the dissemination process. The interest of this questionnaire, beyond the Egyptian context, is that it could be adapted to other countries sharing the same cultural context, and the approach developed could be easily transferable to new contexts. In the future, we plan to test our questionnaire in other Egyptian universities and our approach in other countries.

ACKNOWLEDGEMENTS

This work is funded by the Imhotep project 47765TE between France and Egypt.

REFERENCES

Bakker, A. B., Demerouti, E., de Boer, E., & Schaufeli, W. B. (2003). Job demands and job resources as predictors of absence duration and frequency. *Journal of Vocational Behavior*, *62*(2), 341–356. https://doi.org/10.1016/S0001-8791(02)00030-1

Berlanda, S., Fraizzoli, M., de Cordova, F., & Pedrazza, M. (2019). Psychosocial Risks and Violence Against Teachers. Is It Possible to Promote Well-Being at Work? *International Journal of Environmental Research and Public Health*, *16*(22), Article 22. https://doi.org/10.3390/ijerph16224439

Bigot, R., Croutte, P., & Recours, F. (2010). Is it possible to extrapolate behaviors of internet-users to the general population? *Cahier de Recherche, CREDOC*, *100*, 273.

Bodin, R., Millet, M., & Saunier, É. (2018). Entre triple contrainte et ancrage disciplinaire. Pratiques et conditions d'enseignement à l'Université. *Cahiers de La Recherche Sur l'éducation et Les Savoirs*, *17*, 143–167.

Bolbol, S. A., Zalat, M. M., Hammam, R. A. M., & Elnakeb, N. L. (2017). Risk Factors of Voice Disorders and Impact of Vocal Hygiene Awareness Program Among Teachers in Public Schools in Egypt. *Journal of Voice*, *31*(2), 251.e9-251.e16. https://doi.org/10.1016/j.jvoice.2016.07.010

Bouhali, A. (2021). Hala Bayoumi et Karine Bennafla, Atlas de l'Égypte contemporaine, CNRS Editions. *Mappe Monde*, *132*. https://doi.org/10.4000/mappemonde.6428

Bouletreau, A., Chouaniere, D., Wild, P., & Fontana, J. M. (1999). *Concevoir, traduire et valider un questionnaire.*

A propos d'un exemple, EUROQUEST. (p. 46 p., ill.bibliogr.) [Report, Institut National de Recherche et de Sécurité (INRS)]. https://hal-lara.archives-ouvertes.fr/hal-01420163

Collège d'expertise. (2011). *Collège d'expertise sur le suivi statistique des risques – Le College d'expertise sur les risques*. https://college-risquespsychosociaux-travail.fr/

Desouky, D., & Allam, H. (2017). Occupational stress, anxiety and depression among Egyptian teachers. *Journal of Epidemiology and Global Health*, *7*(3), 191–198.

Dias-Chiaruttini, A., Tali, F., Brunel, M., & Moussi, D. (2020). *Rapport GTnum 10, Approche systémique des ressources et pratiques numériques dans l'éducation: Quels freins et leviers pour un passage à l'échelle?* [PhD Thesis]. Université Côte d'Azur-INSPE Académie de Nice.

Durand, C. (2013). *Internet polls: New and revisited challenges*.

El Helou, M., Nabhani, M., & Bahous, R. (2016). Teachers' views on causes leading to their burnout. *School Leadership & Management*, *36*(5), 551–567.

Fahmy, V. F., Momen, M. A. M. T., Mostafa, N. S., & Elawady, M. Y. (2022). Prevalence, risk factors and quality of life impact of work-related musculoskeletal disorders among school teachers in Cairo, Egypt. *BMC Public Health*, *22*(1), 2257. https://doi.org/10.1186/s12889-022-14712-6

Frippiat, D., Marquis, N., & Wiles-Portier, E. (2010). Web surveys in the social sciences: An overview. *Population*, *65*(2), 285–311.

Harkness, J. A., Van de Vijver, F. J., Mohler, P. P., & Wiley, J. (2010). *Cross-cultural survey methods* (Vol. 325). Wiley-Interscience Hoboken, NJ.

Hwang, Y.-H., & Fesenmaier, D. R. (2004). Coverage error embedded in self-selected Internet-based samples: A case study of Northern Indiana. *Journal of Travel Research*, *42*(3), 297–304.

Jégo, S., & Guillo, C. (2016). Les Enseignants Face Aux Risques Psychosociaux. *Education et Formations*, *92*, 77.

Karasek, R. (1990). Lower health risk with increased job control among white collar workers. *Journal of Organizational Behavior*, *11*(3), 171–185.

Khalifa, E., Khalaf, O. O., & Mohammed, R. (2022). Prevalence of occupational stress and depression among school teachers. *Egyptian Journal of Occupational Medicine*, *46*(1), 1–16.

Lehdonvirta, V., Oksanen, A., Räsänen, P., & Blank, G. (2021). Social media, web, and panel surveys: Using non-probability samples in social and policy research. *Policy & Internet*, *13*(1), 134–155.

Li, C.-H. (2016). Confirmatory factor analysis with ordinal data: Comparing robust maximum likelihood and diagonally weighted least squares. *Behavior Research Methods*, *48*, 936–949.

Mellon, J., & Prosser, C. (2017). Twitter and Facebook are not representative of the general population: Political attitudes and demographics of British social media users. *Research & Politics*, *4*(3), 2053168017720008.

Nashed, N. N., Lahoud, C., & Abel, M.-H. (2022). Ontology-based teacher-context data integration. *2022 IEEE/SICE International Symposium on System Integration (SII)*, 809–814. https://doi.org/10.1109/SII52469.2022.9708601

Niedhammer, I., Siegrist, J., Landre, M.-F., Goldberg, M., & Leclerc, A. (2000). Étude des qualités psychométriques de la version française du modèle du déséquilibre efforts/récompenses. *Revue d'épidémiologie et de Santé Publique*, *48*(5), 419–438.

OMS. (2023). *La santé mentale au travail*. https://www.who.int/fr/news-room/fact-sheets/detail/mental-health-at-work

Sousa, V. D., & Rojjanasrirat, W. (2011). Translation, adaptation and validation of instruments or scales for use in cross-cultural health care research: A clear and user-friendly guideline. *Journal of Evaluation in Clinical Practice*, *17*(2), 268–274.

Tera, M. S. A., & Rabie, A. A. (2020). The Crisis of the COVID-19 Pandemic and the Expansion of E-Learning in Egypt. *Journal of Educational and Psychological Sciences*, *4*(48), 68–49. https://doi.org/10.26389/AJSRP.M200720

Van de Vijver, F. J., & Leung, K. (2021). *Methods and data analysis for cross-cultural research* (Vol. 116). Cambridge University Press.

Vidal, M. (2020). L'enseignement à distance, trait d'union en temps de pandémie. Un regard sur les publications scientifiques sur l'EAD, de février à novembre 2020. *Distances et médiations des savoirs. Distance and Mediation of Knowledge*, *32*, Article 32. http://journals.openedition.org/dms/5721

Youmou, E. (2022). *Risques psychosociaux chez les enseignants-chercheurs: L'effet curviligne des ressources sur le stress professionnel* [These de doctorat, Reims]. https://www.theses.fr/2022REIML004

Zhang, Y., Wang, C., Pan, W., Zheng, J., Gao, J., & Huang, X. (2020). *Stress, Burnout, and coping strategies of frontline nurses during the covid-19 epidemic in Wuhan and Shanghai, China. Front Psychiatry. 2020; 11: 565520*.