



Social Service Research Centre  
Faculty of Arts & Social Sciences



**IN-WORK POVERTY**  
Challenges of Getting By  
Among The Young

IN-WORK POVERTY AND THE CHALLENGES OF GETTING  
BY AMONG THE YOUNG: WAVE 1 REPORT

# **Wage, Jobs, Work Conditions, and Well-Being among Young Workers**

Irene Y. H. Ng, Tan Zhi Han, Asher Goh, Ong Qiyang, Evelyn Kok, Charmaine Lee,  
Mathew Mathews, Caroline Lim, Ho Kong Chong

October 2022

## **Acknowledgements**

We thank Jeanette Renema and Timothy Teoh for assistance in the survey design, Annie Cheong, Vincent Chua, Neo Yu Wei, Nurul Fadiyah Johari, Shane Nicholas Pereira, Thian Wen Li, Muhammad Shamil Bin Zainuddin, and Kim Aryung for feedback, Sandy Chen for the report design, as well as Arthur Soh, Ko Wei Lin, and Aloysius Chan for research assistance.

This research is supported by the Singapore Ministry of Education under its Social Science Research Thematic Grant (MOE 2018-SSRTG-016). Any opinions, findings and conclusions or recommendations expressed in this material are those of the authors and do not reflect the views of the Ministry of Education. Please direct all comments and queries related to this report to A/P Irene Ng.

## Table of contents

<b>Executive Summary</b> .....	<b>1</b>
<b>1. Introduction</b> .....	<b>4</b>
<b>2. Employment Characteristics</b> .....	<b>7</b>
<b>3. Occupation and Income by Highest Educational Qualification</b> .....	<b>10</b>
Occupations.....	10
Monthly Income .....	13
<b>4. Quality of Job Conditions by Highest Educational Qualification</b> .....	<b>16</b>
Working Time Quality .....	17
Work Intensity .....	23
Skills and Discretion .....	25
Physical Environment.....	28
Social Environment .....	29
Employment Prospects .....	31
Comparisons with EU28.....	32
<b>5. COVID-19 Impacts by Highest Educational Qualification</b> .....	<b>34</b>
<b>6. Psychological Well-being by Highest Educational Qualification</b> .....	<b>38</b>
<b>7. Conclusion</b> .....	<b>41</b>
Implications.....	42
<b>Glossary</b> .....	<b>44</b>
<b>Appendix</b> .....	<b>48</b>
<b>References</b> .....	<b>50</b>

## List of Tables

Table 1.1: Unweighted distribution of housing type.....	5
Table 1.2: Weighted distributions of demographic variables .....	5
Table 2.1: Distribution of labour force status .....	7
Table 3.1: Top five most common occupations by highest educational qualification in descending order .....	12
Table 4.1: Distribution of total weekly working hours by highest educational qualification.....	17
Table 4.2: Mean frequencies of working weekends each month by highest educational qualification .....	19
Table 6.1: Mean self-efficacy scores by highest educational qualification .....	39
Table A1: Distribution of gross monthly income from paid work (with CPF contributions) from MOM Labour Force in Singapore 2020 Report.....	48
Table A2: Comparisons of Quality of Job Conditions Indicators between our survey sample and Eurofound (2017).....	48

## List of Figures

Figure 2.1: Distribution of employment status and employment nature .....	7
Figure 2.2: Distribution of contract type and number of jobs .....	8
Figure 2.3: Distribution of job tenure.....	8
Figure 3.1: Distribution of occupational status by highest educational qualification .	10
Figure 3.2: Gross monthly income from paid work (with CPF contributions) among the employed by highest educational qualification .....	14
Figure 3.3: Total household income among all respondents by highest educational qualification.....	15
Figure 4.1: Frequencies of working long hours by highest educational qualification	18
Figure 4.2: Frequencies of working on weekends each month by highest educational qualification.....	19
Figure 4.3: Frequencies of working late at night by highest educational qualification .....	20
Figure 4.4: Proportions who worked shifts by highest educational qualification .....	20
Figure 4.5: Distributions of working time flexibility by highest educational qualification .....	21
Figure 4.6: Proportions with regular working time changes by highest educational qualification.....	22

Figure 4.7: Frequencies of work intensity indicators by highest educational qualification.....	23
Figure 4.8: Frequencies of decision latitude indicators by highest educational qualification.....	25
Figure 4.9: Frequencies of cognitive dimension indicators by highest educational qualification.....	27
Figure 4.10: Proportions of training participation and employers' funding by highest educational qualification.....	28
Figure 4.11: Ratings of workplace safety and health conditions by highest educational qualification.....	28
Figure 4.12: Frequencies and ratings of management quality indicators by highest educational qualification.....	29
Figure 4.13: Frequencies of colleagues' help and support by highest educational qualification.....	31
Figure 4.14: Ratings of job insecurity and satisfaction by highest educational qualification.....	32
Figure 5.1: Distributions of COVID-19 impacts by highest educational qualification (proportions affected in %).....	34
Figure 5.2: Distributions of telecommuting arrangements by highest educational qualification.....	36
Figure 6.1: Proportions of respondents with poor psychological well-being by highest educational qualification.....	38
Figure 6.2: Frequency of discouragement about the future by highest educational qualification.....	40
Figure A1: Distribution of occupational status by highest educational qualification from MOM Labour Force in Singapore 2020 Report.....	48

# Executive Summary

## Background

This report is part of a study funded by the Social Science Thematic Research Grant (Type B) to gain new insights into the kinds of “in-work” poverty that low-income young workers are experiencing. It describes how key outcomes vary by four educational levels: degree and above; diploma, A-Level and professional qualification; Institute of Technical Education (ITE) qualification; secondary and below.

The findings in this report are obtained from a survey conducted during the first wave of this research, from October 2020 to March 2021. We surveyed 1,905 Singaporeans between 21 and 38 years old. The results were weighted for our survey sample to be comparable to the population of young adults in 2020.

Compared to the Ministry of Manpower’s (MOM) sample of young adults in Singapore in 2020, our survey respondents have a higher labour force participation rate and a lower unemployment rate, due to sample selection. Our respondents also have higher proportions in own-account work, part-time work, and fixed-term or temporary contract work.

## Main Results

Overall, our report shows that low educated young workers might be doubly disadvantaged. First, they are disadvantaged by being younger. Besides lower earnings than the general labour force on average, our respondents also reported lower psychological well-being than found by Subramaniam et al. (2020) in their Singapore mental health study, and generally lower quality of job conditions than those found in Eurofound (2017). Exceptions include learning new things on the job, employer sponsorship of training among those who attended training, ratings of bosses, and job satisfaction, where our respondents’ averages were higher than what were reported in Eurofound (2017).

Second, low educated young workers are disadvantaged by their low education. Comparisons by educational level show polarisation in employment outcomes, where higher educated respondents tended to be better off in most facets of job conditions, as summarised below.

**Wage:** The earnings premium of degree-holders was significantly higher than other educational qualifications; by contrast, the average earnings of respondents with ITE qualifications was no different from that of respondents with secondary and below qualifications.

**Occupation:** More than half of degree-holders had professional occupations; conversely, the majority of respondents with ITE and below qualifications had occupations in clerical support, service and sales, or machine operation and assembly.

**Job conditions according to Eurofound’s (2017) job quality framework:** Higher educated respondents fared more favourably in terms of working time quality, discretion and skills, physical environment, and prospects, while lower educated respondents generally reported a lower work intensity, as follows:

- Work time quality – Lower educated respondents were more likely to work on weekends, in shifts, and for long hours daily; they were also more likely to receive short advance notice of working time changes.
- Work intensity – Higher educated respondents had larger proportions who faced high time-based work intensity, while lower educated respondents were more likely to always work at high speeds.
- Skills and discretion – Higher educated respondents had greater proportions who attended employer-sponsored training, while lower educated respondents had larger proportions who had monotonous work and no decision latitude.
- Physical environment – Higher educated respondents rated their workplace health and safety conditions more favourably.
- Social environment – Both high and low educated respondents gave high ratings to bosses' helpfulness, respect, and feedback, and to colleagues' helpfulness and support.
- Prospects – Lower educated respondents had a larger share who indicated worrying about losing their jobs a great deal.

COVID-19 impacts: Across our survey respondents, 40% had never telecommuted. However, degree-holders telecommuted more and worked longer hours than before, while non-degree-holders were more likely to experience reduced work, retrenchment, or termination. Non-degree-holders also had larger proportions who applied for COVID-19-related financial assistance.

Psychological well-being: Higher educated respondents had higher self-efficacy but greater discouragement about the future, while a larger proportion of respondents with secondary or below qualifications reported symptoms of a major depressive episode.

### Implications

The main positive results of overall high rating of learning new things on the job, high prevalence of employer sponsorship of training among those who attended training, favourable ratings of workplace health, safety, and bosses, as well as job satisfaction, should be sustained among young workers.

However, the double disadvantage of being young and low educated suggests the need to pay attention to low educated young workers. For example, that 40% of our respondents had never telecommuted, especially the lower educated group in jobs that do not allow for telecommuting, implies that the promotion of flexible workplace arrangements may have limited application to young workers. This limits the possibilities for this group to balance work and other life goals.

That non-trivial numbers of our low educated respondents are in more precarious, low-paid occupations with poorer job conditions suggests that there is a greater imperative to have wage increments and protection for young workers, given their low bargaining power as new labour force entrants. The poorer work conditions can have long-term scarring effects on the job trajectories of young workers (Helbling & Sacchi, 2014; Moxon et al., 2021).

Important initiatives include the expansion of the Progressive Wage Model (PWM), the impending extension of the Workfare Income Supplement (WIS) to younger workers aged 30 to 34, and the taskforce set up by the National Trades Union Congress (NTUC)

to study the needs of workforce entrants. With a substantial group of low educated young workers in platform work, current discussions to improve the protection of platform workers need to quickly translate into concrete action.

Degree-holders' significantly higher wage premium suggests the importance of policy attention on how work-and-learn programmes towards degrees can be tailored to low educated workers in Singapore, who tend to work longer hours, atypical hours, and shifts. Further, given that there is no significant difference in wages and occupations between ITE graduates and respondents with lower qualifications, efforts to improve ITE graduates' wages and career options remain essential.

With higher educated young workers experiencing greater time-based work intensity and additional work due to COVID-19, they might require protections on drawing clearer boundaries between work and personal time.



# 1. Introduction

## Background

- 1.1 This report is part of a study funded by the Social Science Thematic Research Grant (Type B) to gain new insights into the kinds of in-work poverty that low-income young workers are experiencing. It uses data from the first wave of survey conducted between October 2020 and March 2021 of 1,905 young Singaporeans. The period of data collection coincides with Phases 2 and 3 of Singapore's COVID-19 safe management measures, when some workplace and social gathering restrictions were relaxed.
- 1.2 The report highlights how the following key outcomes among our sample of young, working Singaporeans vary by highest educational qualification:
  - 1.2.1 Occupational status
  - 1.2.2 Monthly income
  - 1.2.3 Job conditions
  - 1.2.4 COVID-19 impacts
  - 1.2.5 Psychological well-being
- 1.3 We report these key outcomes by educational qualification, as education credentials are important signals for finding employment and getting into high-status occupations in a knowledge-based economy. Terms that require further definition are included in the glossary.

## Study Sample

- 1.4 The survey sample was limited to respondents who were between 21 and 38 years old, Singapore citizens, and were working at the time of survey or had worked at some point since 2017. The aim of these screeners is to ensure that the data collected is limited to Singaporean young adults who have had recent working experience.
- 1.5 Additionally, as the focus of the study is on in-work poverty, we targeted young adults from low-income households for our survey sample, with a comparable group from the next few higher rungs in the income distribution.
- 1.6 At sampling, household income was proxied by housing type. Thus, the study's sampling frame includes only young adults living in public housing. It excludes young adults living in private condominiums or landed property, and oversamples those from smaller flat types (Table 1.1).
- 1.7 Our sampling frame was obtained from the Department of Statistics (DOS), which was a random selection of 5,700 Housing & Development Board (HDB) 2- to 4-room addresses with at least one resident aged 21 to 38 years. Households that declined or did not respond were supplemented by households residing in the same HDB blocks as the households from the DOS sampling frame. Additionally, to ensure that we had a good representation of ethnic minorities, we recruited another 59 respondents from other sources such as

Facebook, SINDA, Mendaki, CDAC, NTUC, and AWARE, until our target sample size was attained. All surveys were completed via face-to-face interviews.

**Table 1.1: Unweighted distribution of housing type**

<b>Demographic variables</b>	<b>Distribution (%)</b>
1-room HDB housing	5.09
2-room HDB housing	10.76
3-room HDB housing	28.56
4-room HDB housing	53.23
5-room HDB housing/Executive HDB housing	2.36

### Demographic Profile

- 1.8 For all reported results from Sections 2 to 6, we applied weights by race, age group, and highest educational qualification, to be comparable to the population of young adults within the 20 to 39 age brackets in Singapore in 2020 when our survey was first conducted. Table 1.2 shows the weighted survey sample's demographic distributions.
- 1.9 By gender, our survey sample had an equal share of male and female respondents.
- 1.10 By marital status, slightly over half of our survey sample were single or cohabiting, more than four-tenths were married or remarried, and about 3% were separated, divorced, or widowed.

**Table 1.2: Weighted distributions of demographic variables**

<b>Demographic variables</b>	<b>Distribution (%)</b>
<b>Highest educational qualification</b>	
Secondary and below	11.42
Institute of Technical Education (ITE)	12.20
Diploma, A-level and professional qualification	29.76
Degree and above	46.62
<b>Race</b>	
Chinese	72.64
Malay	15.49
Indian	8.85
Others	3.02
<b>Age group</b>	
21-24	21.99
25-29	24.88
30-34	25.74

35-39	27.39
<b>Gender</b>	
Male	49.90
Female	50.10
<b>Marital status</b>	
Single or cohabiting	54.96
Married or remarried	41.85
Divorced, separated, or widowed	3.19

---

*Note: Distributions are similar to population proportions after weighting.*

## 2. Employment Characteristics

2.1 This section reports our survey sample's key employment characteristics, in comparison with the Ministry of Manpower's (MOM) sample of young adults aged 20 to 39 in 2020 (MOM, 2021).

### Highlights

Consistent with our oversampling of young adults who are active in the labour force and from low-income households, our survey sample had:

- a higher labour force participation rate (93.9%) and lower unemployment rate (4.98%);
- a larger share of own account workers (11%), part-time workers (14%), contract workers (19%), and workers with multiple jobs (10%)

than MOM's sample of young adults.

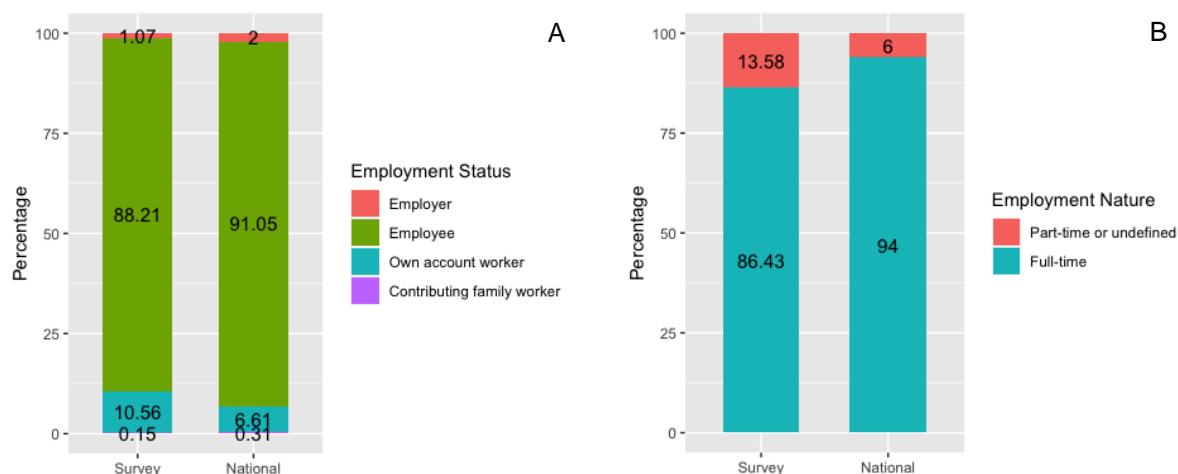
**Table 2.1: Distribution of labour force status**

Labour Force Status	National Distribution in 2020 (%)	Survey Distribution (%)
In labour force (labour force participation rate)	83.33	93.90
Employed	78.17	89.22
Unemployed	5.16	4.68
Outside labour force	16.67	6.10

*Note: Source for national distribution: Ministry of Manpower (MOM) (2021).*

2.2 Our survey sample had a higher labour force participation rate and a lower unemployment rate (4.98%) than MOM's sample (6.19%) due to sampling, where respondents were surveyed only if they had done any paid work since 2017 (Table 2.1).

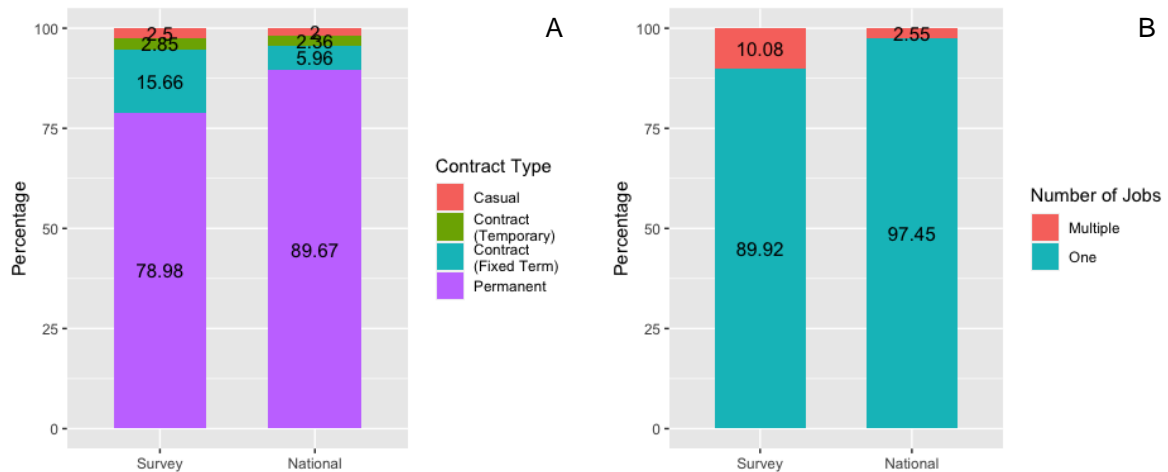
**Figure 2.1: Distribution of employment status and employment nature**



*Note: Source for national distribution: MOM (2021).*

2.3 Among employed individuals, our survey sample had a larger share of own account workers (11% compared to 7%) and part-time workers (14% compared to 6%) than MOM's sample of young adults (Figures 2.1A and 2.1B). Among our survey sample's own account workers, about one-third of them were platform delivery riders, delivery drivers, and private hire drivers.

**Figure 2.2: Distribution of contract type and number of jobs**

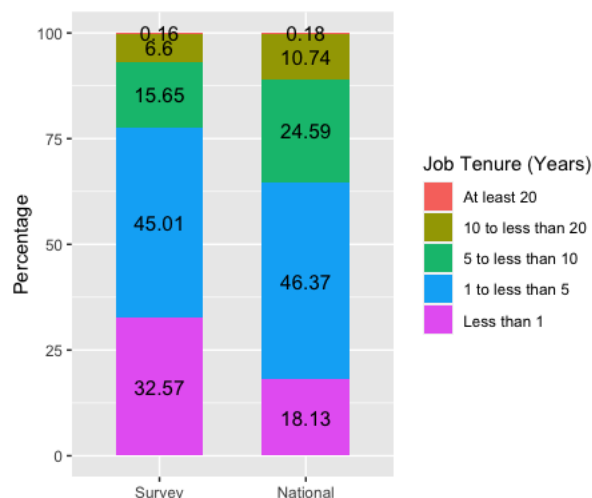


Notes: Sample for Figure 2.2A includes employees only. Source for national distribution: MOM (2021).

2.4 In terms of contract type among employees, our survey sample had a lower proportion of permanent employees than MOM's sample (79% compared to 90%), and a higher proportion of contract employees (19% compared to 8%) (Figure 2.2A).

2.5 While most of our survey respondents had only one job (90% of those working), 10% of them had multiple jobs, higher than MOM's sample proportion (3%) (Figure 2.2B).

**Figure 2.3: Distribution of job tenure**



Note: Source for national distribution: MOM (2021).

- 2.6 Almost one-third of our survey respondents have been in their main jobs for less than a year, compared to only 18% of MOM's sample (Figure 2.3). This suggests that our survey sample had more respondents who changed jobs or started working shortly before the time of survey.
- 2.7 Overall, these comparisons suggest that our survey sample faced greater employment precarity than MOM's sample of young adults in 2020, as own account, part-time, and contract jobs tend to be more short-term and financially unstable than full-time, permanent jobs.

### 3. Occupation and Income by Highest Educational Qualification

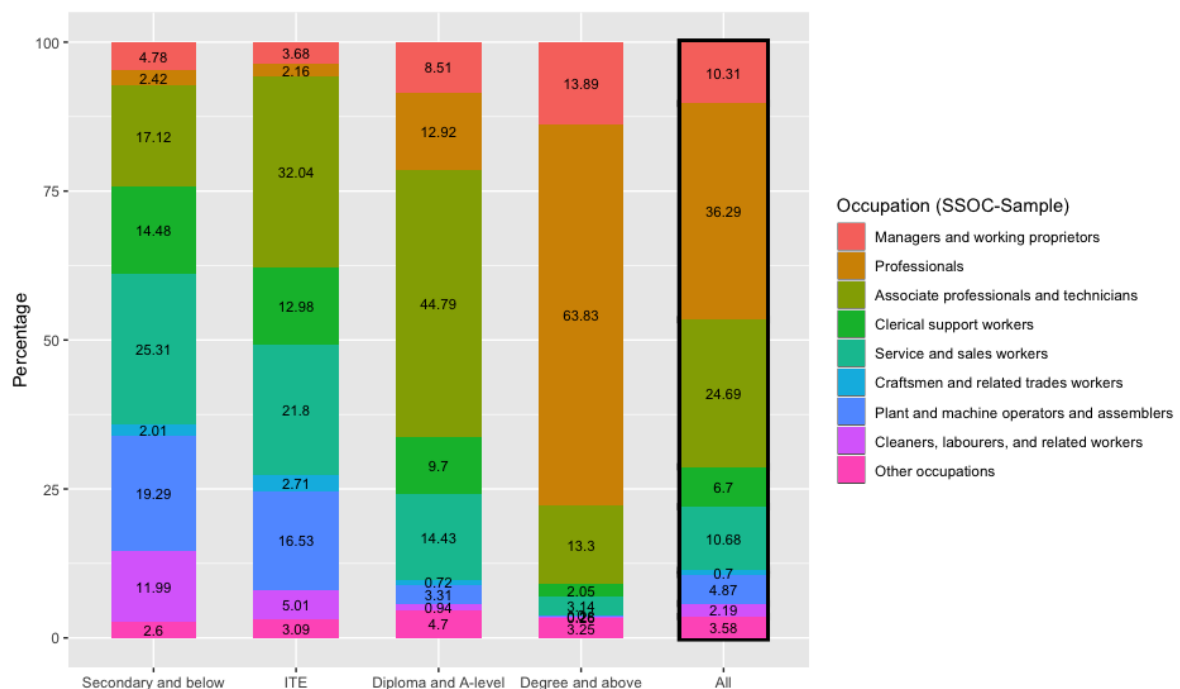
3.1 This section reports how occupational status and monthly income from paid work were associated with educational qualifications among employed respondents. Only statistically significant differences between different levels of education are reported.

#### Highlights

- Among our sample of young respondents, associate professionals form a large proportion across education levels.
- However, there were marked differences in the other occupation categories by educational qualifications. The majority of degree-holders were professionals (64%) or managers or working proprietors (14%). In contrast, the most prevalent occupation groups for respondents with ITE or below qualifications were service and sales workers (22% to 25%), and machine operators and assemblers (17% to 19%).
- The earnings premium of education was concave, with a degree accompanying a sharp rise in average income (\$1,600) from a diploma or A-level, but an ITE certificate bringing no difference in earnings (\$0) from secondary and below education level.
- These findings highlight a polarisation in occupational status and earnings by the level of education.

#### Occupations

Figure 3.1: Distribution of occupational status by highest educational qualification



Note: Occupations were classified according to the Singapore Standard Occupational Classification (SSOC) (Department of Statistics [DOS], 2020).

- 3.2 Associate professionals and technicians formed a significant proportion across all education levels. Among our respondents, professionals constituted the largest occupational group (36%), followed by associate professionals and technicians (25%) (Figure 3.1).
- 3.3 Higher educational attainment is generally associated with higher occupational status. Most degree-holders held professional occupations (64%). They were the only education category whose share of professionals exceeded half. Degree-holders also had the greatest share of managers and working proprietors (14%) and the lowest shares of all other occupational groups.
- 3.4 Diploma or A-level-holders had the largest share of associate professionals and technicians (45%), compared to the other education categories.
- 3.5 Respondents with ITE Nitec or Higher Nitec qualifications (ITE graduates) had the second largest proportions of associate professionals and technicians (32%), clerical support workers (13%), service and sales workers (22%), plant and machine operators and assemblers (17%), and cleaners, labourers, and related workers (5%).
- 3.6 Respondents with secondary or below qualifications had the largest proportions of clerical support workers (14%), service and sales workers (25%), plant and machine operators and assemblers (19%), as well as cleaners, labourers, and related workers (12%).
- 3.7 The prevalence of dependent own account work is seen in that 80% of plant and machine operators and assemblers were delivery drivers, riders, or taxi and private hire drivers.
- 3.8 Our survey sample's distributions of occupations closely resemble MOM's sample distribution of occupations by education level across all age groups in 2020 (see Figure A1 in the Appendix).



**Table 3.1: Top five most common occupations by highest educational qualification in descending order**

<b>Secondary and below</b>	<b>ITE</b>	<b>Diploma and A-level</b>	<b>Degree and above</b>
Delivery riders	Technicians	Administrative and general executives	Engineers
Administrative assistants and clerks	Delivery riders	Call centre agents and customer service officers	Administrative and general executives
Salespersons, retail assistants and cashiers	Salespersons, retail assistants and cashiers	Administrative assistants and clerks	Financial consultants and insurance agents
Call centre agents and customer service officers	Administrative and general executives	Financial consultants and insurance agents	Accountants and auditors
Security officers	Call centre agents and customer service officers	Technicians	Unclassified general managers

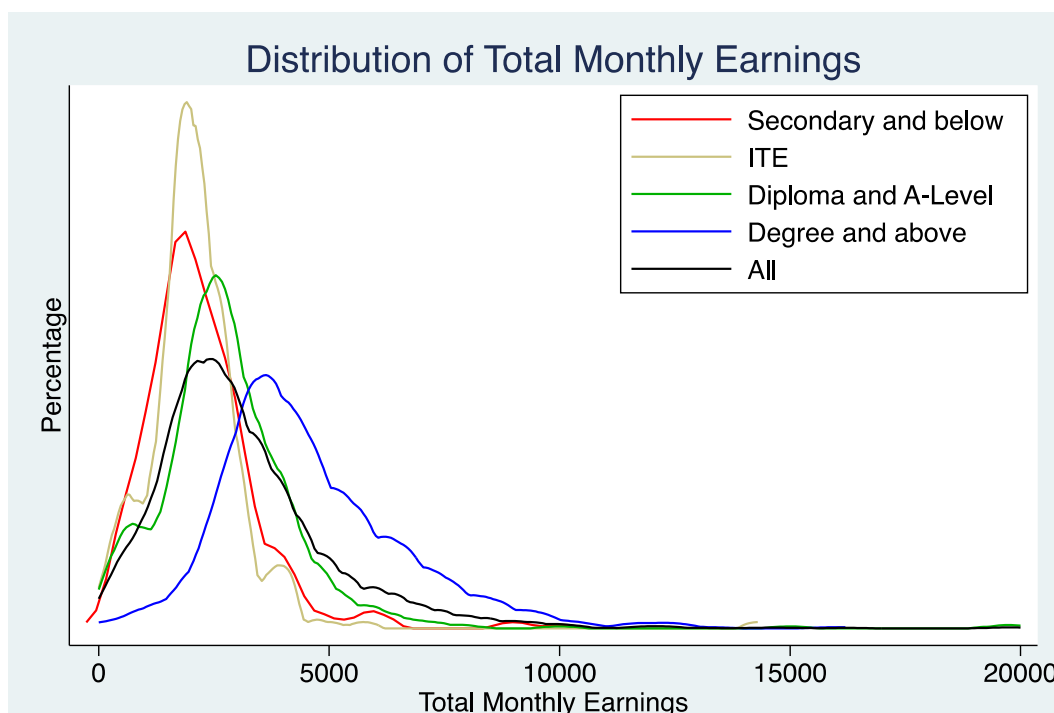
*Note: Occupations that are found across education levels are colour-coded.*

- 3.9 The most common occupations among our respondents were administrative and general executives, engineers, financial consultants, administrative assistants and clerks, and salespersons, retail assistants, and cashiers.
- 3.10 Among degree-holders, the most common five occupations were engineers, administrative and general executives, financial consultants and insurance agents, accountants and auditors, and unclassified general managers. Three out of these five occupations were not among the top 5 occupations in other education levels.
- 3.11 The most common occupations among diploma or A-level-holders and ITE graduates were technicians, administrative and general executives, as well as call centre agents and customer service officers. Financial consultants, insurance agents, administrative assistants, and clerks were also common occupations among diploma or A-level-holders. Among ITE graduates, other common occupations included delivery riders, salespersons, retail assistants, and cashiers (Table 3.1).
- 3.12 Among respondents with secondary or below qualifications, the most common occupations were delivery riders, administrative assistants, clerks, salespersons, retail assistants, cashiers, call centre agents, customer service officers, and security officers.
- 3.13 In sum, besides some commonality in administrative occupations, respondents' occupations diverged by their highest educational qualifications. The highest educated mainly held managerial and professional jobs, the middle educated had technical, executive, and clerical jobs, while the lowest educated were in service, sales, manufacturing, and delivery jobs. There were some overlaps in the common occupations among respondents with diploma, A-level, or below qualifications, but not with degree-holders. This suggests a strong divergence in occupations of degree holders from the other educational levels.

### Monthly Income

- 3.14 Degree-holders had the greatest variance in income, while respondents with ITE or below qualifications were narrowly clustered around their respective median incomes (Figure 3.2). As degree-holders are competing based on different specialised skillsets in the labour market, there is greater variation in employers' valuation of their productivity, resulting in "divergent trajectories" within degree-holders (Lersch et al., 2020, p. 1089).
- 3.15 Median earnings increased with level of education. The college premium is substantial. Degree-holders earned significantly more than other education categories in our survey sample. Their median earnings are \$1,600 more than those with diploma or A-level qualifications, and more than twice of those of respondents with ITE or below qualifications.

**Figure 3.2: Gross monthly income from paid work (with CPF contributions) among the employed by highest educational qualification**

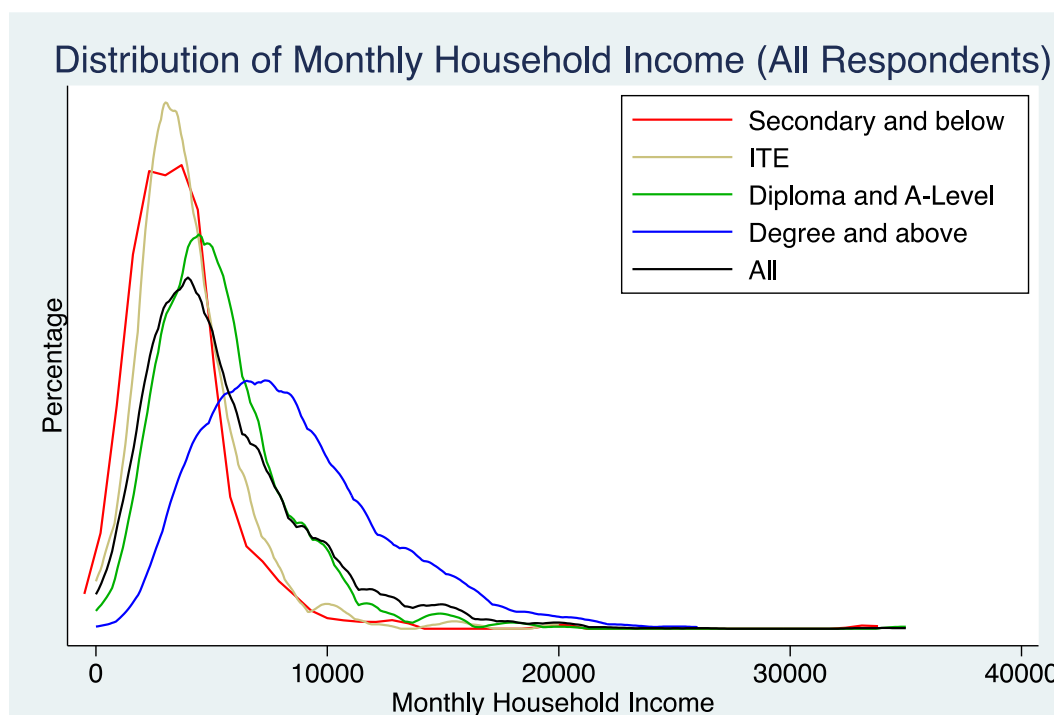


	Secondary and below	ITE	Diploma and A-level	Degree and above	All
Mean	2,221	2,104	2,829	4,753	3,664
Median	2,000	2,000	2,600	4,200	3,225
Difference in Medians	-	0	600	1,600	-

*Note: Gross monthly income from paid work includes income from all jobs, up to respondents' third job. All values are in SGD, rounded to the nearest dollar.*

- 3.16 Respondents with diploma or A-level qualifications only had a slight advantage in earnings compared to those with ITE or below qualifications, earning only \$600 more.
- 3.17 There was no difference between the median monthly earnings of ITE graduates and that of respondents with secondary or below qualifications, partly because respondents with ITE qualifications in our sample are slightly younger.
- 3.18 Our survey sample's average earnings are lower than MOM's sample averages across all age groups (MOM, 2021), thus reflecting the younger age and lower income of our sample. The wage premiums by education in MOM's sample are also larger; hence, as our respondents grow older, educational differences in wages might widen further (see Appendix Table A1).

**Figure 3.3: Household income among all respondents by highest educational qualification**



	<b>Secondary and below</b>	<b>ITE</b>	<b>Diploma and A-level</b>	<b>Degree and above</b>	<b>All</b>
Mean	3,619	4,134	5,554	8,733	6,655
Median	3,300	3,500	5,000	8,000	5,900
Difference in Medians	-	200	1,500	3,000	-

*Note: All values are in SGD, rounded to the nearest dollar.*

- 3.19 For monthly household income, besides degree-holders having substantially higher mean and median household incomes compared to other education categories, degree-holders' household incomes also had the highest variation, followed by diploma or A-level-holders.
- 3.20 ITE graduates and respondents with secondary or below qualifications had the lowest spread, clustering near the median. They also had the lowest mean and median household incomes (Figure 3.3).
- 3.21 Overall, the positive associations between educational qualifications and occupational status, personal income from paid work, and household income are concave in shape. Degree-holders had sharply higher occupational status and income, but ITE graduates had similar status and income compared to non-ITE graduates. The ratios of the respective occupation and monthly income indicators between education levels were largely reflective of MOM's sample.

## 4. Quality of Job Conditions by Highest Educational Qualification

- 4.1 This section reports the quality of job conditions by employed respondents' highest educational qualification, based on Eurofound's (2017) quality of job conditions framework. Improving the quality of job conditions is important to make work more sustainable and "keep people in employment" longer (Eurofound, 2017, p. 36).
- 4.2 Eurofound's (2017) framework consists of six categories for job conditions:
- 4.2.1 Working time quality, including duration of working hours, atypical working time, and working time flexibility
  - 4.2.2 Work intensity, including pace- and time-based workload demands
  - 4.2.3 Skills and discretion, including learning and training opportunities, as well as decision latitude (Eurofound, 2017, p. 8)
  - 4.2.4 Physical environment, including physical health and safety risk factors in job tasks and at the workplace
  - 4.2.5 Social environment, including management quality and social support
  - 4.2.6 Prospects, including job security
- 4.3 All results in this section are run using data from employed respondents only. Only statistically significant differences between education levels are reported.

### Highlights

- By level of education, higher educated respondents fared better in working time quality, skills and discretion, physical environment, and prospects, while lower educated respondents had lower work intensity.
- Degree-holders had:
  - the lowest mean number of times worked on weekends and the lowest proportion in shift work, but the highest proportion who worked late at night at least once a month;
  - the largest share who attended training over the past 12 months; and
  - the highest prevalence who agreed or strongly agreed that the safety and health conditions of the workplace were good.
- Respondents with diploma or A-level qualifications had:
  - the shortest mean weekly working hours; and
  - the largest proportion whose training was paid for by their employers.
- ITE graduates had:
  - the largest proportion who worked shifts;
  - the largest proportions who indicated that they could determine their working time entirely by themselves, or that their working time was set by their company with no possibility of change;
  - the largest proportion who always worked at very high speed;
  - the highest share who indicated that they never worked on tight deadlines; and
  - the lowest share who agreed or strongly agreed that their workplace safety and health conditions were good.
- Respondents with secondary or below qualifications had:
  - the longest mean weekly working hours;
  - the shortest advance notice of working time changes;

- the highest shares who indicated that they could always take a break at their own time, or that they never could do so;
- the highest share who indicated that they always had enough time to get the job done;
- the lowest training participation rate; and
- the largest proportion who worried about losing their jobs a great deal.
- Together, ITE graduates and respondents with secondary or below qualifications had higher rates of:
  - weekend work;
  - working long hours daily;
  - never being able to choose the order, method, and speed of work; and
  - finding work always monotonous.
- Thus, our results show that higher education is associated with jobs that generally have better-quality job conditions, with the exception of higher time-based work intensity.
- Comparing our survey sample with the EU28 countries, our sample had a greater proportion who:
  - worked long hours, late at night, and on weekends;
  - worked at high speed and on tight deadlines often or always;
  - reported that their jobs sometimes, often, or always involved learning new things; and
  - agreed or strongly agreed that their bosses were helpful in getting the job done.

### Working Time Quality

4.4 Working time quality includes three dimensions. First, duration of working hours refers to average weekly working hours and frequency of working long hours each day. Second, atypical working time includes weekend work, night work, and shift work. Third, working time flexibility refers to who sets working time arrangements, how much advance notice is given for work schedule changes, and whether workers can take time off during working hours (Eurofound, 2017).

**Table 4.1: Distribution of total weekly working hours by highest educational qualification**

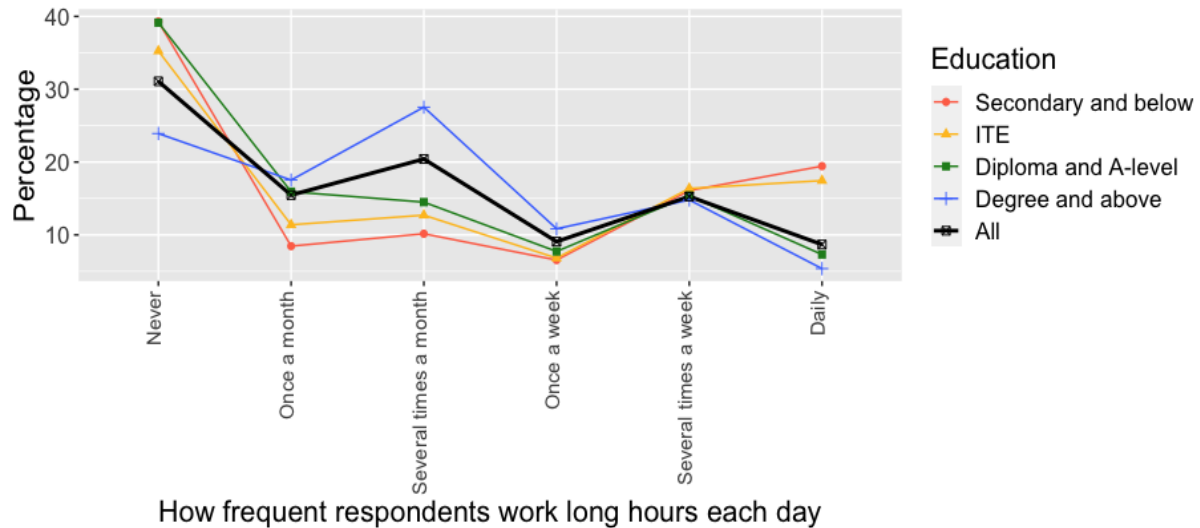
	<b>Secondary and below</b>	<b>ITE</b>	<b>Diploma and A-level</b>	<b>Degree and above</b>	<b>All</b>
Mean (hours)	46.02	43.64	41.13	43.73	43.22

*Note: If respondent had more than one job, the total weekly working hours include weekly working hours from all jobs.*

4.5 In terms of weekly working hours for all jobs, our survey sample's average was 43 hours. Respondents with secondary or below qualifications worked the longest (46 hours), followed by degree-holders and ITE graduates (44 hours). Diploma and A-level-holders worked the shortest mean weekly hours (41 hours) (Table 4.1).

4.6 All education groups except diploma and A-level-holders in our survey sample worked above the national average of 42.8 hours per week in 2020 (MOM, 2021).

**Figure 4.1: Frequencies of working long hours by highest educational qualification**

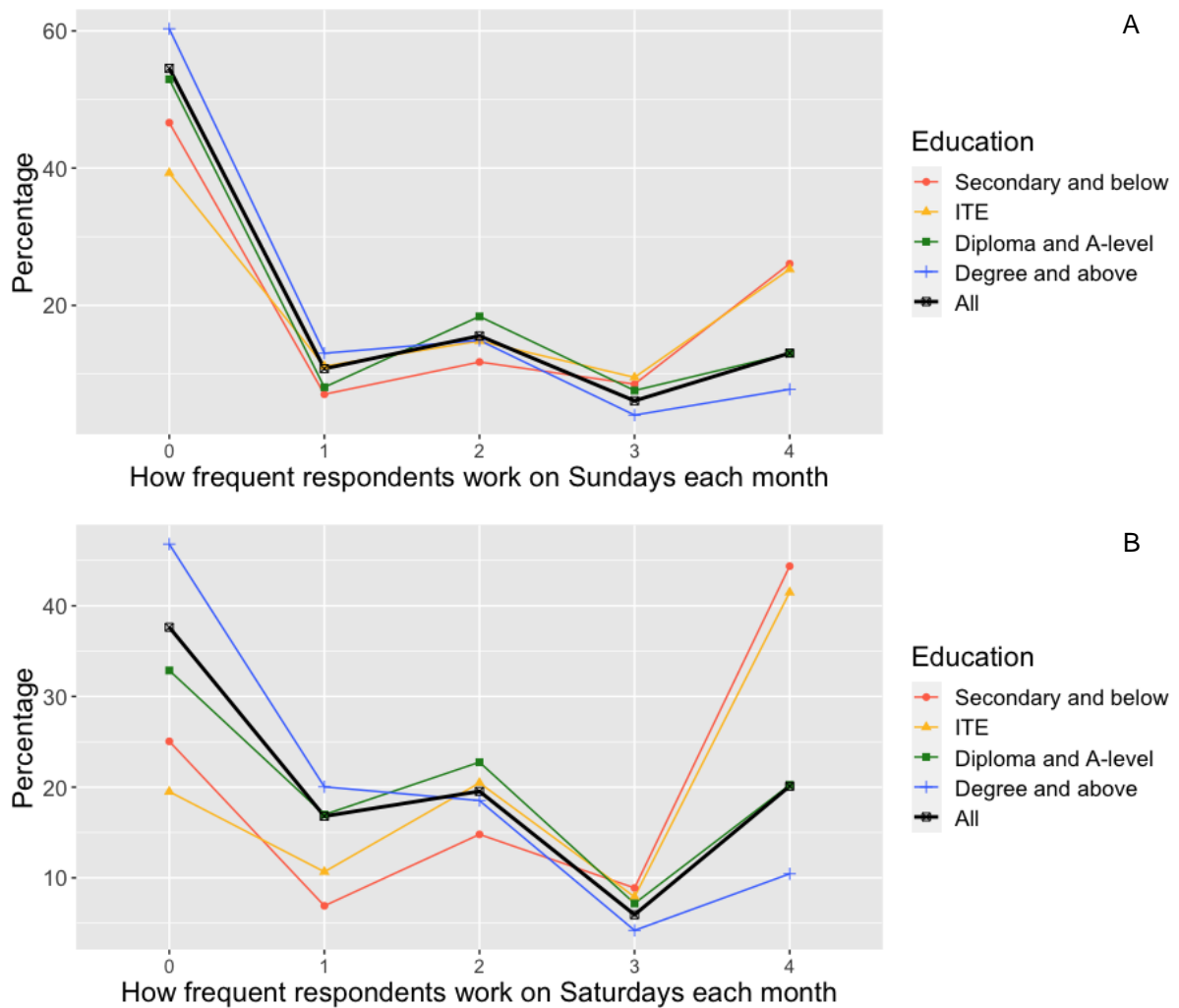


4.7 Working long hours is measured by how frequent respondents worked more than ten hours each day (Figure 4.1). Overall, about 31% of our respondents reported that they never worked long hours, while 9% reported that they did so daily.

4.8 Respondents with ITE or below qualifications fell at the extreme ends; they most commonly either never worked long hours or did so daily. Respondents with secondary or below qualifications had the largest share who reported working long hours daily (19%), followed by ITE graduates (17%). Conversely, respondents with higher than ITE education were significantly less likely to report working long hours daily (7% among diploma or A-level-holders, 5% among degree-holders).

4.9 Degree-holders had a significantly lower share who never worked long hours (24%), compared to the other education categories (39% among respondents with secondary or below qualifications, 35% among ITE graduates, and 39% among diploma or A-level-holders).

**Figure 4.2: Frequencies of working on weekends each month by highest educational qualification**



**Table 4.2: Mean frequencies of working weekends each month by highest educational qualification**

	Secondary and below	ITE	Diploma and A-level	Degree and above	All
Mean (days/month)	4.01	4.12	2.85	1.97	2.66

4.10 Overall, our respondents worked 2.66 days on weekends in a month; 13% had to work every Sunday while 20% had to work every Saturday.

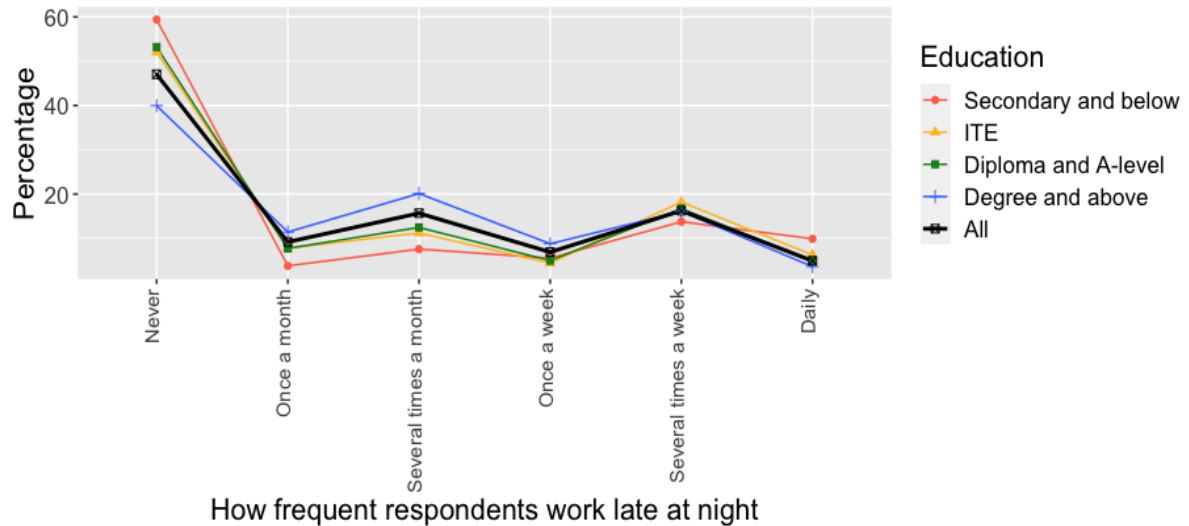
4.11 Degree-holders had the largest share who had never worked on both Sundays and Saturdays (60% and 47% respectively) (Figures 4.2A and 4.2B). Degree-holders also had the significantly lowest average number of times that they had to work on Sundays and Saturdays each month (Table 4.2).

4.12 In contrast, respondents with ITE, secondary, or below qualifications were more likely to always work on Sundays and Saturdays (four times a month) (25% and 41% respectively among ITE graduates, 26% and 44% respectively among



respondents with secondary or below qualifications). Additionally, they had the highest average number of days worked on weekends (4.01 and 4.12 respectively), compared to higher educated respondents.

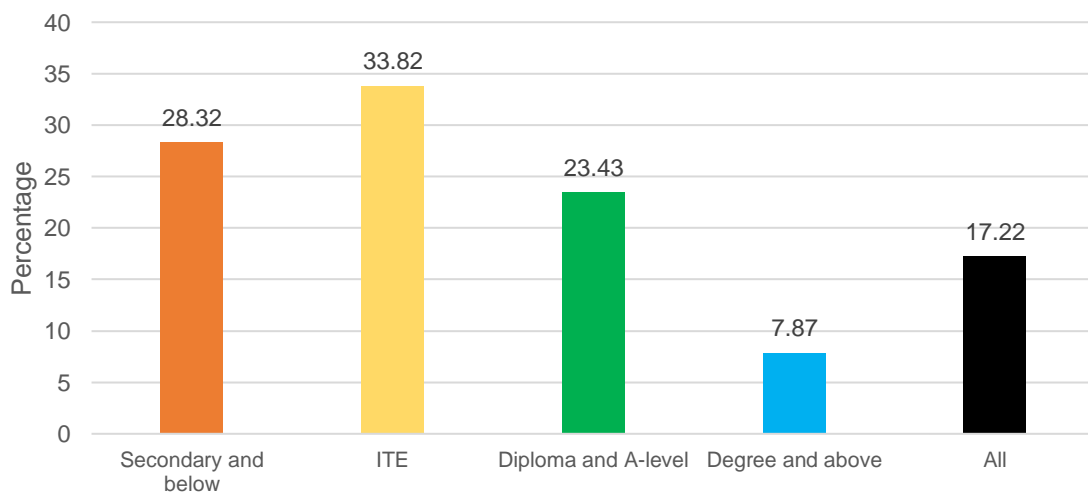
**Figure 4.3: Frequencies of working late at night by highest educational qualification**



4.13 Working late at night is defined as working at any time between 10pm and 5am. Overall, 47% of our respondents never had to work late at night, while 5% indicated that they had to do so daily (Figure 4.3).

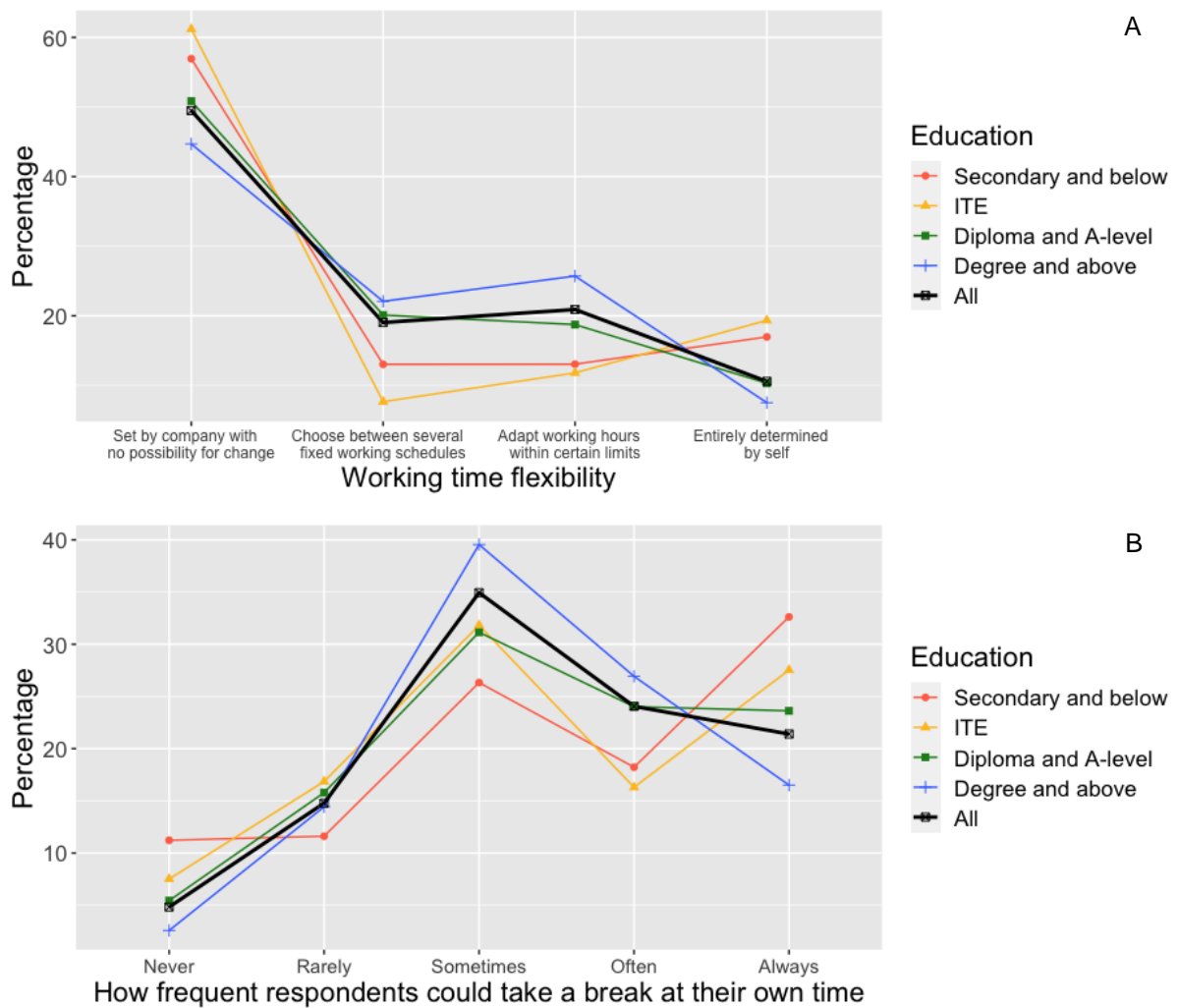
4.14 Degree-holders had the significantly lowest proportion who never worked late at night (40%), compared to other education categories (59% among respondents with secondary or below qualifications, 52% among ITE graduates, and 53% among diploma or A-level-holders). In other words, degree-holders had the highest proportion who worked late at night at least once a month.

**Figure 4.4: Proportions who worked shifts by highest educational qualification**



4.15 Among our respondents, 17% of them worked shifts. ITE graduates had the largest share who worked shifts (34%), while degree-holders had the smallest share in shift work (8%) (Figure 4.4).

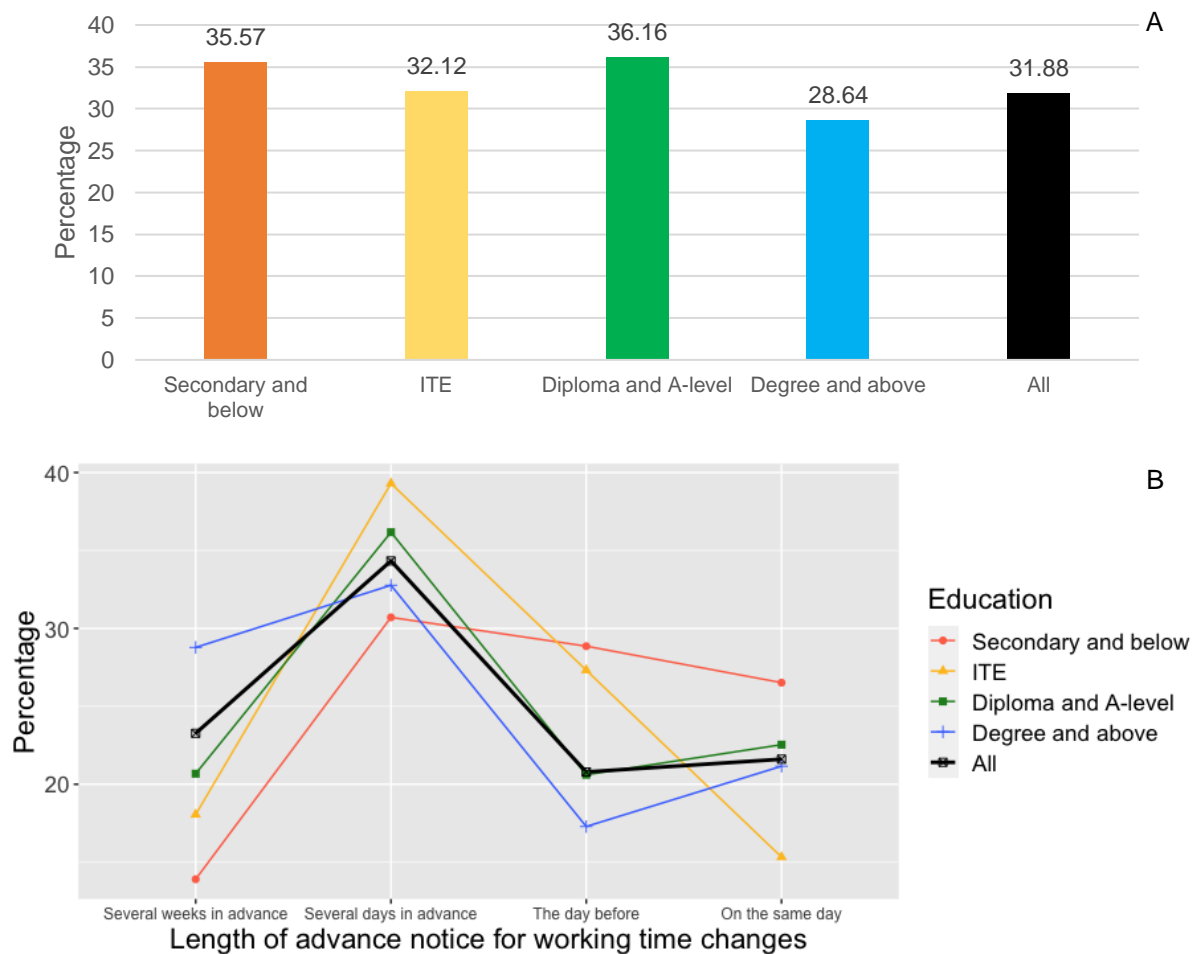
**Figure 4.5: Distributions of working time flexibility by highest educational qualification**



- 4.16 Among the types of working time flexibility, the largest proportion of all respondents had working times that were set by their companies with no possibility of change (49%) (Figure 4.5A).
- 4.17 Lower educated respondents were more likely to be found at the extremes. ITE graduates had the largest shares whose working time arrangements were either entirely inflexible (set by company with no possibility for change) (61%) or flexible (entirely determined by self) (19%).
- 4.18 Conversely, degree-holders had a significantly lower proportion who could entirely determine their working time arrangements themselves (8%). In addition, degree-holders had the largest proportions who straddled the middle of the scale, where they could choose between several fixed working schedules or adapt working hours within certain limits (48%).
- 4.19 In terms of being able to take a break at their own time, the bulk of our survey sample indicated that they could sometimes do so (35%) (Figure 4.5B).

- 4.20 Respondents with secondary or below qualifications had the highest proportions at the extremes (never or always could take a break at their own time) again (11% and 33% respectively).
- 4.21 Conversely, degree-holders had the lowest corresponding shares at the extremes (3% and 17% respectively). They had the largest proportions who reported that they could take a break at their own time sometimes and often (66%).

**Figure 4.6: Proportions with regular working time changes by highest educational qualification**



Note: Figure 4.6B includes respondents with regular working time changes only.

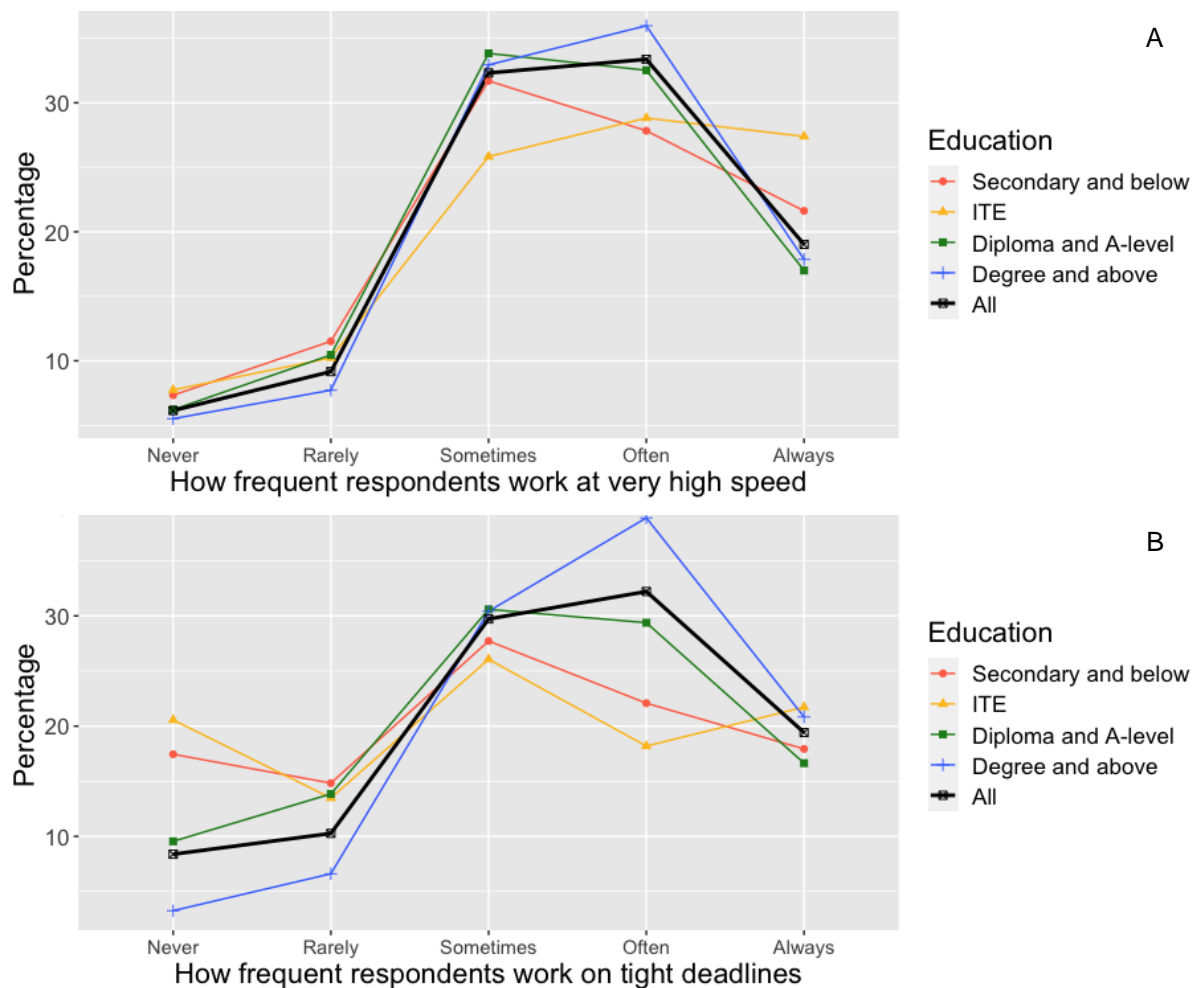
- 4.22 Overall, 32% of our respondents faced working time changes regularly. There were no significant differences in respondents' experience of working time changes by their level of education (Figure 4.6A).
- 4.23 Among respondents with working time changes, the bulk of them received notice several days in advance (34%). However, respondents with secondary or below qualifications had the largest share receiving very short notice of working time changes, i.e., on the same day (27%), and the smallest share who were informed several weeks in advance (14%) (Figure 4.6B).

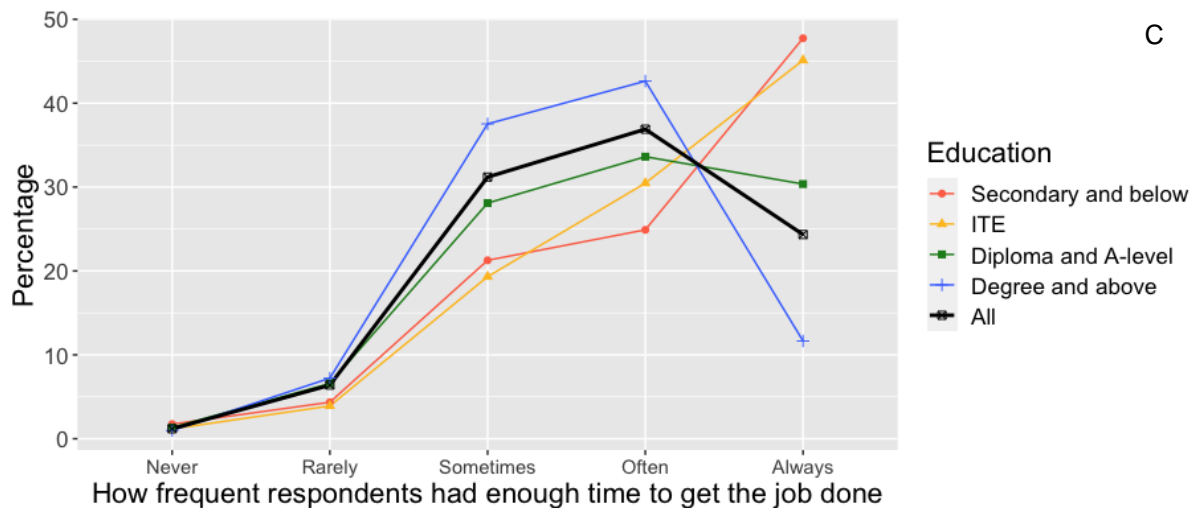
4.24 In all, for working time quality, respondents with lower educational qualifications were more likely to work long hours, on weekends, and shifts. However, a larger proportion of lower educated respondents reported more flexible working time arrangements, but they also had larger proportions who could not take breaks at their own time.

### Work Intensity

4.25 Work intensity refers to the degree of work demands from respondents' jobs (Eurofound, 2017). In our survey, we included indicators measuring pace- and time-related work demands, shown in Figure 4.7. Pace is measured by frequency of working at very high speed, while time-based demands include frequency of tight deadlines and sufficient time to complete work.

**Figure 4.7: Frequencies of work intensity indicators by highest educational qualification**



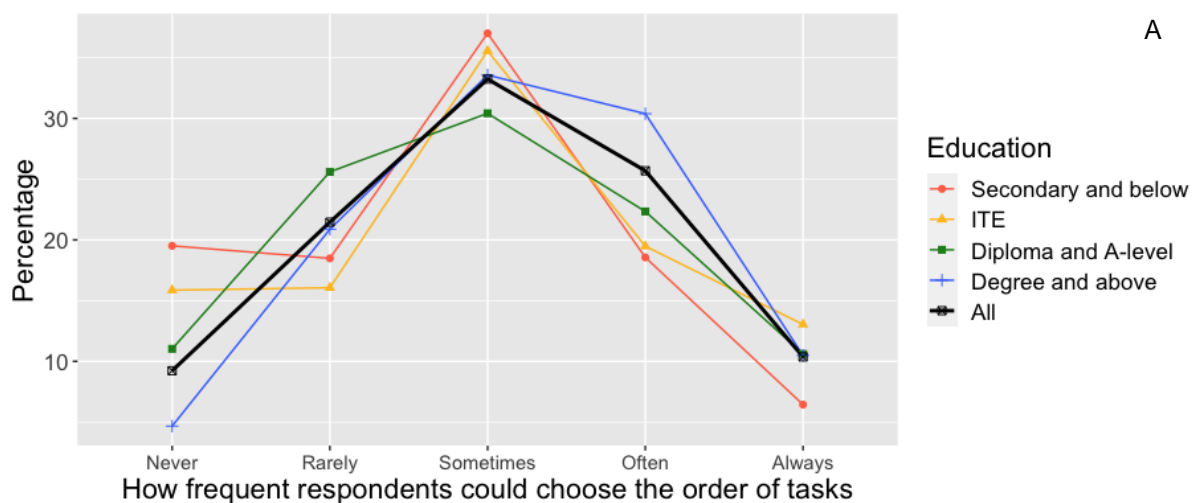


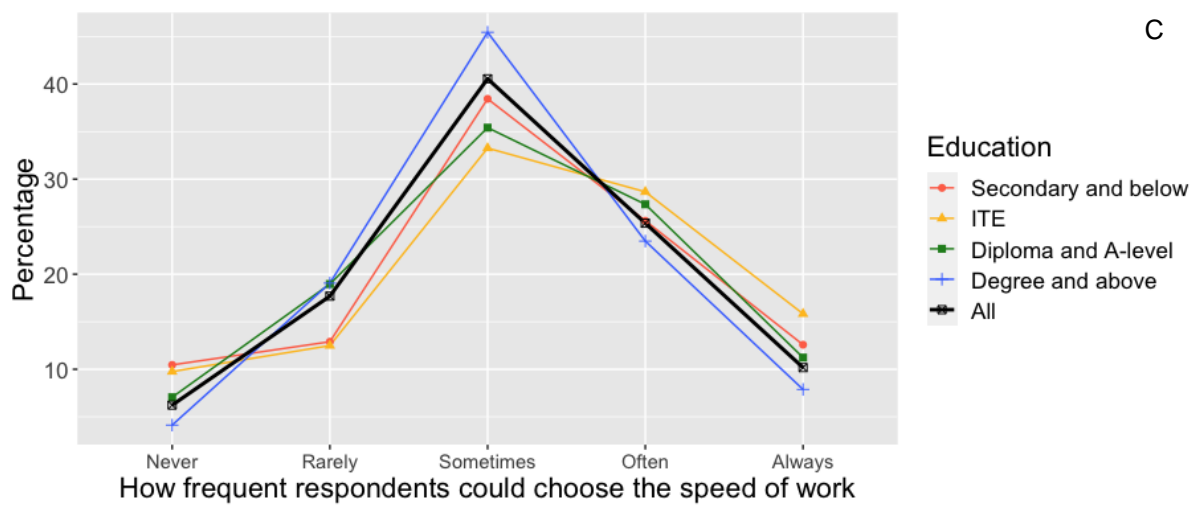
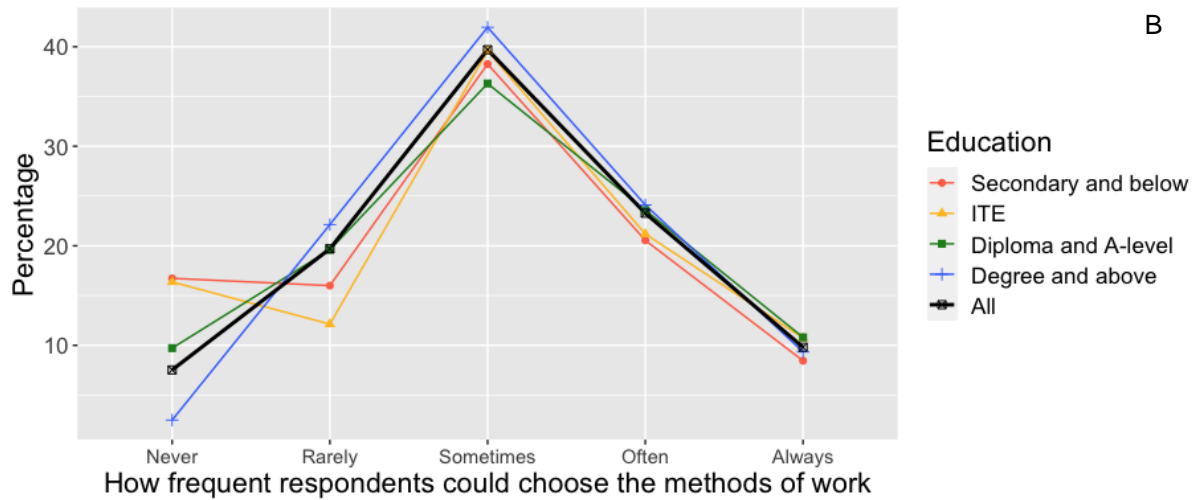
- 4.26 In general, most respondents reported that they sometimes or often worked at very high speed (32% and 33% respectively), while 19% reported that they always did so (Figure 4.7A).
- 4.27 Respondents with diploma or A-level qualifications were the least likely to always work at very high speed (17%), while ITE graduates had the largest proportion who always worked at very high speed (27%).
- 4.28 Overall, 32% of our survey sample often worked on tight deadlines, while 8% of them never had to do so (Figure 4.7B).
- 4.29 Degree-holders had a significantly lower proportion of respondents who never had to work on tight deadlines (3%), followed by diploma or A-level-holders (10%). The lower educated groups had significantly higher proportions who never had to work on tight deadlines (17% among respondents with secondary or below qualifications, 21% among ITE graduates).
- 4.30 Among our survey sample, 37% often had enough time to get the job done, and 24% reported that they always had enough time (Figure 4.7C).
- 4.31 Degree-holders were the least likely to report that they always had enough time to get the job done (12%), followed by respondents with diploma or A-level qualifications (30%). In contrast, larger proportions of respondents with ITE, secondary, or below qualifications reported likewise (45% among ITE graduates and 48% among respondents with secondary or below qualifications).
- 4.32 On the whole, respondents with higher educational qualifications, especially degree-holders, faced greater time-based work intensity, in terms of the frequency of working on tight deadlines and having sufficient time to get their work done. Conversely, ITE graduates faced the largest pace-based intensity.

## Skills and Discretion

- 4.33 This part of job conditions focuses on the decision latitude of workers in their jobs, which refers to the degree of control over job performance (Karasek et al., 1998), as well as the cognitive and skill dimensions of their jobs (Eurofound, 2017). These indicators relate to the growth and development of workers “through the experience of work” (Eurofound, 2017, p. 79).
- 4.34 For the decision latitude indicators, the bulk of our respondents indicated that they sometimes could choose the order of their tasks (33%), methods of work (40%), and speed of work (41%), suggesting a moderate degree of autonomy regardless of their level of education (Figure 4.8). For these three indicators, the distributions follow an inverted V-shape, where the largest proportions are concentrated in the middle and smallest proportions are found at the extremes.
- 4.35 Lower educated respondents had significantly higher proportions who never could choose the order of tasks (20% among respondents with secondary or below qualifications, 16% among ITE graduates), while less than 5% of degree-holders reported likewise (Figure 4.8A).
- 4.36 Similarly, lower educated respondents had the highest proportions who never could choose the methods of work (17% among respondents with secondary or below qualifications, 16% among ITE graduates), while only 2% of degree-holders reported likewise (Figure 4.8B).
- 4.37 Again, respondents with secondary or below qualifications, as well as ITE graduates, had greater shares who reported that they could never choose the speed of work (10% each), which are significantly higher than that of degree-holders (4%) (Figure 4.8C).

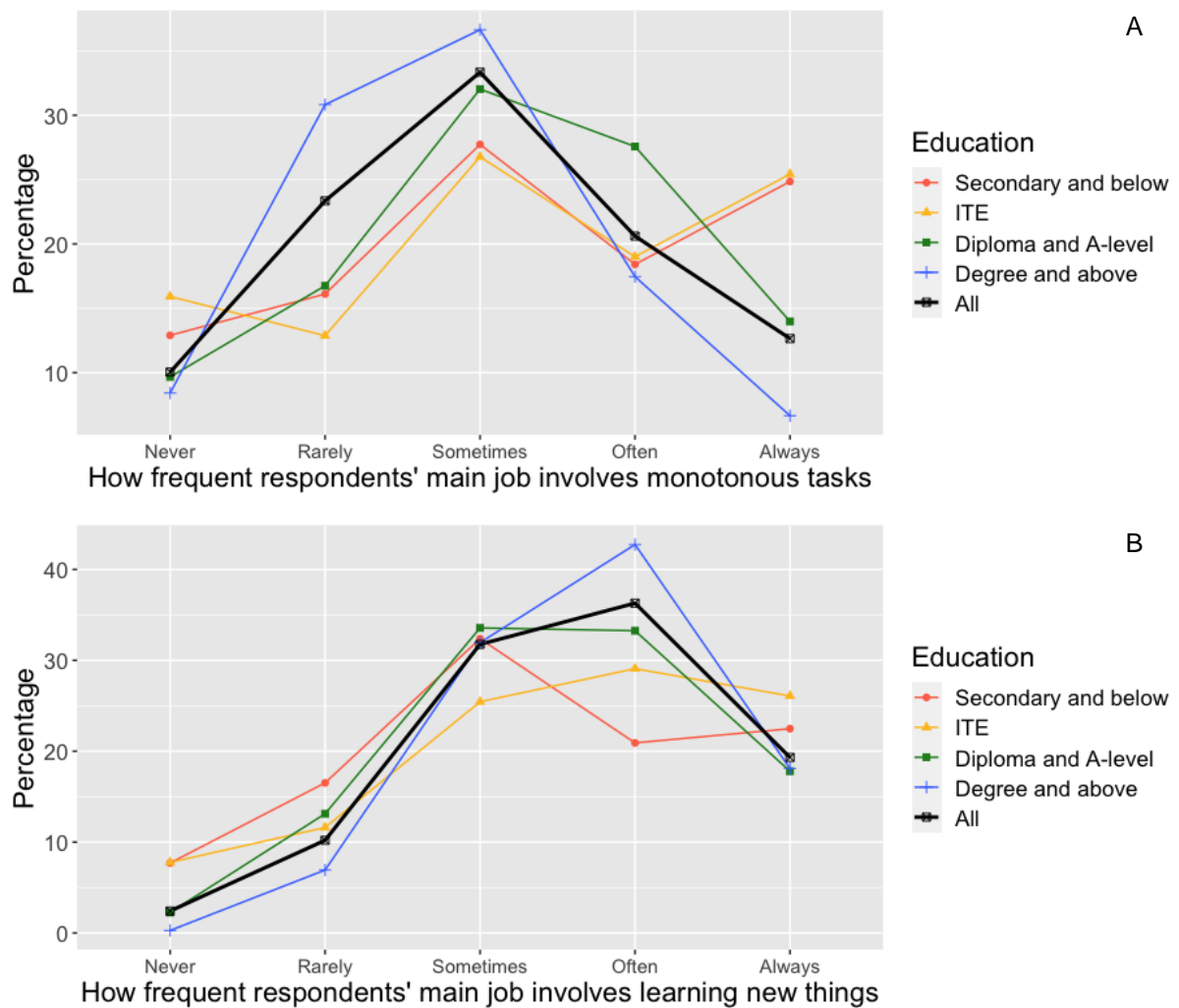
Figure 4.8: Frequencies of decision latitude indicators by highest educational qualification





- 4.38 Among our survey sample, the highest proportion (33%) indicated that their main jobs sometimes involved monotonous tasks (Figure 4.9A).
- 4.39 Degree-holders were the least likely to report that their work always involved monotonous tasks (7%), while respondents with ITE, secondary, or below qualifications had the largest proportions who reported likewise (25% each for both groups).
- 4.40 In terms of how frequent respondents' jobs involved learning new things, most respondents reported that they often or sometimes could do so (36% and 32% respectively). There were no significant differences between the education categories (Figure 4.9B).

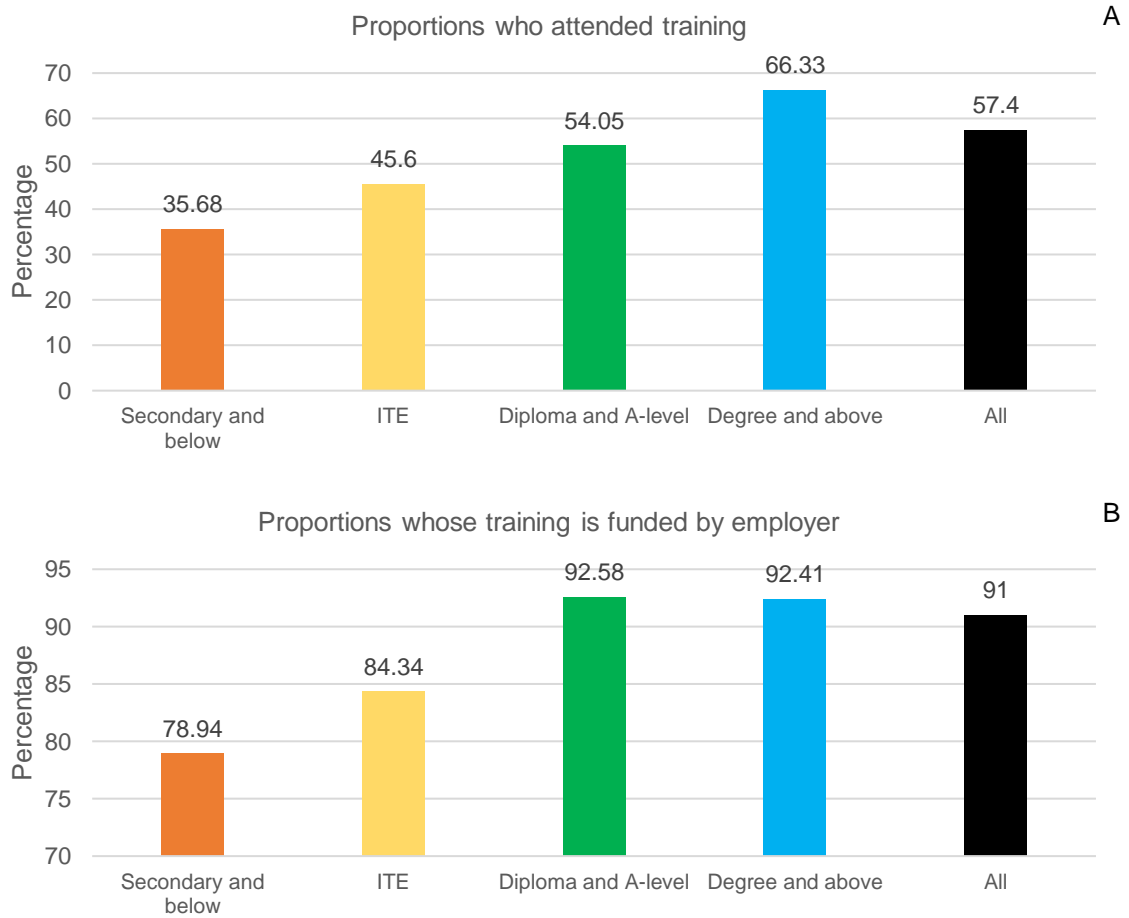
**Figure 4.9: Frequencies of cognitive dimension indicators by highest educational qualification**



- 4.41 While more than half of our respondents attended training in the past 12 months (57%), the likelihood of attending training increased with the level of education. Notably, two-thirds of degree-holders attended training, compared to about one-third of respondents with secondary or below qualifications (Figure 4.10A).
- 4.42 Among those who have attended training, significantly lower proportions of employees with secondary or below qualifications reported that their employers sponsored their training (79%), compared to degree-holders (92%) and diploma or A-level-holders (93%) (Figure 4.10B).
- 4.43 Overall, for the skills and discretion category of indicators, lower educated respondents had lower decision latitude, faced monotonous tasks more frequently, and were much less likely to attend employer-sponsored training. These suggest a relatively lower degree of decision latitude and opportunities for skills development in their jobs compared to higher educated workers.



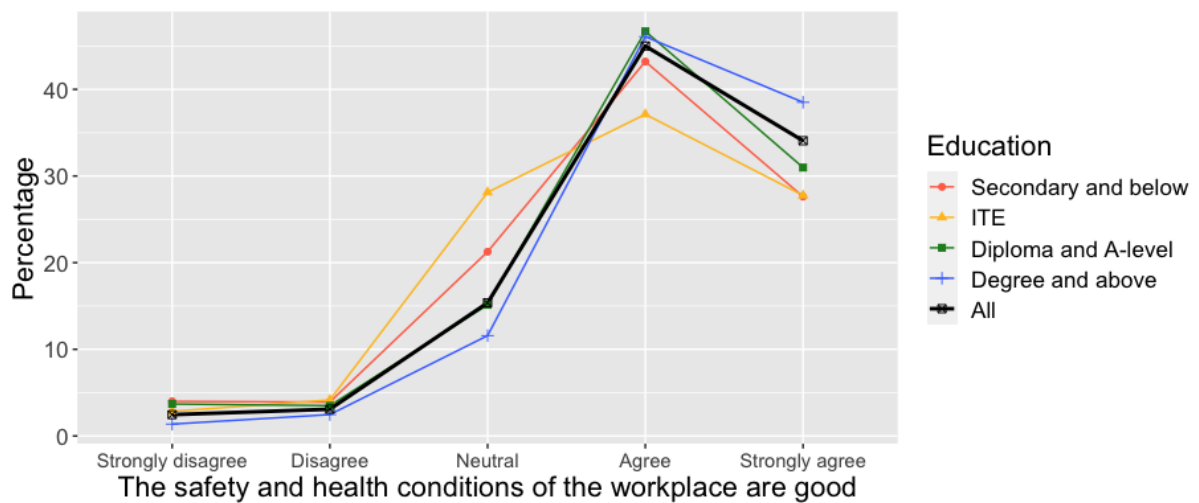
**Figure 4.10: Proportions of training participation and employers' funding by highest educational qualification**



Note: Figure 4.10B includes employees who attended training only.

Physical Environment

**Figure 4.11: Ratings of workplace safety and health conditions by highest educational qualification**

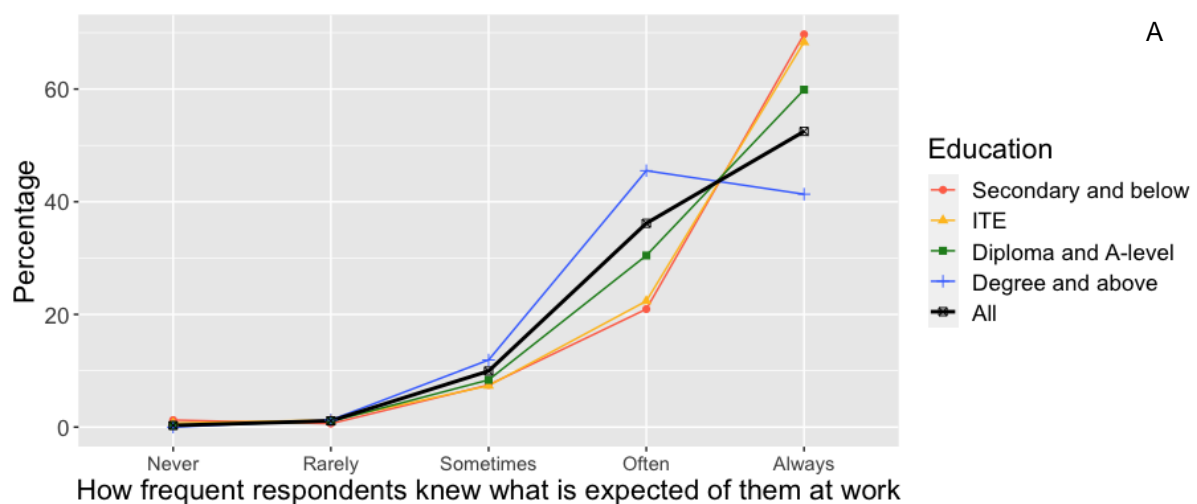


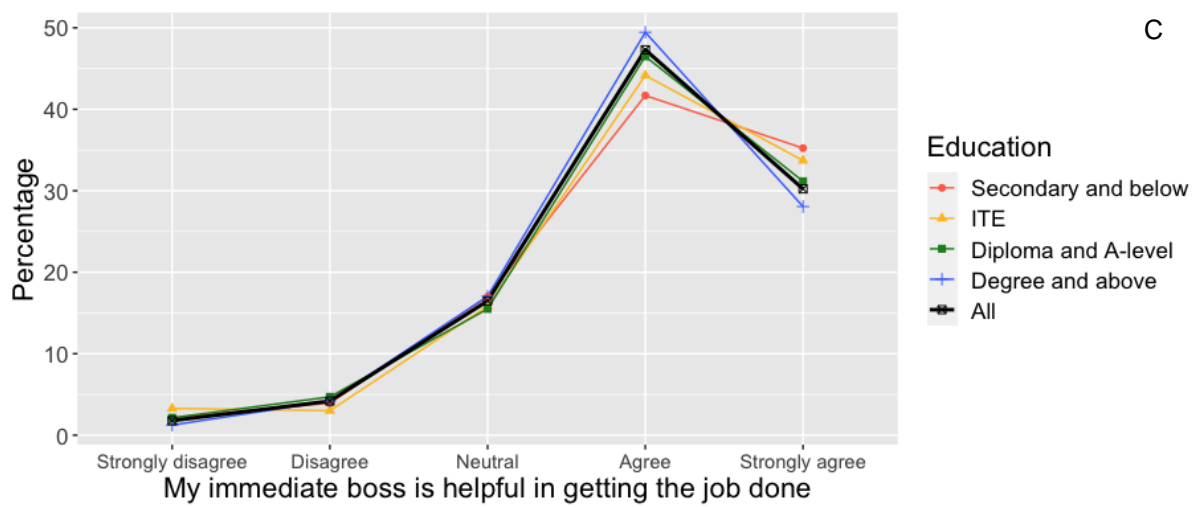
- 4.44 Overall, the majority of respondents agreed or strongly agreed that the safety and health conditions of their workplaces were good (79%) (Figure 4.11).
- 4.45 Respondents with degree, diploma, or A-level qualifications had larger proportions who agreed or strongly agreed that the safety and health conditions of their workplaces were good (85% and 78% respectively), compared to ITE graduates (65%). ITE graduates had the largest proportion who felt neutral or disagreed with this statement (32%).
- 4.46 While the bulk of respondents agreed that the safety and health conditions of their workplaces were good, higher educated respondents tended to give better ratings of the physical conditions of their work environment.

### Social Environment

- 4.47 Measures of social environment in our survey included indicators on management quality and social support from colleagues. Management quality refers to respondents' awareness of expectations at work, as well as how they rated their immediate bosses in terms of providing useful feedback, being helpful in getting their jobs done, and respecting them as persons.
- 4.48 Most of all respondents agreed or strongly agreed that their immediate bosses provided useful feedback (72%), were helpful in getting the job done (78%), and respectful to them (90%).
- 4.49 While 52% of all respondents indicated that they always knew what was expected of them at work, only 41% of degree-holders reported likewise, compared to all other education categories (70% among secondary or below, 68% among ITE, and 60% among diploma or A-level-holders) (Figure 4.12A).

**Figure 4.12: Frequencies and ratings of management quality indicators by highest educational qualification**

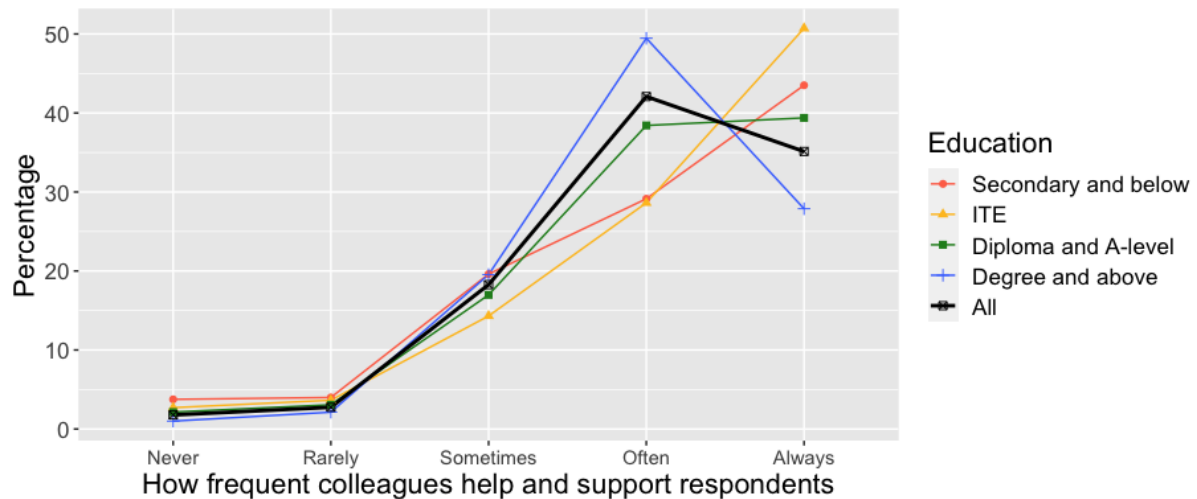




4.50 Overall, most of our respondents agreed or strongly agreed that their immediate bosses provided useful feedback on their work (72%). Figure 4.12B shows that degree, diploma, and A-level-holders tended to agree, while respondents with ITE and below qualifications tended to strongly agree with this statement. This could be due to the lower tendency of higher educated respondents indicating that they agree strongly with the survey statements.

4.51 In terms of how respondents rated their immediate bosses on being helpful in getting the job done and respecting them as a person, there were no significant differences by the level of education (Figures 4.12C and 4.12D).

**Figure 4.13: Frequencies of colleagues' help and support by highest educational qualification**



4.52 Among our respondents, 42% and 35% respectively responded that they often or always received help and support from their colleagues. While the majority of all education categories indicated that they often or always received help and support from colleagues, degree-holders had the lowest proportion who reported that they always did so (28%), compared to all other categories (44% among secondary or below, 51% among ITE, and 39% among diploma or A-level-holders) (Figure 4.13).

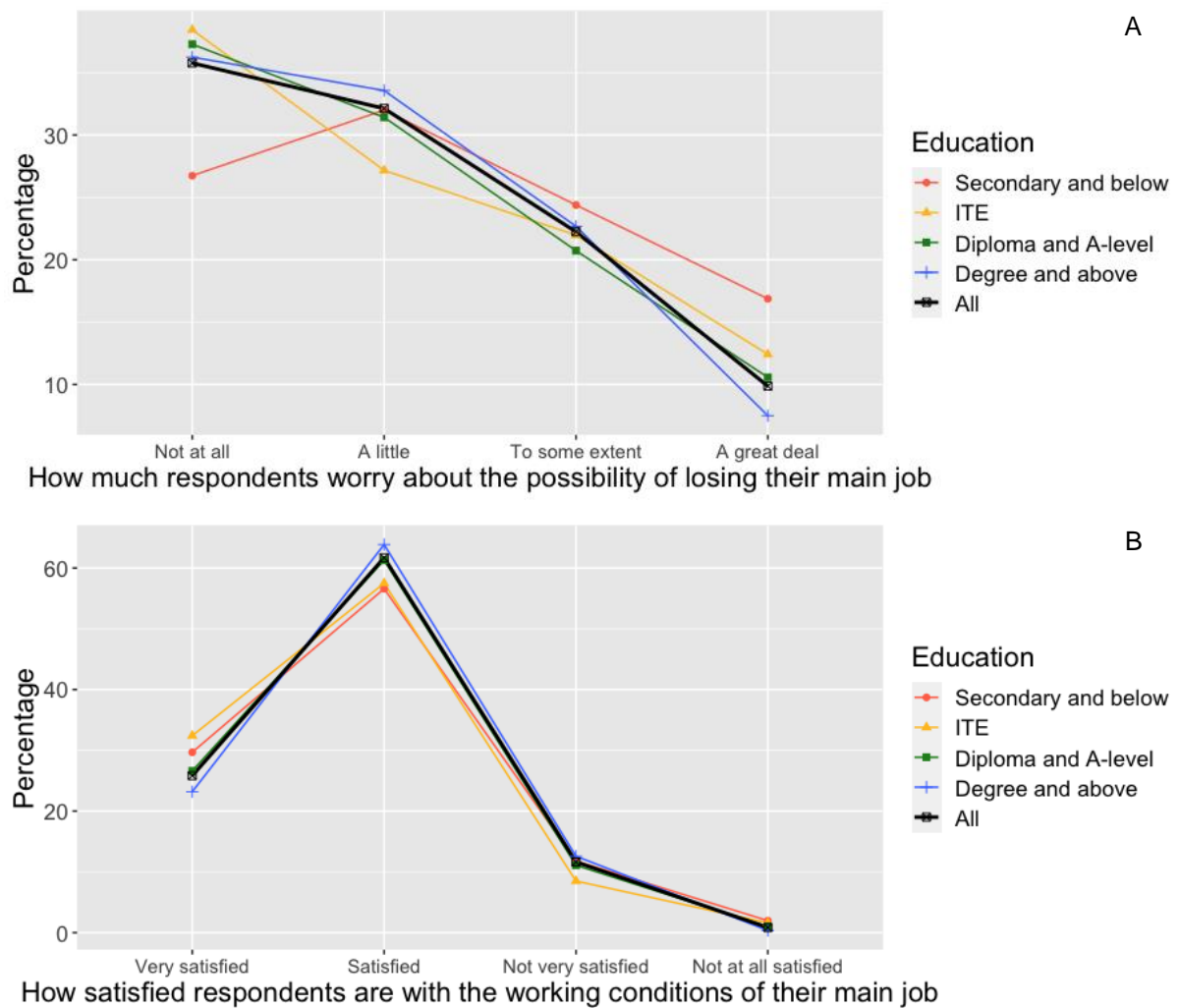
### Employment Prospects

4.53 In this report, we primarily focus on respondents' self-rated job insecurity as a proxy for employment prospects. We also asked respondents to rate how satisfied they were with the working conditions of their main jobs.

4.54 In terms of job insecurity, the bulk of respondents reported that they were not at all worried about the possibility of losing their main job (36%), while 10% of them worried a great deal (Figure 4.14A).

4.55 Higher proportions of respondents with a lower level of education reported that they worried about losing their main jobs a great deal. Seventeen percent of respondents with secondary or below qualifications worried a great deal, while higher educated respondents had lower proportions who reported likewise (11% among diploma or A-level-holders, 8% among degree-holders). Additionally, respondents with secondary or below qualifications had a significantly lower share who reported that they did not worry at all (27%).

Figure 4.14: Ratings of job insecurity and satisfaction by highest educational qualification



4.56 Overall, the majority of respondents were satisfied or very satisfied with the working conditions of their main jobs (62% and 26% respectively). There was no significant difference in job satisfaction by highest educational qualification (Figure 4.14B).

4.57 In summary, within the job conditions framework presented in this section, our results show that higher education is associated with jobs that generally have better job quality, in terms of working time quality, skills and discretion, physical environment, and employment prospects, but not work intensity.

### Comparisons with EU28

4.58 We compared our survey sample's quality of job conditions with those of the EU28 countries from the Eurofound (2017) report, from which job conditions indicators were obtained. Table A2 in the Appendix contains all comparisons.

4.59 In terms of working time quality, our survey sample worked longer hours, more atypical hours, and also had a higher prevalence of working on weekends and late at night at least once a month compared to the EU28 countries.

- 4.60 Our respondents also faced greater work intensity compared to the EU28 countries. They had a higher prevalence of working at high speeds often or always, and on tight deadlines often or always than the EU28.
- 4.61 In terms of the cognitive dimension under skills and discretion, our respondents had a greater proportion who reported that their jobs sometimes, often, or always involved learning new things.
- 4.62 In terms of management practices under social environment, our respondents rated their bosses more favourably. A greater proportion of them agreed or strongly agreed that their bosses were helpful in getting their job done than the EU28.
- 4.63 Overall, compared to the EU28 countries, our survey sample had poorer working time quality and higher work intensity, but had a higher prevalence of learning new things on the job and better ratings of their immediate supervisors.
- 4.64 It must be noted that the EU28 statistics were recorded before COVID-19, and these disparities might be narrower if we had the EU28's data during the pandemic. Additionally, the EU28's figures represent all age groups in the workforce, whereas our survey sample captures responses only from young adults.

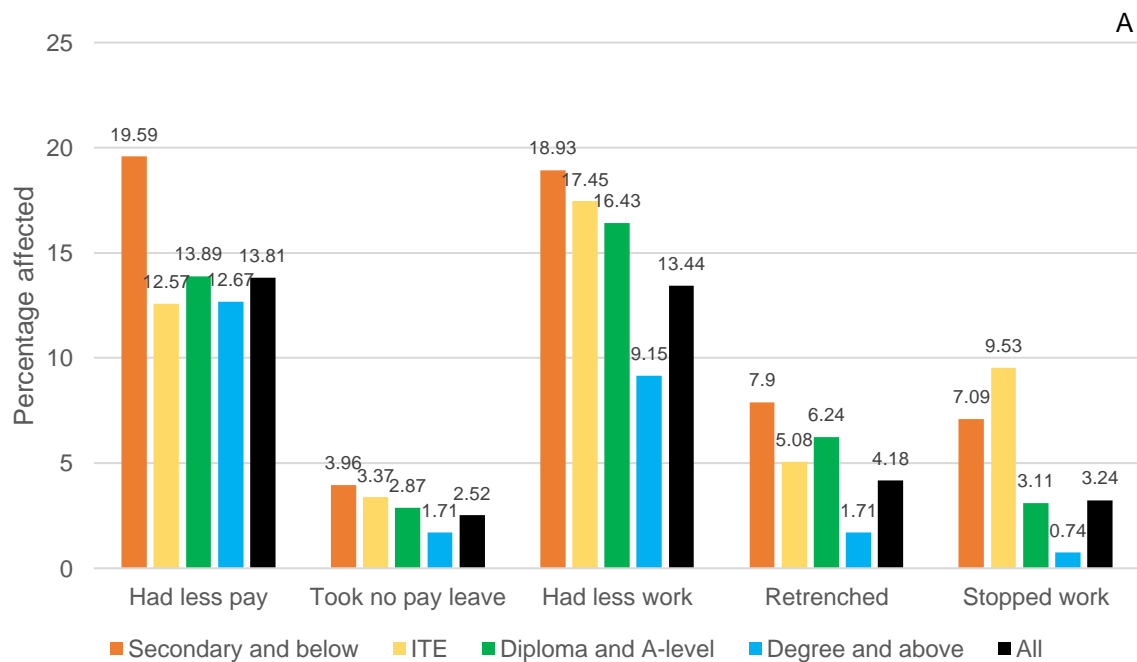
## 5. COVID-19 Impacts by Highest Educational Qualification

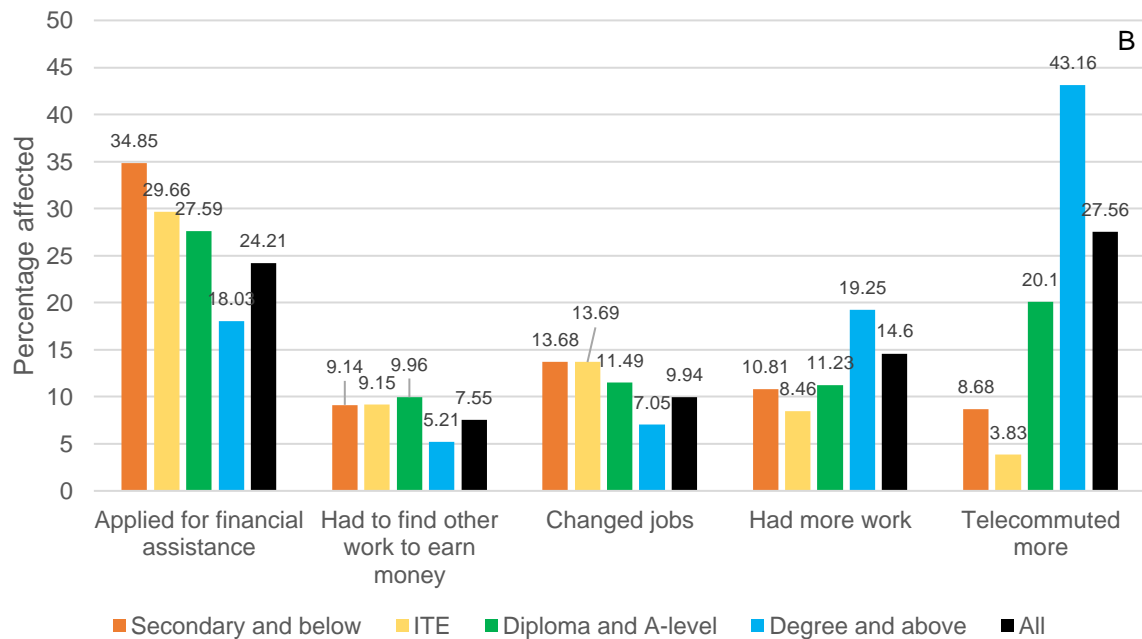
5.1 This section reports different COVID-19 impacts by highest educational qualification for the whole survey sample, regardless of labour force status. Only statistically significant differences between education levels were reported.

### Highlights

- Overall, 61% of our respondents indicated that they were affected by COVID-19 in some way. Among those who were impacted, COVID-19 affected respondents differentially by their level of education.
- Higher educated respondents, especially degree-holders, telecommuted more (43% compared to the overall sample proportion of 28%) and had more work (19% compared to the overall sample proportion of 15%).
- In contrast, lower educated respondents were more likely to experience income loss (had less pay, had to find other work to earn money, and applied for COVID-19 financial assistance) and/or job disruption (changed job, had less work, were retrenched, or stopped work).

**Figure 5.1: Distributions of COVID-19 impacts by highest educational qualification (proportions affected in %)**





5.2 Overall, 61% of our respondents indicated that they were affected by COVID-19 in some way. Among them, the different effects of COVID-19 varied by their level of education.

5.3 A greater proportion of respondents with secondary or below qualifications reported less pay due to COVID-19 compared to all other education levels (20% compared to 13% or 14%) (Figure 5.1A).

5.4 Across the education categories, degree-holders were much less likely to report less work due to COVID-19 (9%), compared to respondents without a degree (19%, 17%, and 16% respectively for secondary or below, ITE, diploma or A-level qualifications).

5.5 Similarly, the proportion of degree-holders who were retrenched due to COVID-19 was significantly lower than the corresponding proportions of all the other education categories (2%, compared to 8% for secondary or below, 5% for ITE, and 6% for diploma or A-level qualifications).

5.6 Lower educated respondents with ITE or below qualifications had higher proportions who responded that they stopped working due to COVID-19 (7% among respondents with secondary or below qualifications, 10% among ITE graduates), compared to degree, diploma, or A-level-holders (1% and 3% respectively).

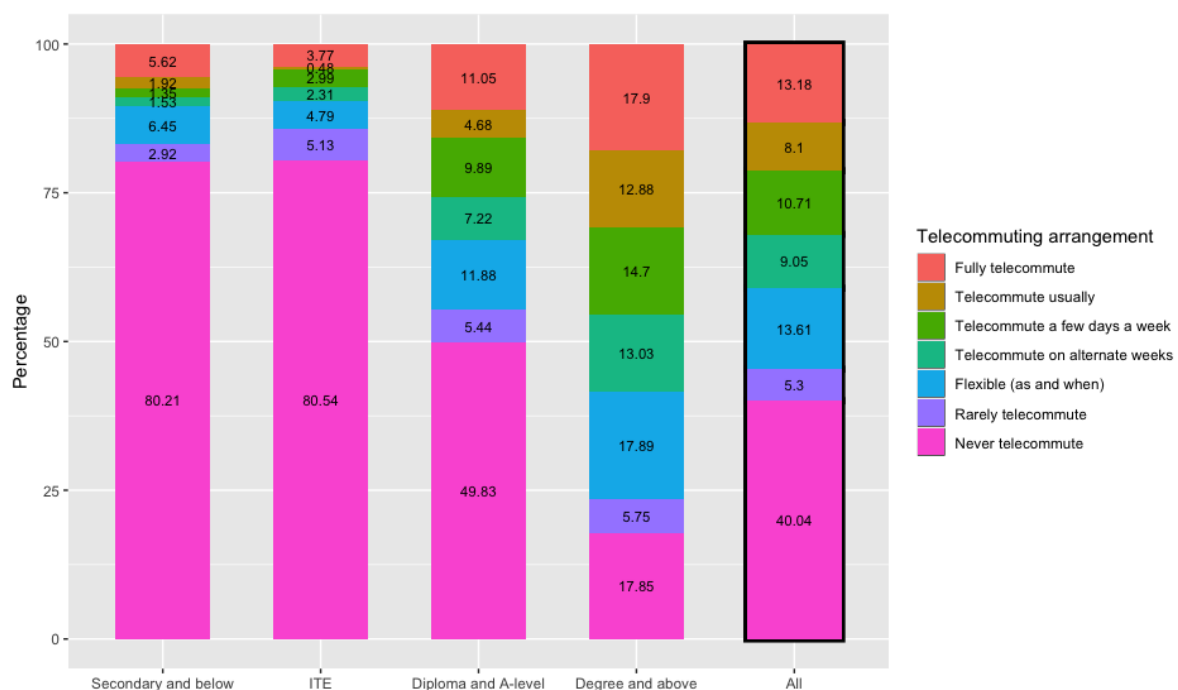
5.7 In terms of respondents who applied for COVID-19-related financial assistance, degree-holders also had a significantly lower proportion (18%) compared to the other education groups (35% for secondary or below, 30% for ITE, and 28% for diploma or A-level qualifications) (Figure 5.1B).

5.8 Diploma and A-level-holders had a greater proportion who had to find other work to earn money due to COVID-19 (10%), compared to degree-holders (5%).



- 5.9 Respondents with secondary or below qualifications and ITE graduates were more likely to change jobs due to COVID-19 (14% in both groups), compared to degree-holders (7%).
- 5.10 Conversely, degree-holders had the greatest proportion who experienced having more work due to COVID-19 (19%), compared to all other education categories (11% for secondary or below, 8% for ITE, and 11% for diploma or A-level qualifications).
- 5.11 Almost half of degree-holders telecommuted more due to COVID-19 (43%), which is more than half of the proportion among diploma or A-level-holders (20%). Lower educated respondents were significantly less likely to telecommute (9% among respondents with secondary or below qualifications, and 4% among ITE graduates).

**Figure 5.2: Distributions of telecommuting arrangements by highest educational qualification**



*Note: Data collection was primarily conducted during Phases 2 and 3, which was after the circuit breaker and before the heightened alert, when many safe distancing measures such as telecommuting were eased (Lai, 2020).*

- 5.12 Focusing on telecommuting arrangements, 40% of working respondents reported that they had never telecommuted, even during COVID-19 when the data was collected. More than 80% of respondents with ITE, secondary, or below qualifications reported that they had never telecommuted, even during COVID-19. About half of respondents with A-level or diploma qualifications reported likewise, while only 18% of degree-holders had never telecommuted (Figure 5.2).
- 5.13 In contrast, degree-holders had the highest proportions who reported that they either had flexible telecommuting arrangements (18%) or telecommuted usually

or fully (13% and 18% respectively), compared to less than one-fifth who reported likewise among respondents with ITE, secondary, or below qualifications.

- 5.14 Overall, COVID-19 has polarised effects on the respondents, with degree-holders experiencing greater workload and telecommuting arrangements, while non-degree-holders more likely faced financial and employment shocks.

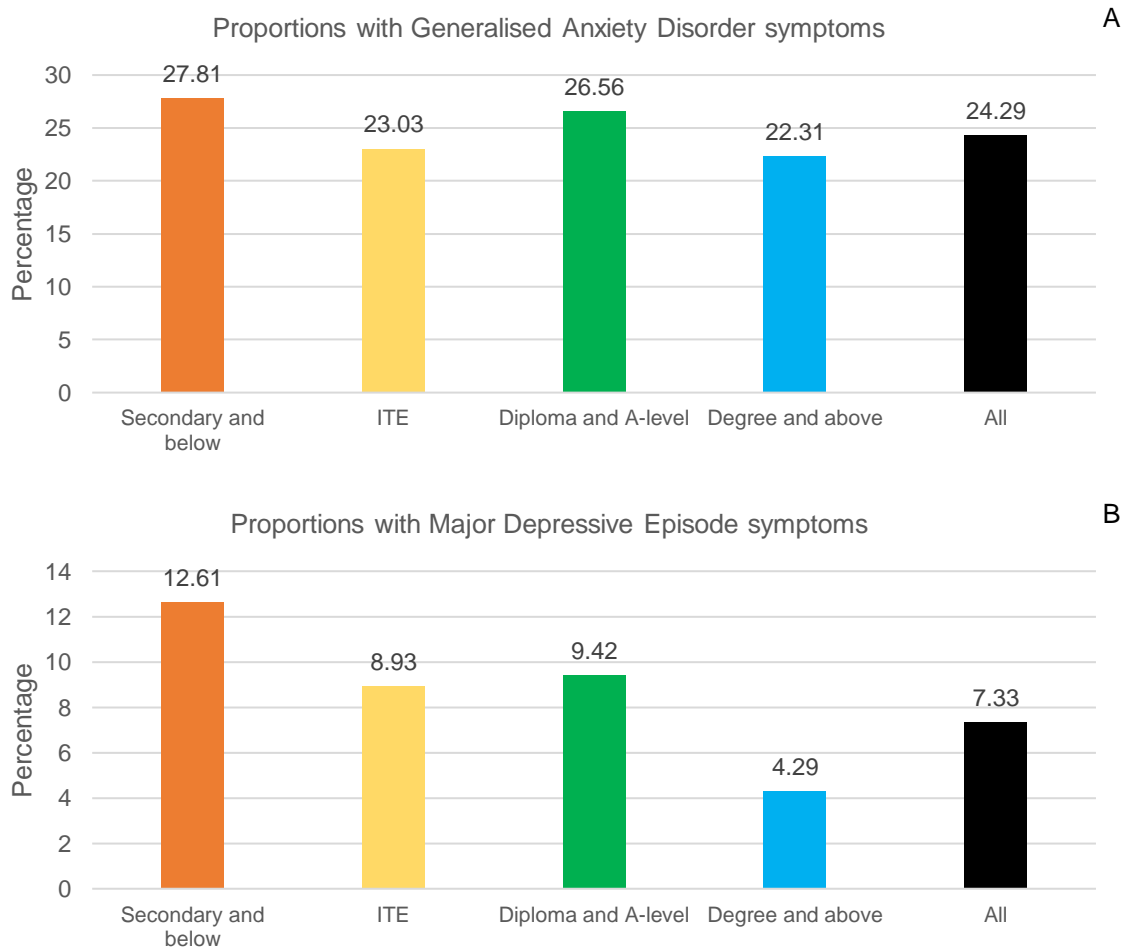
## 6. Psychological Well-being by Highest Educational Qualification

6.1 This section reports four psychological well-being indicators by highest educational qualification. The indicators are: Generalised Anxiety Disorder (GAD) (Liebowitz, 1996; Newman et al., 2002), Major Depressive Episode (MDE) (Kroenke et al., 2001), self-efficacy (Chen et al., 2001), and discouragement about the future (University of Michigan, 2002). Only statistically significant differences between different levels of education were reported.

### Highlights

- Respondents without degrees had larger proportions who reported symptoms of depression (13% among secondary or below, and 9% each among ITE graduates and diploma or A-level-holders).
- Higher educational qualifications are associated with higher mean self-efficacy scores.
- Respondents with degree, diploma, or A-level qualifications were less likely to report that they never felt discouraged about the future (22% and 20% respectively), compared to ITE graduates (33%).

**Figure 6.1: Proportions of respondents with poor psychological well-being by highest educational qualification**



- 6.2 Our survey sample’s 6-month GAD prevalence was 24.3%. Differences in symptoms of GAD between education categories within our survey sample were not statistically significant (Figure 6.1A).
- 6.3 Our survey sample’s six-month GAD prevalence is much higher than reported by Subramaniam et al.’s (2020) Singapore mental health study, whose prevalence of 12-month GAD among the 18 to 34 age group was 1.1% in 2016. It must be noted, however, that while the measure in Subramaniam et al. (2020) is diagnostic, our shortened instrument is only indicative.
- 6.4 For MDE, our survey sample’s 6-month prevalence was 7.3%. Respondents with secondary or below qualifications had the largest proportion who reported MDE symptoms (13%), and degree-holders had the smallest proportion who reported likewise (4%) (Figure 6.1B). Respondents with ITE, diploma or A-level qualifications also had a higher proportion with MDE symptoms (9%) compared to degree-holders.
- 6.5 Our survey sample’s six-month prevalence of MDE is higher than Subramaniam et al.’s (2020) prevalence of 12-month MDE among the 18 to 34 age group, which was 2.3% in 2016. Again, it must be noted that while the measure in Subramaniam et al. is diagnostic, our shortened instrument is only indicative.

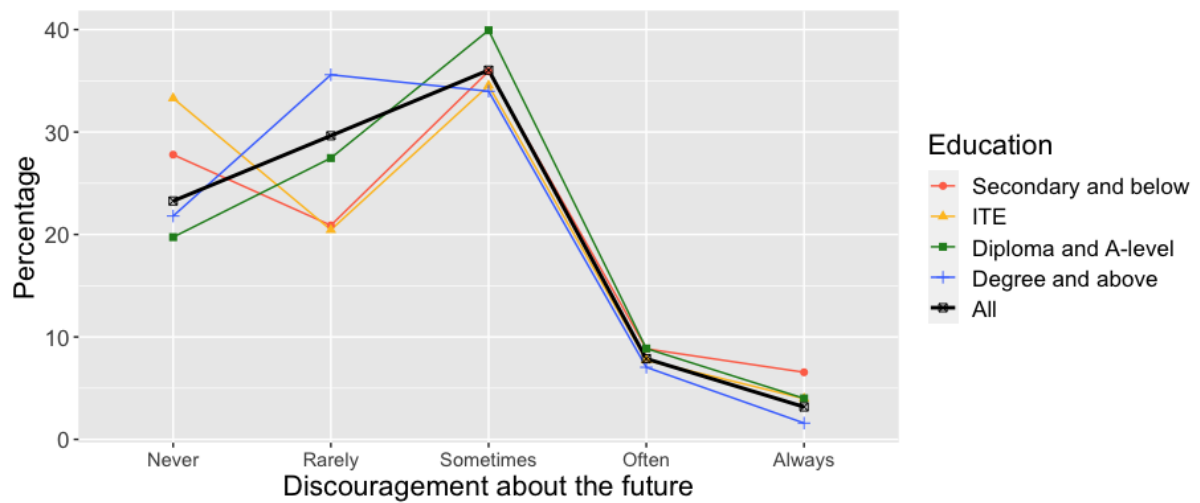
**Table 6.1: Mean self-efficacy scores by highest educational qualification**

	<b>Secondary and below</b>	<b>ITE</b>	<b>Diploma and A-level</b>	<b>Degree and above</b>	<b>All</b>
Mean	3.70	3.82	3.84	3.91	3.85

*Note: A higher score indicates higher self-efficacy.*

- 6.6 Self-efficacy refers to a person’s belief in his/her “capabilities to mobilise the motivation, cognitive resources, and courses of action needed to meet given situational demands” (Wood & Bandura, 1989, p. 408). Overall, our respondents’ mean self-efficacy score is 3.85 (out of a maximum possible score of 5), indicating that they tended to agree with the list of instruments on the self-efficacy scale. Mean self-efficacy scores increased as the level of education increased (Table 6.1). Respondents with secondary and below qualifications had a significantly lower mean self-efficacy score than other education levels.

**Figure 6.2: Frequency of discouragement about the future by highest educational qualification**



- 6.7 In terms of feeling discouraged about the future, the largest proportion of all respondents sometimes felt discouraged about the future (36%). 30% and 23% rarely and never felt discouraged respectively (Figure 6.2).
- 6.8 While respondents with A-level, diploma, or degree qualifications had larger proportions who rarely felt discouraged (27% and 36% respectively), respondents with ITE qualifications had a significantly larger share who reported that they had never felt discouraged (33%), compared to diploma or A-level-holders (20%) and degree-holders (22%).
- 6.9 Overall, respondents with secondary or below qualifications had the greatest proportions who reported poorer psychological well-being, except for discouragement about the future.

## 7. Conclusion

- 7.1 The findings in this report leads to the conclusion that low educated young workers might be doubly disadvantaged, first from being young and second from being low educated. Older adults are often deemed more vulnerable due to lower employability. However, young workers could be more vulnerable in terms of conditions at work. Comparisons of our survey sample with population samples and data from Eurofound (2017) show generally more inferior work conditions and psychological well-being experienced by our respondents, who are younger and have lower incomes than the general population.
- 7.2 Comparisons of survey respondents by educational qualifications further illustrate a clear polarisation in labour market outcomes between higher educated and lower educated young workers in Singapore. Generally, degree-holders were significantly more likely to have higher-status occupations as managers and professionals, which were accompanied by a large wage premium. Conversely, diploma-holders and respondents with A-level qualifications had a smaller wage premium, while ITE graduates did not have a wage advantage relative to respondents with secondary or below qualifications. The large and significant differences in wage premiums between degree-holders, diploma-holders, and ITE graduates are indications of wage stratification by highest educational qualification.
- 7.3 Based on Eurofound's quality of job conditions framework (2017), higher educated young workers also fared better in terms of working time quality and physical environment, and they had higher decision latitude, more skills training, and secure job prospects. However, lower educated respondents reported lower time-based work intensity compared to degree-holders.
- 7.4 COVID-19 also impacted young workers differentially by their level of education. Degree-holders experienced more telecommuting and a greater workload, while non-degree-holders reported more income loss, employment disruption, and job loss. Across our respondents, 40% had never telecommuted.
- 7.5 In terms of psychological well-being, higher educated young workers reported higher self-efficacy on average. Degree-holders were also significantly less likely to report symptoms of a major depressive episode, but degree, diploma, and A-level holders were more discouraged about the future compared to ITE graduates.
- 7.6 As the results shown in this report were obtained from cross-sectional data, we do not claim that level of education alone causes polarisation in occupational status, wages, job conditions, COVID-19 impacts, and psychological well-being. Nonetheless, these statistically significant differences by the level of education paint a broader illustration that lower educated workers are more likely to face a confluence of disadvantages, both in terms of job quality and wages. Future research could follow young workers for several years to study their wage, occupational and psychological well-being trajectories.

## Implications

- 7.7 A romanticised depiction of young adulthood is a time of optimism and aspirations as one launches careers. However, the vulnerabilities highlighted in this report for young workers in general, and low educated workers in particular, paint a less sanguine picture.
- 7.8 The less favourable conditions, poorer psychological well-being, and greater risks to external shocks such as COVID-19 are less concerning if they are only a transitory part of the early career life stage. However, according to the literature on labour market duality (e.g., Kalleberg, 2020), many of the poor characteristics are structural, and even for temporary conditions (e.g., due to COVID-19), their effects could be long-lasting, leading to scarring of job trajectories (Helbling & Sacchi, 2014; Moxon et al., 2021).
- 7.9 Therefore, the first implication of this report is the importance of paying attention to young workers in the labour force, especially those with lower education and working in lower paying jobs. That 40% of our survey respondents have never telecommuted suggests that policies promoting flexible workplace arrangements may have limited application for young workers, especially the lower educated group whose jobs primarily do not allow for telecommuting. This limits the possibilities for this group to balance work and other life goals.
- 7.10 Wage improvements such as the expansion of the Progressive Wage Model (PWM) to more sectors and other job protection policies will benefit young low earning workers as well. In fact, that non-trivial numbers of our low educated respondents are in more precarious, low-paid occupations with poorer job conditions suggests that there is a greater imperative to have wage increments and protection for them, given their low bargaining power as new labour force entrants. In line with this, there has been recognition of the plight of younger workers recently, as the Workfare Income Supplement (WIS) is being extended to younger workers aged 30 to 34 (Workfare, 2022), and the National Trades Union Congress (NTUC) has assembled a taskforce to look into the needs of young entrants to the workforce (Tham, 2022).
- 7.11 Self-employed platform workers, who form 11% of our respondents with ITE and below certification, are a particularly vulnerable group for whom the PWM and existing employment laws do not reach. Current discussions to improve the protection of platform workers need to quickly translate into concrete action (see Mathew et al., 2022a).
- 7.12 The high premium in a degree suggests that sombre reality that young adults in Singapore generally need tertiary-level qualifications to boost their earnings. While the Ministry of Education recently announced that working adults will receive more opportunities to pursue degrees (Teng, 2022), policy attention must be placed on how such work-and-learn arrangements can be tailored to lower educated workers who tend to work longer hours, atypical hours, shifts, and take on additional work to make up for lower wage rates. As it is, our report shows a lower likelihood of lower educated young workers to undertake training.

- 7.13 On the other hand, that ITE graduates are landing jobs not that dissimilar from non-ITE graduates and with no significant wage premium suggests that efforts to improve ITE graduates' wages and career options remain essential. The efforts might need re-assessment given current economic conditions with heightened digitalisation and exacerbated by COVID-19.
- 7.14 While higher educated young workers were better off in most outcomes highlighted in our report, they experienced greater time-based work intensity and additional work due to COVID-19. Although they did not fare worse than the lower-educated respondents in terms of GAD and MDE, they might nonetheless require protections pertaining to drawing clearer boundaries between work and personal time, given that they reported the largest share of working from home at least a few days a week. Young workers who are in junior-level positions may not have the bargaining power to negotiate their workload, resulting in greater spill-overs into their personal or family time. This policy implication is pertinent for employers, as higher-educated workers with the capacity to switch jobs easily may be deterred from staying in jobs with poor work-life balance, evident in the recent wave of the Great Resignation (Mathew et al., 2022b).
- 7.15 More positive findings in the report include: the high rating of learning new things on the job, the high prevalence of employer sponsorship of training among those who attended training, favourable ratings of workplace health, safety, and bosses, and overall positive job satisfaction. These laudable job characteristics should be sustained.



## Glossary

### Labour force status

Persons in the labour force

Employed persons

Persons aged 15 years and above who worked for either pay or profit at the time of the survey, including full-time National Servicemen (MOM, 2021).

Unemployed persons

Persons aged 15 years and above who are not working but are actively looking for a job and available for work during the reference period, including persons who are not working but are taking steps to start their own business or taking up a new job (MOM, 2021), at the time of the survey.

Persons outside the labour force

Persons aged 15 years and above who are neither employed nor unemployed during the reference period (MOM, 2021). In our survey sample, persons outside the labour force include those who were studying or in training, full-time homemakers, unable to work due to caregiving responsibilities, and unable to work due to long-term illness or disability at the time of the survey.

### Labour force indicators

Labour force participation rate

The number of persons in the labour force divided by the population (MOM, 2021).

Unemployed rate

The number of unemployed persons divided by the number of persons in the labour force (MOM, 2021).

### Employment status

Employers

Persons who employ at least one paid employee in their business or trade (MOM, 2021).

Employees

Persons who work for employers in return for regular wages (MOM, 2021).

Own account workers

Persons who operate their own business without employing any paid employees in the conduct of their own business or trade (MOM, 2021). Dependent own account workers specifically refer to self-employed workers with a *de facto* employment relationship, such as platform delivery workers, riders and private hire drivers (William & Lapeyre, 2017).

Contributing family workers

Persons who assist in the operation of family business without receiving regular wages (MOM, 2021).

### Employment nature

Full-time employment

Employment where the normal hours of work is at least 35 hours per week (MOM, 2021).

Part-time employment

Employment where the normal hours of work is less than 35 hours per week (MOM, 2021).

## **Contract type**

Permanent	Employees who are employed for an unspecified duration (MOM, 2021).
Fixed-term contract	Employees whose employment will terminate on the expiry of a specific term unless it is renewed (MOM, 2021).
Casual/on-call	Employees who are employed on ad hoc basis, as and when the company requires additional manpower (MOM, 2021).

## **Highest educational qualification**

Secondary and below	Secondary qualifications include GCE 'N' and 'O' Level or equivalent (MOM, 2021). This category also includes all qualifications below secondary.
ITE	Includes ITE Nitec, ITE Higher Nitec, and WSQ certification or equivalent.
A-level and Diploma	Includes GCE 'A' Level or equivalent. Diploma and professional qualifications include diplomas and post-diplomas by a polytechnic, diplomas or other qualifications by a professional body or vocational institution (MOM, 2021).
Degree and above	This includes Bachelor's degree, Master's degree, Doctoral degree, and postgraduate diploma or certificate (MOM, 2021).

## **Occupational group**

Managers and working proprietors	Include administrative, commercial, production, specialised services, hospitality, retail, and related services managers (DOS, 2020), employers, and entrepreneurs.
Professionals	Include science and engineering, health, teaching and training, business and administration, information and communications technology, legal, social, religious, and cultural professionals (DOS, 2020).
Associate professionals and technicians	Include physical and engineering science, health, business and administration, legal, social, cultural, teaching, and other associate professionals, as well as information and communications technicians (DOS, 2020).
Clerical support workers	Include general and keyboard clerks, numerical and material-recording clerks, customer service officers, and other clerical support workers (DOS, 2020).
Service and sales workers	Include personal service workers, sales workers, personal care workers, protective services workers, and other service workers (DOS, 2020).
Craftsmen and related trades workers	Include building and related trades workers, metal, machinery and related trades workers, precision, handicraft, printing and related trades workers, electrical and electronic trades workers, food processing, woodworking, garment, leather and other craft and related trades workers (DOS, 2020).

Plant and machine operators and assemblers

Include stationary plant and machine operators, assemblers and quality checkers, drivers and mobile machinery operators (DOS, 2020). This group includes the self-employed workers on food delivery and private hire platforms, such as Grab, Gojek, foodpanda, and Deliveroo.

Cleaners, labourers, and related workers

Include cleaners and related workers, labourers and related workers, food preparation and kitchen assistants, waste collection, recycling and material recovery workers, and other elementary workers (DOS, 2020).

Other occupations

Include military occupations, trainees and interns, and occupations not elsewhere classified.

### Psychological well-being measures

Self-efficacy

The mean self-efficacy score is obtained from the following list of instruments, rated on a 5-point Likert scale:

- I will be able to achieve most of the goals that I have set for myself.
- When facing difficult tasks, I am certain that I will accomplish them.
- In general, I think that I can obtain outcomes that are important to me.
- I believe I can succeed at most things that I set my mind to.
- I will be able to successfully overcome many challenges.
- I am confident that I can perform effectively on many different tasks.
- Compared to other people, I can do most tasks very well.
- Even when things are tough, I can perform quite well.

(Chen et al., 2001)

Generalised anxiety disorder

A respondent is considered to have symptoms of generalised anxiety disorder if s/he had been worried more than half the time and found it difficult to control his/her worry in the past 6 months, and experienced at least three of the following: felt restless or on edge, felt particularly irritable, had awareness of muscles tensing, felt easily tired, had trouble falling asleep or restless unsatisfying sleep or trouble staying asleep, and had difficulty concentrating or mind went blank (Liebowitz, 1996; Newman et al., 2002).

Major depressive episode

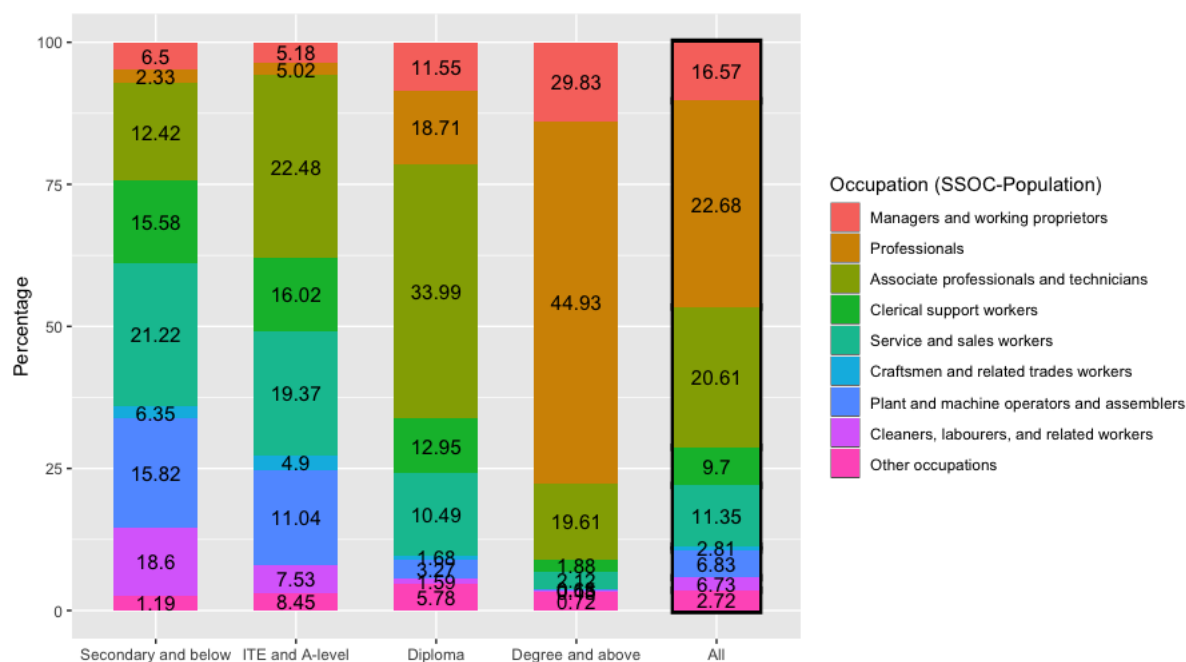
A respondent is considered to have a major depressive episode if s/he felt little interest or pleasure in doing things and/or down, depressed, or hopeless more than half the days in the past two weeks and had a Patient Health Questionnaire (PHQ) score of more than 10 based on a sum of the scores of the following list of symptoms (Kroenke et al., 2001):

- Trouble falling asleep or staying asleep, or sleeping too much

- Feeling tired or having little energy
- Poor appetite or overeating
- Feeling bad about him/herself, or that s/he is a failure or have let him/ herself or his/her family down
- Trouble concentrating on things, such as reading the newspaper or watching television
- Moving or speaking so slowly that other people could have noticed, or being so fidgety or restless that s/he has been moving around a lot more than usual
- Thoughts that s/he would be better off dead, or of hurting him/herself

## Appendix

**Figure A1: Distribution of occupational status by highest educational qualification from MOM Labour Force in Singapore 2020 Report**



Notes: The MOM's sample includes respondents aged 15 and above. Respondents with A-level qualifications are classified together with ITE graduates instead of diploma-holders. Source: MOM (2021).

**Table A1: Distribution of gross monthly income from paid work (with CPF contributions) from MOM Labour Force in Singapore 2020 Report**

	Secondary and below	ITE and A-level	Diploma	Degree and above	All
Median income range	1,500–1,999	2,500–2,999	3,000–3,999	6,000–6,999	3,000–3,999
Difference in Medians (mid-point)	-	1,000	750	3,000	-

Notes: The MOM's sample includes respondents aged 15 and above. All values are in SGD. Source: MOM (2021).

**Table A2: Comparisons of Quality of Job Conditions Indicators between our survey sample and Eurofound (2017)**

Quality of Job Conditions Indicators	Survey Sample Prevalence (%)	Eurofound's EU28 Prevalence (%)
<b>Working time quality</b>		
Worked more than 10 hours a day (at least once a month)	69	32
Worked late at night (at least once a month)	53	19
Worked on Saturday (at least once a month)	62	52

Worked on Sunday (at least once a month)	45	30
Worked shifts	21	21
Working time was set by company with no possibility of change	49	56
Working time was entirely determined by self	11	16
Regular work time changes	32	31
<b>Work intensity</b>		
Worked at high speed (often/three-quarters of the time or more)	52	33
Worked on tight deadlines (often/three-quarters of the time or more)	52	36
Had enough time to get the job done (never or rarely)	8	10
<b>Skills and discretion</b>		
Could choose order of tasks (sometimes or more frequently)	69	68
Could choose speed of work (sometimes or more frequently)	76	71
Could choose methods of work (sometimes or more frequently)	73	69
Job involved learning new things (sometimes or more frequently)	87	72
Had employer-sponsored training over the last 12 months	39	41
<b>Social environment</b>		
Boss respected respondent as a person ([tend to] agree and strongly agree)	90	89
Boss was helpful in getting the job done ([tend to] agree and strongly agree)	78	66
Boss provided useful feedback ([tend to] agree and strongly agree)	72	70
Received help and support from colleagues (often/most of the time or always)	77	71
<b>Employment prospects</b>		
Worried about losing main job (to some extent and a great deal/tend to agree and strongly agree)	32	39

---

Source: Eurofound, 2017.

## References

- Chen, G., Gully, S. M., & Eden, D. (2001). Validation of a new general self-efficacy scale. *Organizational Research Methods*, 4(1), 62–83.
- Department of Statistics [DOS]. (2020, March 20). *Singapore standard occupational classification SSOC 2020*. Department of Statistics, Singapore. Retrieved October 26, 2021, from <https://www.singstat.gov.sg/standards/standards-and-classifications/ssoc>
- Department of Statistics [DOS]. (2021, June 16). *Education, language spoken and literacy*. Department of Statistics, Singapore. Retrieved October 26, 2021, from <https://www.singstat.gov.sg/find-data/search-by-theme/population/education-language-spoken-and-literacy/latest-data>
- Department of Statistics [DOS]. (2022, January 14). *Population and population structure*. Department of Statistics, Singapore. Retrieved March 29, 2022, from <https://www.singstat.gov.sg/find-data/search-by-theme/population/population-and-population-structure/latest-data>
- Eurofound. (2017). The multiple dimensions of job quality. In *Sixth European working conditions survey – Overview report (2017 update)* (pp. 35–99). Publications Office of the European Union. Retrieved February 16, 2022, from [https://www.eurofound.europa.eu/sites/default/files/ef\\_publication/field\\_ef\\_document/ef1634en.pdf](https://www.eurofound.europa.eu/sites/default/files/ef_publication/field_ef_document/ef1634en.pdf)
- Helbling, L. A., & Sacchi, S. (2014). Scarring effects of early unemployment among young workers with vocational credentials in Switzerland. *Empirical Research in Vocational Education and Training*, 6(1), 12.
- Kalleberg, A. L. (2020). Labor market uncertainties and youth labor force experiences: Lessons learned. *Annals of the American Academy*, 688, 258–270. DOI: 10.1177/0002716220913861.
- Karasek, R., Brisson, C., Kawakami, N., Houtman, I., & Bongers, P. (1998). The job content questionnaire (JCQ): An instrument for internationally comparative assessments of psychosocial job characteristics. *Journal of Occupational Health Psychology*, 3(4), 322–355.
- Kroenke, K., Spitzer, R. L., & Williams, J. B. W. (2001). The PHQ-9: Validity of a brief depression severity measure. *Journal of General Internal Medicine*, 16, 606–613.
- Lai, L. (2020, September 24). More people allowed to return to workplace from Sept 28 as S'pore's Covid-19 community cases remain low. *Straits Times*. <https://www.straitstimes.com/singapore/more-people-to-be-allowed-back-to-workplaces-essential-business-travel-pilot-to-be>
- Lersch, P. M., Schulz, W., & Leckie, G. (2020). The variability of occupational attainment: How prestige trajectories diversified within birth cohorts over the

- twentieth century. *American Sociological Review*, 85(6), 1084–1116.  
<https://doi.org/10.1177%2F0003122420966324>
- Liebowitz, M. R. (1996). Generalized anxiety disorder (includes overanxious disorder of childhood). In T. A. Widiger (Ed.), *DSM-IV sourcebook volume 2* (2<sup>nd</sup>. ed., pp. 432–436). American Psychiatric Association.
- Mathew, M., Zainuddin, S., Thian, W. L., Phoa, F., & Lee, C. (2022a). Precarity in platform work: A study of private-hire car drivers and food delivery riders. *IPS Working Papers*, (44). [https://lkyspp.nus.edu.sg/docs/default-source/ips/working-paper-44\\_precarity-in-platform-work.pdf](https://lkyspp.nus.edu.sg/docs/default-source/ips/working-paper-44_precarity-in-platform-work.pdf)
- Mathew, M., Phoa, F., Hou, M., & Lim, E. (2022b). Attitudes towards work and workplace arrangements amidst COVID-19 in Singapore. *IPS Working Papers*, (45). [https://lkyspp.nus.edu.sg/docs/default-source/ips/working-paper-45\\_attitudes-towards-work-and-workplace-arrangements-amidst-covid-19-in-singapore.pdf](https://lkyspp.nus.edu.sg/docs/default-source/ips/working-paper-45_attitudes-towards-work-and-workplace-arrangements-amidst-covid-19-in-singapore.pdf)
- Ministry of Manpower [MOM]. (2021, January 28). *Labour force in Singapore: Impact of COVID-19 on the labour market: 2020 edition*. Manpower Research and Statistics Department, Ministry of Manpower, Singapore. Retrieved November 1, 2021, from [https://stats.mom.gov.sg/iMAS\\_PdfLibrary/mrsd\\_2020LabourForce.pdf](https://stats.mom.gov.sg/iMAS_PdfLibrary/mrsd_2020LabourForce.pdf)
- Moxon, D., Bacalso, C., & Serban, A. (2021). *Beyond lockdown: The ‘pandemic scar’ on young people*. European Youth Forum. Retrieved November 9, 2021, from <https://www.youthforum.org/files/European20Youth20Forum20Report20v1.2.pdf>
- Newman, M. G., Zuellig, A. R., Kachin, K. E., Constantino, M. J., Przeworski, A., Erickson, T., & Cashman-McGrath, L. (2002). Preliminary reliability and validity of the generalized anxiety disorder questionnaire—IV: A revised self-report diagnostic measure of generalized anxiety disorder. *Behavior Therapy*, 33, 215–233.
- Ng, I. Y. H., Ho, K. C., Mathews, M., Ong, Q., Neo, Y. W., Chua, V., Lim, C., Goh, A., Teoh, T., Renema, J., Pereira, S., & Johari, N. F. (2019). In-work poverty and challenges of the young in getting by. *SSR Snippet*, 4(November 2019), 2–7. [https://fass.nus.edu.sg/ssr/wp-content/uploads/sites/8/2020/06/Snippet\\_Issue4\\_Inwork\\_Poverty.pdf](https://fass.nus.edu.sg/ssr/wp-content/uploads/sites/8/2020/06/Snippet_Issue4_Inwork_Poverty.pdf)
- Subramaniam, M. *et al.* (2020). Tracking the mental health of a nation: Prevalence and correlates of mental disorders in the second Singapore mental health study. *Epidemiology and Psychiatric Sciences*, 29, 1–10. <https://doi.org/10.1017/S2045796019000179>
- Teng, A. (2022, March 7). Budget debate: More flexibility in schools and room for Singaporeans to pursue degrees later in life. *Straits Times*. <https://www.straitstimes.com/singapore/politics/budget-debate-more-flexibility-in-schools-and-room-for-singaporeans-to-pursue-degrees-later-in-life>



Tham, Y.-C. (2022, April 30). NTUC to set up task force to look at needs of young people entering workforce. *Straits Times*. Retrieved June 3, 2022, from <https://www.straitstimes.com/singapore/politics/ntuc-to-set-up-taskforce-to-look-at-needs-of-young-people-entering-the-workforce>

University of Michigan. (2002). *Child development supplement II: Child CAPI interview and assessments*. The Child Development Supplement of The Family Economic Study. Retrieved November 10, 2021, from [https://psidonline.isr.umich.edu/cds/questionnaires/cds-ii/english/cdsii\\_child\\_assess.pdf](https://psidonline.isr.umich.edu/cds/questionnaires/cds-ii/english/cdsii_child_assess.pdf)

Williams, C. C., & Lapeyre, F. (2017). Dependent self-employment: Trends, challenges and policy responses in the EU. *ILO Employment Working Paper*, (228). Retrieved November 9, 2021, from [https://www.ilo.org/wcmsp5/groups/public/---ed\\_emp/documents/publication/wcms\\_614176.pdf](https://www.ilo.org/wcmsp5/groups/public/---ed_emp/documents/publication/wcms_614176.pdf)

Wood, R., & Bandura, A. (1989). Impact of conceptions of ability on self-regulatory mechanisms and complex decision making. *Journal of Personality and Social Psychology*, 56, 407–415.

Workfare. (2022). *Enhancements to workfare*. Ministry of Manpower, Singapore. Retrieved June 3, 2022, from <https://www.mom.gov.sg/-/media/mom/documents/budget2022/wis-infographic.pdf>