

Impact of COVID-19 on the change in work conditions and career choices in general Vietnamese population

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Author contribution statement

Linh Phuong Doan: Conceptualization, Resources, Supervision, Writing - review & editing, Linh Khanh Le: Writing - original draft, Writing - review & editing; Vu Anh Trong Dam: Data curation, Formal analysis, Resources, Thuc Minh Thi Vu: Writing - original draft, Writing - review & editing, Laurent Boyer: Writing - original draft, Formal analysis, Pascal Auquier: Writing - original draft, Formal analysis, Guillaume Fond: Writing - original draft, Writing - review & editing, Bach Tran: Conceptualization, Resources, Supervision, Writing - review & editing, Carl A. Latkin: Conceptualization, Resources, Supervision, Roger C.M. Ho: Writing - original draft, Writing - review & editing, Cyrus S.H. Ho: Writing - original draft, Writing - review & editing, Melvyn W.B. Zhang: Writing - original draft, Writing - review & editing.

Keywords

Work condition, Work satisfaction, work motivation, Career Choice, COVID-19, Vietnam

Abstract

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Objectives

The onset of COVID-19 has resulted in both morbidity and mortality. It also has a consequential impact on the Vietnamese economy. Prior studies have examined the impact of COVID-19 on healthcare professionals' career decisions. However, no study remains to have examined the work conditions and career choices in a general Vietnamese population. Our study aims to identify factors associated with the change in work conditions and career choices in general Vietnamese population.

Methods

An online cross-sectional study between September 2021 through to November 2021 (during the Omicron COVID-19 pandemic). Snowball sampling method was utilised in recruiting the participants. The questionnaire used in this study included the following questions: (a) Socio-demographic information; (b) impact of COVID-19 on personal habits/daily expenses; (c) Current nature of work & impact of COVID-19 on work; (d) Impact of COVID-19 on career decisions. Data analysis was performed using STATA version 16. Descriptive analysis followed by Ordered logit regression was performed, to identify potential covariates.

Results

650 participants were recruited, of which only 645 completed the survey. The completion rate was 99.2%. This study demonstrated the impact that COVID-19 has on finances, as only 32% of those sampled reported that they were able to pay in full. 46.6% of the respondents have had a decrease in their overall household income. With regards to their employment and work characteristics, 41.0% reported a decrease in their work satisfaction and 39.0% reported having reduced motivation for work. Females were less likely to consider transiting from their current job to another field than male participants. Respondents who were married, had a higher level of commitment to their current job, and lower inclination to transition to another field. Respondents experiencing financial difficulties were more likely to consider a transition to another field/work.

Conclusion

This is perhaps one of the first studies to have examined the impact of COVID-19 on work intentions regarding career choices and transitions in the general Vietnamese population. Future financial policies must take into consideration these factors.

Contribution to the field

The onset of COVID-19 has resulted in both morbidity and mortality. It also has a consequential impact on the Vietnamese economy. Prior studies have examined the impact of COVID-19 on healthcare professionals' career decisions. There remains no study to have examined the work conditions and career choices in a general Vietnamese population. This study demonstrated the impact that COVID-19 has on finances, as only 32% of those sampled reported that they were able to pay in full. 46.6% of the respondents have had a decrease in their overall household income. With regards to their employment and work characteristics, 41.0% reported a decrease in their work satisfaction and 39.0% reported having reduced motivation for work. We found that females were less likely to consider transiting from their current job to another field, as compared to male participants. Respondents who were married had a higher level of commitment to their current job, and a lower inclination to transition to another field. Respondents experiencing financial difficulties were more likely to consider a transition to another field/work. Individuals who were free-lancing were more likely to make a career switch. More importantly, if there was an increase in healthcare demands in a job, individuals were more likely to switch jobs. This is perhaps the first study to have examined the characteristics of work/intentions with regard to career choices and transition amongst the general Vietnamese population. Several factors,

ranging from personal characteristics to work-related factors might predispose individuals in seeking a change. We believe that our findings would be of interest to your readers, from program managers to policymakers working in this field.

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Ethics statements

Studies involving animal subjects

Generated Statement: No animal studies are presented in this manuscript.

Studies involving human subjects

Generated Statement: The studies involving human participants were reviewed and approved by The study was approved by the scientific committee of the Youth Research Institute (Code: DT.KXDTN 22-11). Participation was completely voluntary. Collected data were saved in a secured system and only served the study purposes. . Written informed consent to participate in this study was provided by the participants' legal guardian/next of kin.

Inclusion of identifiable human data

Generated Statement: No potentially identifiable human images or data is presented in this study.

Data availability statement

Generated Statement: The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

In review

1 **Impact of COVID-19 on the change in work conditions and**
2 **career choices in general Vietnamese population**

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22 **Keywords: work condition; work satisfaction; work motivation; career choice; COVID-19;**
23 **Vietnam.**

24

25 **ABSTRACT**

26 **Objectives**

27 The onset of COVID-19 has resulted in both morbidity and mortality. It also has a consequential impact
28 on the Vietnamese economy. Prior studies have examined the impact of COVID-19 on healthcare
29 professionals' career decisions. However, no study remains to have examined the work conditions and
30 career choices in a general Vietnamese population. Our study aims to identify factors associated with
31 the change in work conditions and career choices in general Vietnamese population.

32 **Methods**

33 An online cross-sectional study between September 2021 through to November 2021 (during the
34 Omicron COVID-19 pandemic). Snowball sampling method was utilised in recruiting the participants.
35 The questionnaire used in this study included the following questions: (a) Socio-demographic
36 information; (b) impact of COVID-19 on personal habits/daily expenses; (c) Current nature of work &
37 impact of COVID-19 on work; (d) Impact of COVID-19 on career decisions. Data analysis was
38 performed using STATA version 16. Descriptive analysis followed by Ordered logit regression was
39 performed, to identify potential covariates.

40 **Results**

41 650 participants were recruited, of which only 645 completed the survey. The completion rate was
42 99.2%. This study demonstrated the impact that COVID-19 has on finances, as only 32% of those
43 sampled reported that they were able to pay in full. 46.6% of the respondents have had a decrease in
44 their overall household income. With regards to their employment and work characteristics, 41.0%
45 reported a decrease in their work satisfaction and 39.0% reported having reduced motivation for work.
46 Females were less likely to consider transiting from their current job to another field than male
47 participants. Respondents who were married, had a higher level of commitment to their current job,
48 and lower inclination to transition to another field. Respondents experiencing financial difficulties were
49 more likely to consider a transition to another field/work.

50 **Conclusion**

51 This is perhaps one of the first studies to have examined the impact of COVID-19 on work intentions
52 regarding career choices and transitions in the general Vietnamese population. Future financial policies
53 must take into consideration these factors.

54 **INTRODUCTION**

55 The COVID-19 pandemic first affected Vietnam on the 23rd of January 2020 [1]. The first wave of
56 COVID-19 in Vietnam lasted till 16th April 2020, resulting in a total of 100 cases in the community
57 [1]. To date, Vietnam has undergone a total of 4 waves of COVID-19 infection. The first wave resulted
58 from the spread of the original strain of the COVID-19 virus from Wuhan, China, and the 2nd wave
59 was by the D614G variant, followed by the alpha and delta variants resulting in the 3rd and 4th waves.

60 COVID-19 infections grew from 100 (first wave) to 601,349 by the end of the fourth wave [1]. To
61 date, as of 14th May 2022, there are a total of 517,648,631 cases globally with 6,261,708 deaths,
62 according to the World Health Organization [2]. Of these numbers, in Vietnam, there have been a total
63 of 10,690,471 cases, with 43,063 deaths. In dealing with the recurrent waves of infection, the
64 Vietnamese government has implemented several measures, including social distancing and the
65 introduction of lockdowns, to curb the spread of the COVID-19 infection [1]. The efforts undertaken
66 by the Vietnamese government have been recognised to be highly effective, and have been widely
67 discussed in the published literature, as well as in the international new media [3]. The COVID-19
68 pandemic has, taken a toll on the employment of many individuals. According to the General Statistics
69 Office of Vietnam [4], in 2021, the number of individuals aged 15 years old and above, who were
70 employed was 49 million. There has been a decrease of 1 million individuals employed since the start
71 of the pandemic [4]. In 2021, there was also a decrease in the average monthly income of employees,
72 that of 32 thousand Vietnamese Dong [4]. Huong et al. (2020), in their article that reviewed the
73 employment situation in Vietnam highlighted that the onset of the COVID-19 pandemic in 2020, led
74 to the highest unemployment rate within Vietnam in the last 10 years [5]. They reported that female
75 workers, those who were unskilled, migrant, and informal workers were the most affected by the
76 pandemic [5]. Workers in the following industries, hotels and food and beverages, were the most
77 affected [5]. The impact of unemployment not only affects the individual him/herself but their
78 household, as in the early stages of the COVID-19 pandemic, it was reported that the overall income
79 of many households was reduced by as much as 70% [5, 6]. This has had a consequential impact on
80 families with children. The impact on children is also heightened by the fact that there have been school
81 closures during the different waves of infection. Given the pandemic's impact on employment and the
82 overall economy, the Vietnamese government needed to implement domestic stimulus and acquire
83 funding from external organisations such as the World Bank and the International Monetary Fund [5].
84 As of the first quarter of 2022, the General Statistics Office of Vietnam has reported a gradual recovery
85 of the economy. The overall Gross Domestic Product (GDP) was expected to increase by 5.03% over
86 the same period last year, but this growth rate was still lower than the 6.85% rate in the first quarter of
87 2019 [7]. External factors, for example, the ongoing Russia-Ukraine conflict and the increasing price
88 of natural commodities, were factors that might hamper overall economic growth (7). There was a
89 reduction in the unemployment rate and the underemployment rates as the economy gradually
90 improved [7].

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93 COVID-19 has impacted the overall economy and the employment rates in Vietnam. Across the
94 literature, studies have examined the impact of COVID-19 on individuals' career choices. Jemini-Gashi
95 et al. (2022) have described how the current pandemic has affected young people [8]. They sampled a
96 total of 30 high school students, who were in the 12th grade, and reported that the participants reported
97 themselves struggling with their career decision-making process in the times of the pandemic [8]. A
98 series of research has examined how the pandemic has affected career choices among healthcare
99 professionals, or those embarking on a healthcare-related career. Wang XL et al. (2022) examined the
100 career intentions amongst a group of medical students from Hubei Providence in China. They reported
101 that several factors mediated students' decisions about their career choices. These factors include of

102 their year/grade, their attitude toward healthcare and how the pandemic has affected their lives [9].
103 Deng J et al. [10], in their study which sampled a total of 1837 medical students, reported that 6.9% of
104 those who were currently training to be a medical doctor, have had decreased willingness to be a doctor
105 since the onset of the pandemic. They reported several variables that contributed to one's willingness
106 to continue their training as a doctor, and these include of younger age, lower household income, fewer
107 depressive symptoms, those who were less exposed to negative pandemic information, and those who
108 were more satisfied with their own major after the pandemic [10]. Other studies such as Rajabimajd et
109 al. (2021), have in their qualitative review reported how the fear associated with COVID-19 was
110 associated not only with increased anxiety about one's future career, but also resulted in job insecurity,
111 reduced job satisfaction, and increased turnover rates [11]. Aside from these studies, there have been
112 other studies that have explored one's commitment and satisfaction to their job, and the associated
113 factors. Chanana et al. (2021), in their study that examined 181 private school teachers, reported that
114 female teachers are had continuance commitment as compared to male teachers [12]. Rozman et al.
115 (2021), who sampled a total of 785 employees in Slovenia companies, reported there to be gender
116 differences in work satisfaction, work engagement and work efficiency [13]. Other studies, such as that
117 by Perades-Aguiree et al. (2022) not only demonstrated that there were gender differences in levels of
118 burnout, but also demonstrated that burnout and turnover intention to be factors affecting one's job
119 motivation [14]. In Malik et al.'s (2022)'s study, the authors also reported how factors like fear
120 associated with COVID-19 infection, the long working hours and the lack of support at workplace
121 affect one's performance [15]. Specific to the Vietnamese context, Thai et al. (2022) have explored the
122 job satisfaction and the associated factors among community healthcare workers during the COVID-
123 19 pandemic [16]. Of the 319 healthcare workers they sampled, they reported that one's level of job
124 satisfaction was low. The authors articulated the need for interventions addressing one's level of job
125 satisfaction. It is evident from these articles that the pandemic has had an impact on career choices. As
126 aforementioned, it is thus evident that the COVID-19 pandemic has impacted employment and the
127 overall economy. To date, apart from the previous article [1] that outlined the challenges faced by the
128 Vietnamese workforce in the acute phase of the pandemic, there remains no other study that has
129 examined the impact of COVID-19 on employment; and one's decision to retain in the same
130 job/organisation or transition to another. Whilst there has already been research examining the
131 changing attitudes towards career/career choices mainly amongst those training to become healthcare
132 workers/doctors, there remains no study to date, that has examined how the career choices of the
133 general population, and that in a low and middle income, like Vietnam has changed since the onset of
134 the pandemic. It is thus the aim of this study to explore this. Prior studies have identified demographic
135 factors like gender, and other factors relating to the fear of infection, burnout and turnover intention
136 might affect one's motivation, and it is crucial to conduct this current study to examine related factors.
137 The findings revealed by this study would be of importance, as they would have resultant implications
138 for businesses/organisations and might guide the formulation of policies.

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144 **METHODS**

145 **Study design and Sampling methods**

146 To address the aims of the study, we conducted an online cross-sectional study between September
147 2021 to November 2021. This study was conducted when Vietnam was experiencing a resurgence of
148 COVID-19 cases due to the spread of the Omicron variant. Snowball sampling method was utilised in
149 recruiting the participants based on key initials across three regions: North, South, and Middle,
150 including large metropolitans such as Ha Noi capital city and Ho Chi Minh city.

151 The formula for estimating a population proportion was used for the sample size for this study. In
152 particular, the expected proportion of people who have high organizational commitments was 0.72
153 (according to a previous study in Iran [17]), the confidence level was 0.95, and the relative precision
154 was 0.05. Thus, leading to the necessary sample size was 598 respondents. Furthermore, to avoid
155 participants the incomplete questionnaire or dropout during the research, 10% of the sample size was
156 added, thus resulting in the data from 658 participants needing to collect. Finally, at the end of the
157 participant recruitment, data from 650 participants were collected, of which only 645 completed the
158 survey (with the completion rate was 99.2%).

159 In this study, the research instrument was developed based on a standard procedure. Firstly, we
160 conducted a systematic review to find out the gap as well as the important aspects that have been
161 indicated from the previous research and then developed frames of the questionnaire for the study.
162 Furthermore, several experts in the COVID-19 field were invited to jointly discuss the translation,
163 language, and logical order of the questionnaire. Before collecting the data process, the questionnaire
164 was designed and piloted by 15 staff members from the Vietnam Young Physician Association to test
165 any text, and any technical issue one more time. Finally, the questionnaire after the revision was sent
166 to a group of 20 participants from the community/general population with various occupations such as
167 students, white-collar workers, and freelancers. After completing the questionnaire, these participants
168 were told to share the linked questionnaire with their colleagues and acquaintances. Participants took
169 20-30 minutes for the completion of the questionnaire study.

170 Informed consent was acquired from all participants. The benefits and risks associated with their
171 participation in the study were informed to all. Due to the voluntary nature of the study, participants
172 were told that they could leave/ withdraw at any point of time. A web-version questionnaire database,
173 that of Survey Monkey, was used to disseminate the questionnaire and track the data.

174 **Inclusion and Exclusion Criteria**

175 Participants were eligible to participate in the study if they were (a) aged 16 years and above, (b) able
176 to provide informed consent, (c) lived in Vietnam at least 6 months (d) were able to access the survey
177 link using a computer/mobile device.

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180 **Measurements**

181 The questionnaire used in this study included the following questions: (a) Socio-demographic
182 information; (b) impact of COVID-19 on personal habits/daily expenses; (c) Current nature of work &
183 impact of COVID-19 on work; (d) Impact of COVID-19 on career decisions. Some of these
184 questionnaires were included in consideration of some of the variables aforementioned in the
185 introductory paragraph that affected one's decision to remain or make a transition in one's job.

186 In the following section on Outcome Variables, further details on each questionnaire are provided.

187 **Outcome variables**

188 *Occupational intention (Impact of COVID-19 on Career Decisions)*

189 A questionnaire comprising five items was designed to ascertain the participants' occupational
190 intentions:

- 191 1) Are you determined to complete your job at your current workplace and stick to this job?
- 192 2) Have you considered transferring to another unit/division within the same organisation?
- 193 3) Are you considering switching to another organisation (that deals with the same nature of business)?
- 194 4) Have you considered switching to another area of work, but remaining in the same line of business?
- 195 5) Have you considered moving on to another new job (in a different field)?

196 Participants were told to rate how each of the statements. Commitment to the current job is ascertained
197 based on their responses to question 1 and 5.

198 **Covariate**

199 *Socioeconomic status*

200 Respondents reported their socio-demographic information questions, including age, gender
201 (male/female), marital status (single, others), living location (urban areas, town, rural/mountainous
202 areas), main income/month (under 5 million VND, 5-10 million VND, and 10 million VND and above),
203 and monthly household income per capita (under 5 million VND, 5-10 million VND, and 10 million
204 VND and above).

205 *Impact of COVID-19 on personal demand*

206 7 questions were included to ascertain the impact of COVID-19 on personal habits and expenses. These
207 questions focused on the following areas: eating, electricity/water/bills, education, transport, clothes,
208 health care, and family expenses. Participants were told to rate their responses as to whether they have
209 had (a) enough to pay in full; (b) sufficient to pay partially; (C) or totally had not enough to finance.

210 *Impact of COVID-19 on work*

211 Variables that assessed the impact of COVID-19 on employment included having a cost-of-living
212 allowance (yes/no); Changes in income and spending (wage, allowance, bonus, other incomes at work,
213 other sources of incomes outside the workplace, monthly income of the whole family), average

214 working time per day (less than 8 hours, 8-10 hours, and more than 10 hours), average workload (no
215 changed or increased), change in work satisfaction level (no change, decreased, increased), and change
216 in work motivation level (no change, decreased, increased).

217 To ascertain the impact of COVID-19 on one's current work, based on the previous study by Tran et
218 al. [18] 10 questions were developed, including:

- 219 1) Daily work intensity
- 220 2) Level of work-related stress and fatigue
- 221 3) Health risks caused by work
- 222 4) The community's stigma with the work I'm doing
- 223 5) Your ability to endure and cope with external work pressures
- 224 6) Process and professionalism of routine work
- 225 7) Complexity in coordination between colleagues, and between departments
- 226 8) New knowledge and skills for work
- 227 9) Ability to complete assigned tasks
- 228 10) Ability to ensure safe means of work

229 All above 10 statements were rated using a 5-point Likert scale (1= Completely unchanged; 2=Changed
230 little; 3=Changed relatively much; 4=Changed a lot; 5=Changed extremely, beyond processing
231 capacity).

232 **Data analysis**

233 We analysed the data using STATA version 16 (Stata Corp. LP, College Station, United States of
234 America). To deal with the issues of missing data, we used the Listwise Deletion method to clean data
235 before analysing it [19]. Continuous variables were presented as mean and standard deviation (SD),
236 while categorical variables were presented as frequencies with percentages.

237 Potential covariates for full models "commitment to the current job" and "Consider moving job to
238 another field" included "individual characteristics, the impact of COVID-19 on personal demand, the
239 impact of COVID-19 on work, and working condition characteristics". We used multivariate Ordered
240 logit regression to confirm factors associated with "commitment to the current job". These models
241 were then combined with the stepwise forward strategies to produce reduced models with $p < 0.2$ as
242 the threshold for included variables [20]. The p-value (P) <0.05 was considered statistically significant.

243 **RESULTS**

244 650 participants were recruited, of which only 645 completed the survey. The completion rate was
245 99.2%. **Table 1** summarised the characteristics of the sampled individuals and the impact of COVID-
246 19 on personal finances. 67.3% of the participants were aged between 16 to 20 years old, with 67.7%
247 female respondents. Of those sampled, 9.5% were married, 55.3% resided in the urban area, 28.4%
248 resided in rural/mountainous/island areas, 82.5% had tertiary education and most of the participants
249 were students (53.2%) 85.1% of the participants had a monthly income per month which was under 5
250 million VND (Vietnamese Dong). Most of those sampled (85.1%) had a monthly household income

251 per capita under 10 million VND, and 29.2% of those sampled had an income of 10 million VND or
252 above.

253 Regarding personal finances, most participants reported that their finances for food, education, and
254 healthcare did not change during COVID-19. 49.2% of the participants had to spend more on
255 electricity/water/bills. Pertaining to individual's affordability, only 32% of the respondents had the
256 ability to pay in full.

257 **[Insert Table 1: Characteristics of Recruited Participants and Impact of COVID-19 on**
258 **Personal Finances]**

259 **Table 2** provides an overview of the impact of COVID-19 on individuals' income, their workload, and
260 work-related satisfaction/motivation. 11.6% of the participants reported that they have received an
261 allowance. Regarding individuals' income, most participants reported no changes in their wages,
262 allowances, bonus, or other income sources at or outside the workplace. However, 46.6% of the
263 participants reported a decrease in the monthly income of the whole family. In terms of workload,
264 75.1% of the participants reported working on average 8 hours or less. 81.3% reported no change in
265 their average workload. 41.0% reported a decrease in their work satisfaction and 39.9% reported
266 reduced motivation for their work. Participants reported there being no changes or little changes in
267 their work.

268 **[Insert Table 2: Impact of COVID-19 on income, workload and work-related satisfaction and**
269 **motivation]**

270 **[Insert Figure 1: Overview of Intentions to Change Career]**

271 **Figure 1** provides an overview of participants' intentions in changing their careers. It is apparent that
272 most of the participants intend to keep their existing job, with few indicating an intention to change
273 their jobs.

274 **Table 3** presented the odds ratio (OR) and 95% Confident Intervals (CI) from the Ordered logistic
275 regression analysis. The main outcomes from the regression analysis, which were statistically
276 significant were that female participants were less likely to consider moving jobs to another field than
277 male participants (OR = 0.69; 95%CI = 0.48; 0.98); respondents who were married had a higher level
278 of commitment to the current job (OR = 3.09; 95%CI = 1.67; 5.73) and lower level of considering the
279 moving job to another field (OR = 0.48; 95%CI = 0.25; 0.93). The freelancer was likely to consider
280 moving a job to another field (OR = 1.77; 95%CI = 1.18; 2.65). Increasing health care demand was the
281 factor that was likely to consider moving jobs to another field (OR = 1.53; 95%CI = 1.02; 2.30).

282 Participants who were able to partially pay (OR = 2.21; 95%CI = 1.48; 3.30) or have had totally not
283 enough finances to pay household expenses (OR = 1.96; 95%CI = 1.26; 3.05) were more likely to
284 consider moving a job to another field than those who had enough to pay in full. A reduction in the
285 overall monthly income of the whole family also had the opposite impact, in that it affected the
286 commitment to their current job (OR = 1.69; 95%CI = 1.12; 2.54) and increased their consideration of

287 moving job to another field (OR = 0.67; 95%CI = 0.45; 1.00). Meanwhile, decreases in wages (OR =
288 0.51; 95%CI = 0.331 0.79) and other incomes outside the workplace (OR = 0.59; 95%CI = 0.37; 0.92)
289 were likely to decrease the commitment to the current job. Changing in daily work intensity was likely
290 to increase the commitment to the current job (OR = 1.47; 95%CI = 1.16; 1.86), by contrast, change in
291 the community's stigma with the work I'm doing and ability to ensure safe means of work had the
292 opposite impact. Decreasing work satisfaction level also resulted in individuals' consideration in
293 moving job to another field (OR = 1.67; 95%CI = 1.17; 2.38), meanwhile, decreasing work motivation
294 level had a negative effect on commitment to current job (OR = 0.59; 95%CI = 0.42; 0.84)

295 **[Insert Table 3: Factor associated with career choices of participants]**

296 **DISCUSSION**

297 This study is perhaps one of the first to examine the impact of COVID-19 on employment in Vietnam,
298 and how the pandemic has affected individuals' career choices. There are several key findings arising
299 from this study. First, this study demonstrated the impact that COVID-19 has on finances, as only 32%
300 of those sampled reported that they were able to pay in full. 46.6% of the respondents have had a
301 decrease in their overall household income. Regarding their employment and work characteristics,
302 41.0% reported a decrease in their work satisfaction and 39.0% reported having reduced motivation
303 for work. We found that females were less likely to consider transiting from their current job to another
304 field than male participants (OR = 0.69; 95%CI = 0.48; 0.98). Respondents who were married had a
305 higher level of commitment to their current job, and a lower inclination to transition to another field.
306 Respondents experiencing financial difficulties were more likely to consider a transition to another
307 field/work. Individuals who were free-lancing were more likely to make a career switch (OR = 1.77;
308 95%CI = 1.18; 2.65). More importantly, if there was an increase in healthcare demands in a job,
309 individuals were more likely to switch jobs. In addition, changes in work intensity (OR = 1.47; 95%CI
310 = 1.16; 1.86) and reduced work satisfaction also resulted in individuals transitioning to another job.

311 Huong et al. (2020) in their article have provided an overview of the economic and employment issues
312 that Vietnam was afflicted with, 6 months after the start of the pandemic. In their article, they
313 highlighted some of the measures that the Vietnamese government undertook, and these measures were
314 classified into general solutions, urgent and long-term solutions [5]. The general solutions included
315 expanding the domestic market, developing an attractive business market, and identifying opportunities
316 and challenges to help stimulate economic growth [5]. Urgent solutions included that of granting
317 extensions for payment of taxes and other duties, financial assistance that allows lending institutions
318 to lower borrowing rates, and debt restructuring [5]. At the time of conduct of this study, these “urgent”
319 measures ought to have been in place, but a good proportion of the respondents sampled still report
320 having difficulties in their personal finances, and their ability to pay in full for their financial
321 obligations. We postulate that whilst tremendous efforts have been undertaken by the Vietnamese
322 government, the relief measures might not be adequate given the disruptions brought upon by the
323 repeated waves of COVID-19 infections. Despite these challenges, Huong et al. (2020) [5] have also
324 highlighted the long-term measures that the Vietnamese government has strategise, such as recognising
325 the importance of developing new policies and legislation to facilitate new business models, to

326 restructure the economy, and to constantly innovate using science and technologies. It remains of
327 importance for there to be further evaluations following the implementation of these policies, to see if
328 they have any impact on one's decision to continue at their same job or make a transition to another
329 job.

330 One of the key findings was a decrease in motivation and confidence to work, and certain factors (such
331 as gender, marital status, and financial stability) were associated with whether one has intentions to
332 transition within the same job environment, or onto another job. Previous studies have highlighted the
333 impact that COVID-19 has on those working in healthcare. The onset of the COVID-19 pandemic has
334 resulted in longer working hours for healthcare workers. Healthcare workers also needed to constantly
335 adapt to new demands at their job in view of the new disease variants/updated knowledge about the
336 virus [21]. The toll on healthcare workers was tremendous in that they also needed to deal with the
337 increased mortality and had to dedicate time to their own families while at the frontline dealing with
338 the pandemic [21]. Tran et al. (2022) [22] have proposed a model that demonstrated how the interaction
339 of different factors would increase healthcare workers' toll. Such factors include individual
340 predisposing factors (like health status, family attachment, security), psychosocial outcomes of
341 healthcare jobs, and the working environment. In a similar vein, the findings from the current study
342 can be conceptualised in much the same way. As the pandemic progresses, the challenges that
343 healthcare workers and workers in other occupation experience might differ. Future research should
344 examine the impact of the protracted pandemic on workers, with repeated assessment of their intentions
345 to stay on or leave their jobs. This would guide the implementation of relevant policies to retain or
346 alleviate the pressures on healthcare workers.

347 One of the key findings arising from this study was the identification of individual factors that
348 predispose whether one would make a job transition. Some of the factors that we have identified
349 included those of gender, marital status, financial security, work intensity and demands and one's level
350 of satisfaction with their work. With regards to gender differences, Rozman et al. (2021) reported there
351 to be gender differences in terms of work satisfaction, engagement, and efficiency when they sampled
352 a total of 785 employees. However, in contrast to our findings, their study found females to have lower
353 satisfaction during the pandemic, as they had to meet not only their job demands, but handle higher
354 household demands, and provide care for their family. Similarly, according to UN Women [23], they
355 stated that the pandemic has a huge impact for females, as compared to males, given that females are
356 likely to face difficulties relating to having unpaid care, violence, overload of work and job loss. Our
357 current findings are contrary to these findings and are unique and suggest that future research is needed,
358 to explore this difference, as it is to be expected that Vietnamese female workers would also need to
359 handle more responsibilities, but they remain less likely than males to be inclined in making a job
360 transition. It is of important to study and examine organizational policies that help maintain their levels
361 of satisfaction at the workplace. Pertaining to financial security, work intensity and work demands, our
362 findings are in-line with the findings of prior studies. The provision of a good salary package has been
363 shown to be a strong factor that affects the organizational committee of an employee [24]. Regarding
364 work demands, studies done among healthcare workers have shown how increased work demands not
365 only leads to a deterioration in physical well-being, but could have consequential impact on one's
366 mental health, leading to employees developing depression and anxiety [15]. Thus, these would have

367 an impact on one's work quality and job satisfaction. Factors relating to the working environment that
368 might predispose individuals to consider a change of their job include one's satisfaction and confidence
369 in the job. The demographic variables we identified highlighted that there ought to be more targeted
370 interventions focusing on groups that are more vulnerable. Workplace-based interventions should be
371 considered, to better help employees to adjust to their workplace, and to avoid decisions to leave.
372 Bienkowska et al. (2022) highlighted how different human resource strategies could help in ensuring
373 employee's well-being and strengthen organisational performance [25]. Some of these strategies
374 include, enabling hybrid modality of work and helping employees feel safe about their health.

375 There are several strengths of this study. This study is perhaps the first study to have examined the
376 impact of COVID-19 on work conditions and decisions to transition between careers among a
377 population sampled from all over Vietnam. The sample size was sizeable, and the completion rate was
378 adequate. Statistical analysis also managed to identify factors that might increase the odds of one
379 making a career transition. Despite these strengths, there remain several limitations. The age of the
380 overall sample was relatively young, 16 to 20 years old. It will be important to sample a wider range
381 of ages, and individuals from different jobs/organisations. The nature of the sampling method might
382 affect the overall representativeness of the sample. Most of the information that we have obtained was
383 based on self-report, and hence there might be recall biases. It would be beneficial to track these
384 participants over a period of time and determine if there are any changes in their responses, as the
385 COVID-19 pandemic develops.

386 **CONCLUSIONS**

387 In conclusion, this study has shed light on the impact of COVID-19 on employment and career
388 choices among individuals in Vietnam. The findings suggested that the pandemic has had a
389 significant effect on household finances, work satisfaction, and motivation. Factors such as gender,
390 marital status, and financial stability were found to be associated with one's intentions to transition
391 within or outside of their current job environment. The study also highlighted the need for targeted
392 interventions to support vulnerable groups and workplace-based strategies to promote employee
393 well-being and organizational performance. While this study has several strengths, such as a sizeable
394 sample size and adequate response rate, there are also limitations, including a relatively young age
395 range and potential recall biases in self-reported data. Future research should aim to address these
396 limitations and examine the impact of the protracted pandemic on healthcare workers and other
397 vulnerable populations. Overall, this study contributes to a better understanding of the impact of
398 COVID-19 on employment and career choices in Vietnam and provides insights that may inform
399 policy interventions and organizational strategies to support individuals and communities affected by
400 the pandemic.

401 **Conflict of Interest**

402 The authors declare that the research was conducted in the absence of any commercial or financial
403 relationships that could be construed as a potential conflict of interest.

404 **Author Contributions**

405 **Linh Phuong Doan:** Conceptualization, Resources, Supervision, Writing - review & editing, **Linh**
406 **Khanh Le:** Writing - original draft, Writing - review & editing; **Vu Anh Trong Dam:** Data curation,
407 Formal analysis, Resources, **Thuc Minh Thi Vu:** Writing - original draft, Writing - review & editing,
408 **Laurent Boyer:** Writing - original draft, Formal analysis, **Pascal Auquier:** Writing - original draft,
409 Formal analysis, **Guillaume Fond:** Writing - original draft, Writing - review & editing, **Bach Tran:**
410 Conceptualization, Resources, Supervision, Writing - review & editing, **Carl A. Latkin:**
411 Conceptualization, Resources, Supervision, **Roger C.M. Ho:** Writing - original draft, Writing - review
412 & editing, **Cyrus S.H. Ho:** Writing - original draft, Writing - review & editing, **Melvyn W.B. Zhang:**
413 Writing - original draft, Writing - review & editing.

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430 **Ethics approval**

431 The study was approved by the scientific committee of the Youth Research Institute (Code:
432 ĐT.KXĐTN 22-11). Participation was completely voluntary, respondents who were under 18 must
433 have the consent of their parent or guardian to participate in this study. Collected data were saved
434 in a secured system and only served the study purposes.

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Table 1: Characteristics of Recruited Participants and Impact of COVID-19 on Personal Finances

Characteristics	n	%	
Age group	16-20 years old	435	67.3
	21-25 years old	137	21.2
	More than years old	74	11.5
Gender	Male	208	32.3
	Female	436	67.7
Marital status	Single/Divorced/Widowed	584	90.5
	Married	61	9.5
Education	Tertiary	532	82.5
	Intermediate/College	66	10.2
	Post graduate	18	2.3
	Other	29	4.5
Occupation	Student	346	53.2
	White-collar worker	155	23.9
	Freelancer	149	22.9
Living location	Urban areas	359	55.3
	Town	106	16.3
	Rural/Mountainous/Island areas	184	28.4
Main income/month	Under 5 million VND	532	85.1
	5-10 million VND	62	9.9
	10 million VND or above	31	5.0
Monthly household income per capita	Under 5 million VND	322	49.9
	5-10 million VND	188	29.2
	10 million VND or above	135	20.9
Personal demand during COVID-19			
Eating	No changed	300	46.2
	Decreased	262	40.3
	Increased	88	13.5
Electricity, water, bills	No changed	246	37.9
	Decreased	84	12.9
	Increased	320	49.2
Education	No changed	367	56.5
	Decreased	207	31.9
	Increased	76	11.7
Transport	No changed	204	31.4
	Decreased	411	63.2

	Increased	35	5.4
Clothes	No changed	348	53.5
	Decreased	274	42.2
	Increased	28	4.3
Health care	No changed	355	54.6
	Decreased	142	21.9
	Increased	153	23.5
Family expenses	No changed	203	31.2
	Decreased	254	39.1
	Increased	193	29.7
Affordability to pay household expenses	Enough to pay in full	208	32.0
	Sufficient to pay part	270	41.5
	Totally not enough	172	26.5

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Table 2: Impact of COVID-19 on income, workload, and work-related satisfaction and motivation.

Characteristics	n	%	
Having cost-of-living allowance	75	11.6	
Changing in income and spending			
Wage	No changed/Increased	418	65.1
	Decreased	224	34.9
Allowance	No changed/Increased	517	80.8
	Decreased	123	19.2
Bonus	No changed/Increased	510	80.6
	Decreased	123	19.4
Other incomes at work	No changed/Increased	506	79.6
	Decreased	130	20.4
Other incomes outside the workplace	No changed/Increased	489	77.4
	Decreased	143	22.6
Monthly income of the whole family	No changed/Increased	342	53.4
	Decreased	298	46.6
Average working time per day	8 hours or less	482	75.1
	8-10 hours	118	18.4
	More than 10 hours	42	6.5
Average workload	No changed	526	81.3
	Increased	121	18.7
Work satisfaction level	No changed	356	55.1
	Decreased	265	41.0
	Increased	25	3.9
Work motivation level	No changed	321	49.6

	Decreased	258	39.9
	Increased	68	10.5
		Mean	SD
Recent changes in work (range: 1-5)	Daily work intensity	2.0	0.9
	Level of work-related stress and fatigue	2.0	0.9
	Health risks caused by work	1.9	0.9
	The community's stigma with the work I'm doing	1.4	0.7
	Your ability to endure and cope with external work pressures	1.8	0.9
	Process and professionalism of routine work	1.7	0.9
	Complexity in coordination between colleagues, and between departments	1.7	0.9
	New knowledge and skills for work	1.8	0.9
	Ability to complete assigned tasks	1.7	0.9
	Ability to ensure safe means of work	1.7	0.8

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Table 3. Factor associated with career choices of participants

Factors	Commitment to current job From 1 "Certainly not" to 5 "Definitely yes"		Consider moving job to another field From 1 "Certainly not" to 5 "Definitely yes"	
	OR	95%CI	OR	95%CI
SOCIO-ECONOMIC				
Gender (Female vs Male -Ref)			0.69**	0.48; 0.98
Marital status (Married vs Single / Divorced / Widowed -Ref)	3.09***	1.67; 5.73	0.48**	0.25; 0.93
Education (vs Tertiari -Ref)				
Intermediate/College	0.85	0.47; 1.54	1.56	0.85; 2.87
Post graduate	1.02	0.36; 2.92	1.23	0.44; 3.44
Other	0.59	0.28; 1.22	1.41	0.64; 3.08
Location (vs Urban areas -Ref)				
Town			0.70	0.43; 1.13
Rural/Mountainous/Island areas			1.16	0.79; 1.69
Occupation (vs Students -Ref)				
White-collar worker	0.78	0.53; 1.15	0.86	0.56; 1.31
Freelancer	0.75	0.51; 1.10	1.77***	1.18; 2.65
Personal demand during COVID-19				
Health care (vs No changed -Ref)				
Decreased			1.03	0.66; 1.59
Increased			1.53**	1.02; 2.30
Affordability to pay household expenses (vs Enough to pay in full -Ref)				
Sufficient to pay part	0.74	0.51; 1.08	2.21***	1.48; 3.30
Totally not enough	0.70*	0.46; 1.05	1.96***	1.26; 3.05
WORKING CONDITIONS				
Having cost-of-living allowance (Yes vs No -Ref)	1.40	0.85; 2.28		
Changes in income and spending (vs Decreased vs No changed/Increased -Ref)				
Wage	0.51***	0.33; 0.79		
Bonus			1.48	0.91; 2.38
Other incomes outside the workplace	0.59**	0.37; 0.92		
Monthly income of the whole family	1.69**	1.12; 2.54	0.67**	0.45; 1.00
Recent changes in work (unit: score)				
Daily work intensity	1.47***	1.16; 1.86		

Level of work-related stress and fatigue	0.80*	0.64; 1.00		
Health risks caused by work			0.82	0.64; 1.05
The community's stigma with the work I'm doing	0.74**	0.59; 0.94	1.52***	1.14; 2.02
Ability to ensure safe means of work			1.43***	1.12; 1.83
Work satisfaction level (vs No changed-Ref)				
Decreased			1.67***	1.17; 2.38
Increased			1.33	0.55; 3.19
Work motivation level (vs No changed-Ref)				
Decreased	0.59***	0.42; 0.84		
Increased	1.28	0.75; 2.18		

*** p<0.01, ** p<0.05, * p<0.1

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In review

Figure 1.JPEG

