Data Article

Workplace health and safety training, employees' risk perceptions, behavioral safety compliance, and perceived job insecurity during COVID-19: Data of Vietnam

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A B S T R A C T

This paper presents the dataset of a survey on workplace health and safety training, employees' risk perceptions, behavioral safety compliance, and perceived job insecurity in Vietnam during COVID-19 pandemic. The data were collected through an online questionnaire completed by Vietnamese full-time employees between April and June 2020. Using Email, LinkedIn, and Facebook, the online questionnaire was sent to respondents who filled it out voluntarily. A two-wave survey was conducted in order to lessen the common method bias. Totally, we received complete matched data for 732 full-time employees. All data were processed through SPSS 22.0, AMOS 23.0 and Smart PLS 3.0. Besides descriptive statistics, the results of the explanatory factor analysis and the confirmation factor analysis were included in this paper, which may serve as a good reference for future studies.

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Specifications Table

| Subject                          | Business, Management and Accounting |
|---------------------------------|--------------------------------------|
| Specific subject area           | Human resource management, Workplace health and safety management, Risk perceptions, Employee perception and behavior. |
| Type of data                    | Table                                |
| How data were acquired          | Survey Questionnaire (included in Supplementary Materials) |
| Data format                     | Raw                                  |
| Parameters for data collection  | Respondents are Vietnamese employees who participated in the survey voluntarily |
| Description of data collection  | The data were collected through an online questionnaire completed by Vietnamese full-time employees between April and June 2020. Using E-mail, LinkedIn, and Facebook, the online questionnaire was sent to respondents who filled it out voluntarily. A two-wave survey was conducted in order to lessen the common method bias. Totally, we received complete matched data for 732 full-time employees. |
| Data source location            | Region: Asia Country: Vietnam        |
| Data accessibility              | Mendeley depository                   |
| Direct URL                      | http://dx.doi.org/10.17632/8b3hrcykcr.1 |

Value of the Data

- This dataset advances the knowledge regarding the impact of workplace health and safety training on employees’ perceived risk of COVID-19, their behavioral safety compliance at the workplace, and perceived job insecurity.
- The present data is particularly useful for organizational behavior and human resource management researchers and organization managers to understand employees' perceptions and behavior during the pandemic.
- The data can be reused for an empirical study that intends to examine workplace health and safety practices and employees' attitudes and behaviors during the COVID-19 pandemic in Vietnam, compared with other countries.
- The dataset is a reference source for studies on workplace health and safety management as well as human resource management during a health crisis.

1. Data Description

COVID-19 originated in Wuhan, China, in December 2019, and became a global pandemic [1,2], the worst global crisis since the Second world war [3]. During this pandemic, workplace health and safety training should be provided to all levels of employees to improve their awareness, knowledge, and attitudes to health and safety in the workplace. Previous studies demonstrated that employees’ awareness of the risks associated with the pandemic could influence their attitudes and behaviors [4,5]. According to the protection motivation theory [6], behavior adjustment may be achieved by playing to people’s fears. Therefore, workplace health and safety training pandemic could have an impact on employees’ perceived risk of COVID-19, which, in turn, influences their behavioral safety compliance and their perceived job insecurity.

The questionnaire included two main information sections: socio-demographic- and work-related information and measurement scales. Concretely, the first section consisted of information related to respondent’s characteristics, including age (4 categories), gender (2 categories), position (4 categories), type of work contract (3 categories), size of working organization (7 categories) and type of working organization (3 categories), organization type (5 categories), industry (6 categories), and working mode change due to COVID-19 (4 categories: constant, switch to
working at home completely, about a half of work being done at home, and a small part of work being done at home). To fully complete the form, respondents spent about 12 min. Seven hundred thirty-two valid responses were collected through a two-wave survey. Respondents’ profiles are shown in Table 1.

The second section consisted of items related to workplace health and safety training (5 items, Cronbach’s alpha = 0.911), employees’ risk perceptions of COVID-19 (6 items, Cronbach’s alpha = 0.72), employees’ behavioral safety compliance (5 items, Cronbach’s alpha = 0.925), and their perceived job insecurity during COVID-19 pandemic (5 items, Cronbach’s alpha = 0.88) (see Table 2). We provided the results of exploratory factor analysis (EFA) with SPSS software, demonstrating that the 21 items were saliently loaded onto four dimensions, namely, workplace health and safety training, risk perceptions of COVID-19, behavioral safety compliance, and job insecurity. The analysis was grounded on relevant ratios such as Kaiser-Meyer-Olkin statistic (KMO) equal to or higher than 0.50, Barlett test with p-value smaller than 0.05, and average variance extracted over 50%, factor loadings of each item of more than 0.50 (see Table 2).

Afterward, we validated the measure of the constructs through confirmatory factor analysis (CFA) with AMOS 23.0 and Smart PLS 3.0. In this analysis, the items PC2–3 of risk perceptions of COVID-19 and item JJ1 of perceived job insecurity are eliminated because of their standardized factor loadings less than 0.50. The CFA justifies that the model fit indices meet the acceptable criteria [7] as shown that χ²=512.913 (df = 160, χ²/df=3.026, p < 0.001), RMSEA = 0.055 < 0.08, RMR = 0.075 < 0.08, GFI = 0.931 > 0.9; CFI = 0.963 > 0.9, and TLI = 0.956 > 0.9. In addition, in order to check the reliability and the convergent validity of the measurement model, we computed the average variance extracted (AVE) and composite reliability (CR) values [8]. Table 3 presents that these constructs had AVE values greater than the 0.50 cut-off (from 0.565 to 0.77), and CR over 0.70 (from 0.831 to 0.944). Moreover, most of the outer loadings were above 0.50, except that of the item PC5, with a value of 0.438. We decided to retain PC5 as its outer loading was not smaller than 0.40 to be deleted as suggested by Avkiran and Ringle [9]. Thus, the measurement model was considered reliable. We then checked the measurement model for discriminant validity using the procedure suggested by Fornell and Larcker [10]. Table 4 shows that the square root values of AVE (bold diagonal) of the constructs (ranging between 0.751 and 0.878) were all higher than the absolute values of their correlations (between 0.131 and 0.533).
Table 2
Descriptive and exploratory factor analysis results.

| Variable | Mean  | SD   | Factor loadings in the EFA |
|----------|-------|------|---------------------------|
|          |       |      | HST | PC | SC | JI |

**Workplace health and safety training (HST) (Cronbach’s alpha = 0.91)**

| Variable | Description | Mean  | SD   | HST | PC | SC | JI |
|----------|-------------|-------|------|-----|----|----|----|
| HST1     | My company gives comprehensive training to employees in workplace health and safety issues | 3.53  | 1.16 | .865 |    |    |    |
| HST2     | All employees must participate in training programs on COVID-19 prevention | 3.31  | 1.26 | .865 |    |    |    |
| HST3     | Training programs on COVID-19 prevention given to me are adequate to enable me to assess hazards in the workplace | 3.80  | 1.12 | .849 |    |    |    |
| HST4     | Management promotes internal communication on COVID-19 prevention via newsletter, e-mail, Facebook, etc. | 4.14  | 1.03 | .732 |    |    |    |
| HST5     | Safety issues are given high priority in training programs | 4.06  | 1.05 | .762 |    |    |    |

**Risk perceptions of COVID-19 (PC) (Cronbach’s alpha = 0.72)**

| Variable | Description | Mean  | SD   | HST | PC | SC |
|----------|-------------|-------|------|-----|----|----|
| PC1      | COVID-19 has a high fatality rate | 4.34  | 0.94 |    |    | .676 |
| PC2      | Currently, the treatment methods for COVID-19 are not effective | 2.92  | 1.17 |    |    | .787 |
| PC3      | We will need to wait for a long time before having a vaccine for COVID-19 | 3.13  | 1.18 |    |    | .768 |
| PC4      | I am worried about myself, my family members or my colleagues who may be affected by COVID-19 | 4.24  | 1.00 |    |    | .763 |
| PC5      | I believe it is possible that there will be an outbreak of COVID-19 in the area where I live and work | 3.31  | 1.15 |    |    | .648 |

**Behavioral safety compliance (SC) (Cronbach’s alpha = 0.93)**

| Variable | Description | Mean  | SD   | HST | PC |
|----------|-------------|-------|------|-----|----|
| SC1      | I use all the necessary safety equipment (masks, hand washing products, etc.) to prevent COVID-19 | 4.51  | 0.80 |    |    |
| SC2      | I respect safety rules and procedures regarding the prevention of COVID-19 while carrying out my job | 4.47  | 0.80 |    |    |
| SC3      | I ensure the highest levels of safety when I carry out my job. | 4.45  | 0.79 |    |    |
| SC4      | I carry out my work in a safe manner. | 4.30  | 0.88 |    |    |
| SC5      | I do not deviate from correct and safe work procedures | 4.33  | 0.86 |    |    |

**Perceived job insecurity (JI) (Cronbach’s alpha = 0.88)**

| Variable | Description | Mean  | SD   | HST | PC |
|----------|-------------|-------|------|-----|----|
| JI1      | I am worried about having to quit my job before I would like to due to COVID-19. | 3.38  | 1.37 |    |    |
| JI2      | There is a risk that I will have to leave my current job in the near future. | 2.73  | 1.40 |    |    |
| JI3      | My career development opportunities in the organization are favorable. (R) | 2.39  | 1.26 |    |    |
| JI4      | I feel that the organization can provide me with a stimulating job content in the near future. (R) | 2.36  | 1.24 |    |    |
| JI5      | I believe that the organization will still need my competence in the future even if the COVID-19 pandemic breaks out. (R). | 2.11  | 1.21 |    |    |
| JI6      | My salary, bonus, and other benefits will still be promising in the near future even if the COVID-19 breaks out. (R) | 3.00  | 1.37 |    |    |
| JI7      | I am afraid that my salary, bonus, and other benefits development will be delayed due to COVID-19. | 2.99  | 1.30 |    |    |

Note: (R) indicates that the item was reverse coded. SD = Standard deviation.
Table 3
Confirmation factor analysis results.

| Constructs and items | Weight/loading |
|----------------------|----------------|
| **Workplace health and safety training (HST)** (Cronbach's alpha = 0.911; AVE = 0.734; CR = 0.932) | |
| HST1 My company gives comprehensive training to employees in workplace health and safety issues | 0.848 |
| HST2 All employees must participate in training programs on COVID-19 prevention | 0.808 |
| HST3 Training programs on COVID-19 prevention given to me are adequate to enable me to assess hazards in the workplace | 0.872 |
| HST4 Management promotes internal communication on COVID-19 prevention via newsletter, e-mail, Facebook, etc. | 0.869 |
| HST5 Safety issues are given high priority in training programs | 0.884 |

| **Risk perceptions of COVID-19 (PC)** (Cronbach's alpha = 0.751; AVE = 0.831; CR = 0.565) | |
| PC1 COVID-19 has a high fatality rate | 0.805 |
| PC4 I am worried about myself, my family members or my colleagues who may be affected by COVID-19 | 0.793 |
| PC5 I believe it is possible that there will be an outbreak of COVID-19 in the area where I live and work | 0.438 |
| PC6 In general, I know that COVID-19 is highly dangerous | 0.889 |

| **Behavioral safety compliance (SC)** (Cronbach's alpha = 0.925; AVE = 0.944; CR = 0.770) | |
| SC1 I use all the necessary safety equipment (masks, hand washing products, etc.) to prevent COVID-19 | 0.868 |
| SC2 I respect safety rules and procedures regarding the prevention of COVID-19 while carrying out my job | 0.899 |
| SC3 I ensure the highest levels of safety when I carry out my job. | 0.897 |
| SC4 I carry out my work in a safe manner. | 0.853 |
| SC5 I do not deviate from correct and safe work procedures | 0.870 |

| **Perceived job insecurity (JI)** (Cronbach's alpha = 0.885; AVE = 0.904; CR = 0.617) | |
| JI2 There is a risk that I will have to leave my current job in the near future. | 0.715 |
| JI3 My career development opportunities in the organization are favorable. (R) | 0.893 |
| JI4 I feel that the organization can provide me with a stimulating job content in the near future. (R) | 0.904 |
| JI5 I believe that the organization will still need my competence in the future even if the COVID-19 pandemic breaks out. (R) | 0.902 |
| JI6 My salary, bonus, and other benefits will still be promising in the near future even if the COVID-19 breaks out. (R) | 0.609 |
| JI7 I am afraid that my salary, bonus, and other benefits development will be delayed due to COVID-19. | 0.624 |

Note: (R) indicates that the item was reverse coded.

Table 4
Discriminant validity analysis.

| | Mean | SD | HST | PC | SC | JI |
|-------------------------|------|----|-----|----|----|----|
| 1. Workplace health and safety training (HST) | 3.768 | 0.964 | **0.857** | | | |
| 2. Perceived job insecurity (JI) | 2.518 | 1.054 | −0.131** | **0.785** | | |
| 3. Risk perceptions of COVID-19 (PC) | 4.095 | 0.744 | **0.345**** | −0.039** | **0.751** | |
| 4. Behavioral safety compliance (SC) | 4.410 | 0.725 | **0.533**** | −0.16** | 0.438** | **0.878** |

Note: 1st value = Correlation between variables (off diagonal); 2nd value (italic) = HTMT ratio; SD = Standard deviation; Square root of average variance extracted (bold diagonal). ** Correlation is significant at the 1% level (2-tailed t-test).

This result shows an adequate level of discriminant validity. We also calculated the Heterotrait-Monotrait (HTMT) ratios to further confirm the discriminant validity and found the result was as robust as the HTMT ratios, ranging between 0.118 and 0.566, and were significantly less than 0.85 [11].

2. Experimental Design, Materials, and Methods

Four primary constructs in this survey were measured using scales extracted from previous studies. These scales were adapted to the context of COVID-19. Specifically, the scales of workplace health and safety training (5 items) and employees’ behavioral safety compliance (5 items) were adapted from Vinodkumar and Bhasi [12]; the scale of employees’ risk perceptions (6 items) was adapted from Lau et al. [13]; the scale of employees’ perceived job insecurity (7 items) was adapted from Hellgren et al. [14]. The questionnaire was translated into Vietnamese and then back into English to avoid changes in meaning. We followed the recommendation of Hardesty and Bearden [15] by inviting eight experts specialized in human resource management (two full professors, four assistant professors, and two Ph.D. students) from three universities. The experts read the constructs’ items adapted and provided us with suggestions to guarantee face validity. As a result, all the items were agreed by 75% or more of the experts and some wordings were adjusted. Moreover, to ensure the readability, the Vietnamese version was tested on five Vietnamese full-time employees and refined based on their feedback. The survey instrument consisted of 31 questions, including 23 statements of specific impact of COVID-19 which require participants to rate on a 5-point Likert scale, particularly 1 = Totally disagree; 2 = Somewhat disagree; 3 = Neither agree nor disagree; 4 = Somewhat agree; 5 = Totally agree.

The data were collected through an online questionnaire completed by Vietnamese full-time employees between April and June 2020. Using E-mail, LinkedIn, and Facebook, the online questionnaire was sent to respondents who filled it out voluntarily. We preferred this data collection method to reduce the risks of infection for participants and researchers. A two-wave survey was conducted in order to lessen the common method bias [16]. We set a cover letter at the beginning of the questionnaire indicating the survey objective and the procedure of this survey, assuring respondents about the confidentiality of their data. At wave 1, respondents reported their socio-demographic information, E-mails, and workplace health and safety training, employees’ risk perceptions of COVID-19. At this stage, we collected 917 respondents. Data on dependent variables (employees’ behavioral safety compliance and perceived job insecurity) were collected at wave 2 after 10 days. A short time frame between phase 1 and phase 2 was chosen to reduce the drop rate and memory bias [17]. The two-wave data were matched through an identification code assigned to each respondent. The use of the codes allowed us to exclude participants’ email addresses, ensuring the confidential nature of the survey. Totally, we received complete matched data for 732 full-time employees. All data were processed through SPSS 22.0, AMOS 23.0 and Smart PLS 3.0.

Ethics Statement

Before data collection, the instrument was reviewed and approved by the Ethics Committee of the University of Economics Ho Chi Minh City (No: 1661/QD-DHKT-QLKH). The authors received informed consent from participants. Participation was voluntary, and they could withdraw from the survey at any point. As an ethical research team, we value the privacy rights of human subjects. Therefore, the data we submitted does not identify participants based on their responses. The survey did not collect any identifiable information from the participants.
Declaration of Competing Interest

The research team did not receive financial support from any institutions. The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Supplementary Materials

Supplementary material associated with this article can be found, in the online version, at doi:10.1016/j.dib.2020.106346.

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