



# The neglect of researchers during the first COVID-19 pandemic induced national lockdown in India: inside the lives of JNU's research scholars

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## Abstract

This paper discusses the main findings of a study on the impact of the first COVID-19 induced nationwide lockdown and university closure in India on the research scholars (PhD and MPhil) of the Jawaharlal Nehru University (JNU). An online survey was employed using the quantitative descriptive methodology. With responses from 530 research scholars, this is one of the first quantitative studies to assess the pandemic's effect on the research work, finances, and mental health of researchers in India from March to June 2020. Given the existing social inequality in higher education, the survey reflects the researchers' dismal state of reality as reported during the first 4 months of the pandemic. Research work witnessed a standstill with large-scale disruption in travel and every other scholar encountering unreliable electricity or internet connectivity. Untimely disbursal of fellowships intensified their already existing financial hardship. Nearly 90% of scholars reported stalled fieldwork, a lack of clarity regarding extension of their research programme, and financial woes as some of the top reasons for their anxiety. Using the chi-square method, the study predicts that dropouts from research programmes are likely in the context of the pandemic, which correlates significantly with socio-economic backgrounds (caste, class and gender) of research scholars. Further, the results show that the challenges faced by terminal, mid-stage, and course-work scholars are unique, emphasizing on the need for targeted interventions beyond extended research deadlines. Non-addressal of these immediate effects of the COVID-19 pandemic will have long-term repercussions on the lives of India's researchers and academic workers. It will only deepen existing inequalities in higher education, leading to gentrification of research degrees in India.

**Keywords** Research scholar · JNU · COVID-19 pandemic · Scholarship · Mental health · Dropout · Social inequality · PhD

## Introduction

### COVID-19 pandemic and higher education

Since 2020, the COVID-19 pandemic has jeopardised people's lives across the globe in unprecedented ways. It has simultaneously ensured acute distress to health care systems

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(WHO, 2020), has negatively impacted economies (World Bank, 2020), and has successfully disrupted the functioning of education systems (United Nations, 2020). Around 94% of the students (Pokhrel & Chhetri, 2021) observed sudden and unplanned changes to their education system due to lockdowns, travel restrictions, and social distancing measures.

The impact of the SARS-CoV-2 virus on higher education has been manifold. The International Labour Organizations' (ILO) Global Survey on Youth and COVID-19 in 2020 found a disproportionate and systematic impact of the pandemic on young people, i.e., those aged between 18 and 29, with seventy-three percent having experienced educational institution closure (ILO, 2020). Higher Education Institutions (HEI) have been severely affected (Aristovnik et al., 2020). Complete or partial HEIs' closure has caused hardships for students pursuing non-research<sup>1</sup> and research degrees.<sup>2</sup> Our survey, done by June 2020, is one of the earliest studies to gauge the impact of the pandemic on research scholars. It can be seen that research studies conducted around the same time mirror the same broad issues that our survey questionnaire addressed. A lack of proper ambience to study at home, mental health concerns, and anxiety regarding tapering finances and career prospects have been commonly reported by non-research and research students (Álvarez et al., 2021; Aristovnik et al., 2020; Gupta et al., 2022; Johnson et al., 2022; Kapasia et al., 2020; Sideropoulos et al., 2021; Stevens et al., 2021; Syahril et al., 2021).

### Social inequality in India's higher education system

Higher education justice, i.e., equal opportunity for all in higher education, is crucial in leveling social inequalities in society as it ameliorates generational income and provides social mobility (Marginson, 2011). However, social stratification and socio-economic inequalities in higher education are well-established through research (Kromydas, 2017; Marginson, 2018). Instead of being instruments of social change and bridging these inequalities, HEIs are non-egalitarian and reflect society's socioeconomic dynamics on who gets access to education (Madan, 2020a; Marginson, 2018). India is no exception to social stratification in higher education (Jayaram, 1979), and social inequality in higher education is more significant than that in primary education (Madan, 2020a). This inequality in India is addressed through constitutionally backed affirmative action.<sup>3</sup> The expansion of higher education and affirmative action policies has enhanced the access of disadvantaged social groups to HEIs. Nevertheless, inequalities still exist in access to elite institutions and Science, Technology, Engineering and Mathematics (STEM) subjects across caste, class and gender (Madan, 2020b).

Students are subjected to various subsets of intersecting vulnerabilities in higher education by being situated in lower strata of power (Harris & Patton, 2019). These intersecting vulnerabilities impact India's higher education system too. Social identities like caste, class, gender and kinship constitute these intersecting vulnerabilities in the Indian scenario. These identities cannot be seen in reality as operating independently of each other (Madan, 2020b). They should be seen in tandem with each other to understand the complex ways

<sup>1</sup> Non-research degrees include undergraduate (Bachelors) and non-research post-graduate (Masters) programmes. In non-research degrees, the grading is based on classroom teaching, course work, and subsequent evaluation.

<sup>2</sup> Research degrees denote MPhil (Master in Philosophy) and PhD (Doctor of Philosophy), where the grading depends on the dissertation submitted in their final year.

<sup>3</sup> The Indian Constitution allows reserving seats in public HEIs' for communities that have historically faced social discrimination. Affirmative action is advanced for the upliftment of socially and economically backward communities based on caste —Other Backward Classes (OBCs) (27%), Scheduled Castes (SCs) (15%), and Scheduled Tribes (STs) (7.5%).

each inequality interacts with the others, resulting in intersectional inequality. Upper caste Hindus, compared to Scheduled Tribes (ST), Scheduled Castes (SC) and Other Backward Classes (OBCs), are better off as far as the dropout and completion rate of degrees in higher education, employment, and relative incomes are concerned. Madan (2020a) shows in 2014, the dropout rate<sup>4</sup> in HEI for STs (37.5%) was almost twice that of the general category<sup>5</sup> (19.6%), while the dropout percentage for OBCs was 28.3% and SCs was 33.3%, respectively. An analysis of the dropout scenario in India's HEIs through caste identity alone fails to give a holistic picture. Instead, lower family incomes associated with caste identities can better explain the reasons for higher education dropouts. Madan (2020a), thus, reiterates that social stratification in higher education should be viewed as 'intersectional inequality', to address it effectively.

### The COVID-19 pandemic and students pursuing research degrees

Research scholars<sup>6</sup> and early career researchers, who partake in the bulk of research work in educational institutions across the globe, are vital national resources, contributing to a nation's development goals. They are critical for innovation, scientific knowledge, and economic and socio-political growth of a country (Jackman et al., 2021; Levine, 2021). Researchers are also involved in teaching students at universities, thus forming a large chunk of the teaching population in higher education (DeLaquil & Wang, 2021). However, this is also one of the economic groups that governments worldwide neglect. Pursuing research degrees during the pandemic has been difficult. A handful of studies have documented the challenges in pursuing research degrees. Studies have used surveys and interviews (Goel et al., 2020; Jackman et al., 2021; Johnson et al., 2022; Kariotis, 2020; Sideropoulos et al., 2021; Stuart et al., 2021; Syahril et al., 2021), qualitative descriptions (Álvarez et al., 2021; Le, 2021), ethnography (Eigege & Kennedy, 2021; Stevens et al., 2021), and art-based poetic inquiry (McWilliams & Shields, 2022).

Electricity, internet, and a workspace are some basic amenities researchers require to pursue their work. Of the six continents surveyed, the lack of access to uninterrupted internet connectivity emerged as a critical issue for students pursuing higher education in Asia and Africa (Aristovnik et al., 2020). India is no exception.<sup>7</sup> A study done at the University of Hyderabad (UoH) (UoH Herald, 2020) found that three-fourths of non-research degree students who had internet connectivity only had access to the internet via internet data packages on their cell phones. Internet data packs are insufficient to sustain uninterrupted online classes and require frequent and expensive data recharges, thus increasing students' financial burden. Many students were denied access to online teaching owing to inconsistent internet connectivity (Goel et al., 2020; Kapasia et al., 2020), making the online transition non-inclusive. The absence of a

<sup>4</sup> Madan (2020a) defines dropout rates as dropouts from programmes after enrolment, or the lack of enrolment in higher education.

<sup>5</sup> The general category includes all communities outside the constitutionally reserved groups.

<sup>6</sup> In this article, the 'research degree' includes both Master of Philosophy (MPhil) and Doctor of Philosophy (PhD/DPhil). Students pursuing research degrees, to be inclusive, will be addressed hereafter as research scholars, researchers, or scholars.

<sup>7</sup> The 75th round of India's National Sample Survey Organization (NSSO) data (2018) shows the disproportionate percent of internet connectivity in Indian households — 42% in urban areas and 14.9% in rural areas (NSO, 2019).

conducive workspace and the right work equipment to pursue research was considered a reason for worry during the pandemic (Kariotis, 2020; Stevens et al., 2021; Syahril et al., 2021). Across countries, lower self-confidence was reported in the absence of proper workspace and working amidst a noisy home (Guppy et al., 2021). The Student Experience in the Research University (SERU) survey<sup>8</sup> found that every second person of both first-generation students (61%) and continuing-generation students (54%) had a lack of access to an appropriate study space or had a distracting home environment, with first-generation students being worse off in every aspect (Soria et al., 2020). A ‘sense of belonging’ is essential for researchers’ academic progress (Stachl & Baranger, 2020). Working from home has distorted the boundary between the professional and the personal (Álvarez et al., 2021; Stevens et al., 2021), resulting in a loss of sense of belonging, causing academic stress (Wang & Delaquil, 2020). Further, researchers with caregiving responsibilities, especially females, were the most affected due to the pandemic and this impact is expected to reflect in their long-term career prospects (Jackman et al., 2021). In fact, within an already gender-biased publication industry, there has been a decrease in journal publications by female authors in the aftermath of the pandemic (Pinho-Gomes et al., 2020).

Finances were another area of significant concern for researchers. They had high anxiety regarding their finances, given personal and family commitments (Syahril et al., 2021). Larkins et al. (2020) note that the pandemic would severely impact the Australian research workforce with a fall in research investment and with universities cutting their budgets. In 2021, the UK Research and Innovation (UKRI) came up with the third improved version of its policy toward doctoral students whose research has been affected by the pandemic. To compensate for the cost of lost time due to the pandemic, it provided flexibility by granting time and financial extension to doctoral students (UKRI, 2021b). In India, unlike in other countries, research degrees are not viewed as taxed employment. However, there are diverse sources,<sup>9</sup> i.e. scholarships and fellowships, through which scholars are financed. Fellowships and scholarships from government bodies have always been infamous for being delayed (Marar, 2019) and erratic (Aman, 2017; Qazi, 2017). In the context of the pandemic, this delay worsened across universities (Charuchandra, 2020; Karla, 2020; Marar, 2020). In May 2020, having not been paid for 6 months, a pan-Indian group of research scholars even wrote to the prime minister requesting speedy disbursement of their fellowships (Goradia, 2020).

Doing a PhD is generally a stressful endeavour (Levecque et al., 2017). PhD students are six times more prone to anxiety and depression than the general population (Barry et al., 2018). Globally, studies on researchers reveal that more than one-third report seeking help for anxiety or depression caused by PhD studies (Stubb et al., 2011; Woolston, 2019). The pandemic has intensified the existing mental health issues in the research community. Studies show that during the pandemic, within the student community, doctoral students underwent far more stressful experiences in comparison to those in coursework programmes (Sideropoulos et al., 2021; Syahril et al., 2021), primarily owing to an absence of proper workspaces, a lack of finances and personal problems. There are few

<sup>8</sup> The SERU surveyed 10 US public research-intensive universities in May–July 2020.

<sup>9</sup> Source for the fellowship includes the University Grants Commission (UGC), Council for Scientific and Industrial Research (CSIR), state government fellowships, and other fellowships operated by external agencies and departments (like the Indian Council of Social Science (ICSSR)). The UGC implements fellowships for the Ministry of Human Resource Development, the Ministry of Social Justice and Empowerment, the Ministry of Minority Affairs, the Ministry of Minority Affairs, and the Ministry of Tribal Affairs.

studies on students' mental health in India, let alone that on research scholars. A 2016 study done with students (aged 21–26 years) at a central university in India found that 37.7% suffer from moderate depression, while 15.6% suffer from severe or extremely severe depression (Deb et al., 2016). Upon the onset of the pandemic, in April, the University Grants Commission (UGC) in India recommended that universities and colleges set up helplines for their student's mental health and well-being (UGC, 2020). The helpline set up at Delhi University revealed that students suffer from generalised anxiety disorder (Ibrar, 2020).

In 2014, with 24,300 PhD graduates, India had the world's fourth-highest number of doctoral graduates (MHRD, 2019). In 2018, this number went up to 1,69,170. Nevertheless, research studies and publicly available data on the lives, work, and pay satisfaction of research scholars in India have been invisible (OECD, 2016). Therefore, it is unsurprising that there is no concrete research and policy attention towards understanding the challenges research scholars have faced and continue to face in the pandemic. On the other hand, several studies (Gupta et al., 2022; Kapasia et al., 2020; Mishra et al., 2020; UOH Herald, 2020) have highlighted the pandemic's impact on India's college students, i.e., non-research students. PhD enrolment comprising only 0.5% of total higher education enrolment in India (MHRD, 2019) may explain why discussions on the ramifications of the pandemic on higher education in India have primarily focused on non-research degrees, leading the debate paradigm to hover only around the pros and cons of the digital-mode of teaching–learning and evaluation.

The plight of India's research scholars during the pandemic, except their finances, has not figured in public discourse. It is imperative to note, as is indicated in Álvarez et al. (2021) and Stevens et al. (2021), that research scholars share concerns with those in coursework-heavy programmes.<sup>10</sup> However, they also have problems unique to them owing to the nature of research work in general, the length, design, and purpose of their programmes, and the source and extent of their finances. Through a case study on the research scholars of Jawaharlal Nehru University (JNU) in India, this article attempts to provide insight into the lives of researchers during the first national lockdown in India from March to June 2020. Conceived and executed in June–July 2020, this survey is the first quantitative survey<sup>11</sup> conducted in India.<sup>12</sup> The research questions this article seeks to address are as follows.

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<sup>10</sup> The impact of the COVID-19 pandemic on different aspects of the lives of students pursuing non-research degrees (course-work programmes) has begun to receive adequate research attention. Aristovnik et al. (2020) provide a comprehensive overview of the studies on COVID-19 and its impact on college students, including single sector, single university, and single-country studies. It is the first global study, spanning six continents and 62 countries, to understand the pandemic's effect on the lives of college students. Besides the issues listed above, the primary challenge for non-research degree students was the sudden transition from offline to online teaching–learning and evaluation (Aristovnik et al., 2020; Kapasia et al., 2020).

<sup>11</sup> INYAS (2020), a pan-Indian study, examined the status of research scholars in state-run-universities. The survey was conducted in October 2020 among 2017 researchers. There is no official report of the survey available. Their website carries a report which has survey responses published as graphs. Another study by Ramvilas et al. (2021) looked at the pandemic's impact on early career researchers in India's biodiversity field.

<sup>12</sup> By June 2020, when our survey was executed, a few studies emerged on the impact of COVID-19 on higher education. However, their primary focus was not on research scholars. Two surveys focused primarily on the 'online mode' in higher education. The University of Hyderabad (UoH) gauged 2500 students' internet accessibility in the context of offline classes shifting online (UOH Herald, 2020). The Jawaharlal Nehru Students' Union (JNUSU) surveyed JNU students on their productivity, access to finances, internet, and online classes (There is no published report from this survey, hence the lack of a reference.).

- (a) What impact did the first pandemic-induced university and nationwide closure have on research scholars?
- (b) Given the social stratification in India's HIEs, will the researchers' social identity impact their research-related decisions during the pandemic, including their choice to drop out of their research programme?

## Methods and materials

### Sample selection

JNU, a central university<sup>13</sup> in the heart of India's national capital, was chosen for a case study to examine the pandemic's impact on researchers' lives. There are many reasons for choosing JNU for the survey. First, it is primarily a research university, with 48.3% (4251) of its 8805 students enrolled in research programmes, as of 2019.<sup>14</sup> Second, being a public university, the plight of JNU's scholars will only be similar to scholars pursuing research in other universities in India.<sup>15</sup> Third, being a central university, its student population is diverse, representing all regions and socio-economic backgrounds of the country. Further, the university has schools dedicated to all areas of study: the social sciences, the sciences, languages, and the arts. JNU was also chosen as a case study because the authors are scholars of the university and, during the pandemic, had access to its scholar population.

### Research design

Amidst the pandemic and sudden transition to a distant mode of education, an online survey was the only executable method of data collection to understand the lives of researchers. Using a quantitative descriptive methodology, an online survey with a closed questionnaire was constructed to understand the lives of JNU scholars from March to June 2020. The questionnaire, executed via the Google Forms application, was circulated online via WhatsApp, Facebook, and e-mail between 27th June and 6th July 2020. All registered JNU students whose degrees are contingent on submitting a dissertation were considered respondents to the survey. The sample thus includes students pursuing PhD, and MPhil and MTech programmes. Respondents provided demographic details and information on the status of their research work, finances, and mental well-being during and before the pandemic via 57 questions.

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<sup>13</sup> In India, 'central universities' are formed by acts of the Indian parliament. They are autonomous higher educational institutions, which, unlike state/provincial universities, do not have affirmative action for those belonging to the state/province where the university is located. Hence, there is no admission quota in JNU for those whose domicile is the state of Delhi.

<sup>14</sup> Research in JNU includes 2 years of MPhil or MTech study, and 4 years of PhD study, with an option of no more than a year's extension for a PhD (called the '9B clause year' in JNU), or 5 years of PhD study with an option for a year's extension.

<sup>15</sup> JNU scholars are probably more privileged than those from other universities, given that it is a premier university at a prime location, with relatively strong students' and teachers' unions.

## Procedure

The collected data was analysed on SPSS using univariate and bivariate cross-tabulations to calculate the percentages of the responses. Researchers' level of access to resources, their financial status, and causes of anxiety during the pandemic are discussed through descriptive statistics. The survey finds different reasons for the potential dropping out/de-registration of scholars from their research programmes owing to barriers in their research during the pandemic. Given the sample size of the survey, the chi-square method is used to examine the degree of association between dropout reasons and two factors: (a) socio-economic status and (b) stage of the research degree.

## Survey demographics

The survey garnered 530 responses (12.3% of the total researcher population of JNU). Table 1 gives a breakdown of the research scholar's socio-economic profile, and Table 2 provides the research demographics of the respondents. The survey population is representative of the JNU student population (See Table 3, in Appendix 1). JNU being a residential university, the largest share of respondents (79.3%) reported that they used to live on campus. After the university closure,<sup>16</sup> the highest percentage of scholars (61.6%) was those who had moved back home (Fig. 1). Is there a possible sample bias due to unequal access to the questionnaire considering that those on campus had internet access while not all scholars back home did? Even if such a bias existed, it could not have impacted the results since the sample size is representative of the total population (Table 3). Also, even those with access to the questionnaire reported a lack of access to the internet.

## Results

### Accessibility of resources for research

Consistent electric supply and uninterrupted internet connectivity speeds are indispensable for working on laptops and desktops to pursue research-related academic work. The survey showed that only half of the scholars (50%) had regular access to electricity at their residence. Only 40.8% had access to public/university Wi-Fi or personal broadband speeds, and 35.8% had access to 4G phone data speed. About one-fourth (14.9%) said they only had 2G or 3G data speeds. Many (8.1%) did not have access to the internet on an everyday basis. Given the high level of inconsistency in internet accessibility,

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<sup>16</sup> In India, in January 2020, the first case of COVID-19 was detected. On 13th March 2020, due to a surge in COVID-19 cases across India, academic activities were suspended in JNU (Registrar's Office, 2020a). Students were advised on 16th March to leave for their homes (Registrar's office, 2020b), and hostel mess facilities would be shut (PTI, 2020). However, there was no information that the university would be closed. From March last week, railway services and domestic air travel were suspended, and India entered its first nationwide lockdown on 24th March (PIB 2020a). Lockdown continued with limited activities until 31st May 2020 (PIB 2020b). JNU was declared 'closed' after the suspension of transportation services on 1st April and remained closed until 31st May 2020 (Registrar's Office, 2020c).

**Table 1** Sample description-socio-economic profile of the respondents

Total respondents: 530 (100%)																															
<b>Sex</b>	<table border="0"> <tr> <td><i>Male</i></td> <td>220 (41.5%)</td> <td><i>Female</i></td> <td>308 (58.1%)</td> <td><i>Others</i></td> <td>2 (0.4%)</td> </tr> </table>	<i>Male</i>	220 (41.5%)	<i>Female</i>	308 (58.1%)	<i>Others</i>	2 (0.4%)																								
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**Table 2** Sample description – research programme demographics of the respondents

Total respondents: 530 (100%)					
<i>PhD programme</i>	<i>First Year</i>	<i>Second Year</i>	<i>Third Year</i>	<i>Fourth Year</i>	<i>9B year</i>
	61 (11.5%)	102 (19.2%)	92 (17.2%)	106 (20%)	63 (11.9%)
<i>MPhil and M Tech programmes</i>	<i>MPhil</i>	<i>MPhil</i>	<i>M Tech</i>	<i>M Tech</i>	
	<i>First year</i>	<i>Second year</i>	<i>First year</i>	<i>Second year</i>	
	62 (11.7%)	36 (6.8%)	1 (0.2%)	7 (1.3%)	

it is unsurprising that a majority (58.3%) were unable to have regular phone/video meetings with their research supervisors.

The survey also revealed that the pandemic-induced abrupt closure of the university resulted in nearly 4 out of 5 (78.1%) research scholars being unable to carry adequate research-related resources (books, photocopies, readings and notes) from their hostels, library lockers, and laboratories back home with them.

Scholars are dependent on numerous resources, including archives, laboratories, libraries, and populations (human, plant, and animal), among other resources, for primary and secondary data collection (Table 4). The survey revealed the appalling state of the required research material available online for researchers, including that on the JNU e-library. 89% found none or only a few of the material relevant to their research in the JNU e-library. More than three-fourths (80.9%) of the scholars who require resources from libraries/archives outside JNU found none or only a few of the research material for their thesis/synopsis on the internet (Table 5). Around half of the respondents (46%) reported working with human/animal/plant populations. Amongst these, 70.4% said the population they work with is vulnerable, i.e., disadvantaged socio-economically or physically as humans or endangered/threatened as animals/plants.

Further, 88.3% of researchers stated that those who work with human populations could not access these populations online. Amongst those who engage in laboratory work, 75.9% said they could not work digitally. Nearly three-fifths (67.2%) of the respondents reported that they needed to access resources outside JNU, including in the Delhi-National Capital Region (NCR), places outside of Delhi-NCR, and places outside India. Only one-third of scholars (32.8%) asserted that the resources available at JNU were adequate for their research (Fig. 2).

Fieldwork progress, i.e., primary and secondary data collection, is entailed by the architecture of the research programme itself; as for most disciplines, primary data collection is done between years II and IV of the PhD programmes and Year II of the MPhil programme. In an overall picture of progress, the survey showed that only 20% of scholars had completed more than 75% of resource collection. Other scholars' fieldwork progress was thus reported as 'still in course work' (15%), 'not yet started data collection' (26%), and '50% of data collection completed' (26.5%). Of the mid-programme research scholars, more than half (55%) of the scholars in PhD II year were yet to begin fieldwork, while 42% of them had completed less than 50% of their data collection. Of those in year III of their PhD, 70% had completed less than 50% of data collection. Only students close to submission (i.e.) in those in PhD year IV (57.3%),

9B (89.8%), or MPhil year II (50%) had completed more than 50% of primary data collection (Fig. 3).

### Scholars' financial status

The survey comprised of 20.5% former<sup>17</sup> and 74.9% current fellowship holders. The existing trend<sup>18</sup> of erratic and delayed fellowship payments continued during the pandemic too. Amongst current fellowship holders, every second scholar (66.2%) said they had not received any money since the pandemic began (March 2020), indicating a significant discontinuity in the disbursement of fellowships (Fig. 4).

To make matters worse, more scholars have had to extend financial support to their families since the onset of COVID-19. Before the pandemic, 40.1% of the fellowship holders used their fellowship money to support their families,<sup>19</sup> besides using it for research work and daily expenses. With the arrival of the pandemic and large-scale job cuts across industries, this share has climbed to 52.8% (Fig. 5).

### Scholars' mental health

The survey<sup>20</sup> revealed the prevalence of anxiety among JNU scholars on a massive scale. Since the pandemic began, 87.5% reported being anxious, and 10% said they 'may be' anxious (Fig. 6). Scholars underlined multiple reasons for their anxiety, with six causes of anxiety reported by every other scholar. For every three in four scholars (80%), anxiety regarding their career prospects and anxiety regarding research work progress, including stalled fieldwork, were the most prevalent anxiety drivers. A lack of clarity regarding the extension of the research programme was the third (64%) major cause of anxiety.

Of the three anxiety-causing factors related to finances, two were stated by every second scholar: having run out of money or having fast-depleting savings (58%) and a lack of clarity regarding fellowship/finances for the extension period if an extension period were to be given (56%). Almost half of the scholars (48%) reported the third cause of worry to be the financial/health situation at home.

Along with anxiety caused by stalled research work and financial precarity, several socio-cultural, infrastructural, and familial issues caused anxiety amongst a significant share of researchers (Fig. 7). Of the respondents, women constituted 58% of the total sample and men 41.5%. Thirty nine percent of scholars were worried about family demands and expectations regarding household work and care responsibilities. Of the women, 40.9% said family demands and expectations regarding household work and care responsibilities have increased after the pandemic began, as opposed to 33.6% of the men. Moreover, close to one-third (31%) of scholars felt anxious due to family/social pressure regarding marriage. Of the women, 33.4% reported being increasingly pressured by family to get married, compared to 24.5% of men.

<sup>17</sup> Former fellowship holders are those scholars who have exhausted their scholarship and are currently self-financed.

<sup>18</sup> Around three-fourths (77.7% former fellows and 70.5% current fellows) of scholars said they had received fellowships erratically, in bulk, before the pandemic.

<sup>19</sup> A sizeable share of former fellowship holders (38.7%) used their fellowship money for their families when they were receiving it.

<sup>20</sup> Multiple-choice questions (MCQs) with fifteen pre-determined responses, including one option of 'others' (see Fig. 7), was given. The respondents could choose multiple responses indicating all issues that resulted in anxiety.

## Association between socio-economic identities of the scholars and their reasons for dropping out

Given the different reasons for de-registration or dropping out<sup>21</sup> that research scholars have mentioned, there are specific socio-economic orientations to their responses. Table 7 shows the degree of association between the socio-demographic and economic background of respondents and their different reasons for de-registration or dropping out.

Almost half of the male scholars (51.2%) said they would drop out if their scholarship is not extended despite an extension of the research period, while 37.9% of female scholars said they would choose to do so for the same reason. The chi-square value (9.345) is significant at 99% ( $P$ -value=0.002), showing a strong association between the gender of the scholar and this reason for dropping out. 48.1% of male scholars said they would discontinue their research if they were required to seek employment to sustain their families. In comparison, relatively fewer female scholars (36.9%) report deregistering to look for a job to sustain their family. The chi-square value (7.118) is significant at 99% ( $P$ -value=0.008), indicating a high degree of association between gender and the reason for dropping out being a lack of financial assistance during the extended research period. A higher share of female scholars (13.6%) compared to males (8.3%) said they would drop out if 'pressurised by family to get married'. The chi-square value (3.478) is significant at a  $P$ -value of 0.062.

Scholars from backward social groups are comparatively disadvantaged in pursuing their degrees if their family pressurises them to get married or if they have to look for a job to sustain their family. 15.6% of SCs and 15.4% of OBC scholars responded that they would discontinue from their programmes if they were pressurised by their family to get married, as opposed to 8.5% of those from socially non-backward groups. A higher share of OBCs (50.6%) and SCs (46.2%) too would opt for dropping out in case they need to 'look for a job to sustain family' compared to non-backward groups (34.6%). A strong association is observed among scholars' social categories and these two reasons for de-registration, i.e., pressure from one's family to get married and the need to look for a job to sustain one's family. Chi-square ( $\chi^2$ ) values (10.992 and 10.782, respectively) are significant at 95%, revealing this strong association.

A strong association exists between family income and reasons for dropping out. Every second scholar who attested to having a low annual family income reported that they will drop out (52.3% for income below Rs. 0.15 million per annum and 50% for income Rs. 0.15 to 0.3 million per annum). While only around one-third of scholars (29.9%) with higher annual family income (above Rs. 0.6 million per annum) would choose to discontinue if there is a research period extension without a fellowship extension. The chi-square value (16.478) is significant at 99.9% for the degree of association between different family-income groups, and this reason for de-registration, i.e., a non-extension of fellowship period despite an extension of the research period. Scholars from lower family-income groups also reported that they would drop out if they needed to look for a job to sustain their families. A higher proportion of scholars from the 'below Rs. 0.15 million per annum' category (50.8%) and those from the 'Rs. 0.15 to 0.3 million per annum' (47.3%) category reported this, followed by 40.3% from the 'Rs. 0.3 to 0.6 million per annum' and 30.6% from the 'above Rs. 0.6 million per annum' categories. The chi-square result ( $\chi^2$  value of 12.712, significant at 99%) indicates a

<sup>21</sup> Deregistering/dropping out in JNU gives a research scholar the choice to return to complete their degrees within a stipulated period. However, this option is only available to students with PhD confirmation, i.e., from roughly year II/III and beyond. Leaving the PhD programme before receiving the PhD confirmation amounts to not having the option to return to finish one's degree. However, in our survey, and in this article, we use the terms 'deregister' and 'drop out' interchangeably.

strong association between the financial status of one's family and their likelihood to discontinue because of the need to look for a job to sustain the family.

### Association between progress of research work and reasons for dropping out

Besides socio-economic disparities, scholars' level of progress in research work is also a significant factor in their decision to drop out. Appendix 1, Table 8, observes an association between the level of research work of scholars<sup>22</sup> and their reasons for dropping out, i.e., 'cannot access resource', 'research period extended but scholarship is not extended', and 'looking for a job to sustain family'. Scholars from non-terminal batches, having a large section of their research work left unfinished, are more vulnerable to different reasons for de-registration. 57.7% of non-terminal students report the possibility of de-registration if they cannot access resources for their research, as opposed to 48.3% of terminal students. The chi-square value is 4.356 and is significant at 95% ( $P$  value = 0.037), showing a strong association between the level of research progress and dropping out due to inaccessibility to research-related resources. Almost every second non-terminal student (48.1%) reported discontinuing from their research programme if there was no extension of the fellowship period despite an extension of the research period. 37% of terminal students have reported dropping out in case of research extension without fellowship extension. The chi-square value (6.116) is again significant at 95% showing the strong association between the level of progress in research and the dropout reason of not receiving any fellowship during a research period extension. Apart from this, a higher share of non-terminal students (46.2%) compared to the terminal (35.1%) say they would drop out to 'look for a job to sustain family'. The chi-square value calculated at 6.232, which is significant at 95% ( $P$ -value 0.013), provides a strong association between the research progress of the scholar and dropping out to search for a job.

A high degree of association ( $\chi^2$  value 14.573, significant at 99.9%) between course work/non-course work program and the reason for dropping out, 'research period extended but scholarship not extended' is noted among the scholars. A higher share of scholars from the non-course work category (48.1%) would choose to discontinue their programme, while about 28% of scholars from the first year, i.e., the course work year, may choose to do so. A summary for the same is available in Table 8.

## Discussion

The survey results paint an alarming picture of the lives of research scholars in India during the first nationwide lockdown in 2020. The abrupt closure of the university from March to June 2020 resulted in 41.3% of scholars being unable to work at all, and 53.2% reporting being able to work only intermittently. Around 60% of scholars reported being unable to meet the supervisor regularly.

Every second scholar encountered either inconsistent electricity supply or internet connectivity. The lack of steady accessibility to the internet, and poor supply of electricity, is

<sup>22</sup> We have categorized scholars into two categories depending on the stage of their research work- (1) Non-terminal and (2) Terminal. Non-terminal batches include all scholars from 1st year, 2nd year, and 3rd year of PhD and 1st year of MPhil, while terminal batches include scholars from 4th year and 9B-clause year of PhD, and 2nd year of MPhil.

a low-income and lower-middle income country problem in Asia and Africa (Aristovnik et al., 2020). We find that this claim is borne out in the case of our study in India. Research work also witnessed a standstill with large-scale disruption in travel (Álvarez et al., 2021; Stuart et al., 2021). Since March 2020, Union and State (provincial) governments placed intermittent localised lockdowns and night curfews, with many public spaces like libraries and archives being shut. Our data reveals that almost three-fourths of scholars had no access to primary resources of research. Research data was not accessible online because of the nature of the data, i.e., data from human/plant/animal populations or wet laboratories. In India, secondary literature is available primarily in hardcopy format in libraries, archives, and museums, and one did not have access to these during the lockdown. Thus, for most scholars, even if access to the internet could assist research, it could not replace the integral nature of fieldwork that is required for original research in India.

Scholars reported uncertainty around fieldwork and dissertation submission as one of the primary reasons for anxiety and possible dropping out. Around three-fourths of mid-term scholars in JNU had completed less than 50% of data collection. Between the survey (June 2020) and now (July 2022), universities across India, including JNU, have opened and shut intermittently. Until March 2022, which is when universities completely opened, they did so in a phased manner with a preference for final year students. Given the lingering variants of the SARS-CoV-2 virus, at least for the duration of the pandemic, scholars' access to the populations they work with has been restricted. In our study, given the ongoing pandemic and the continuing difficulty in doing fieldwork, scholars reported the need for the university administration to accommodate flexibility in their research programmes. For example, the title of a JNU dissertation is fixed at the time of the scholar's PhD confirmation and is not readily subject to change. About one-third (32.5%) said they might need to modify the scope or change the title of their dissertation. Similarly, 43% of scholars at the University of Melbourne reported that the pandemic had affected their research design (Le, 2021). To adjust to the changing times in the UK, the UKRI has emphasised the need to rethink, adapt, and change to new research design and has actively assisted doctoral students in rethinking and reframing research methodology and data collection methods (Álvarez et al., 2021). In these exceptional circumstances, universities in India too should allow modifying the title or scope of scholars' dissertations on a case-to-case basis. However, as far as JNU is concerned, there has been no official sanction of this. Further, there has been no discussion on the need for a paradigm shift in research methodology under the unprecedented circumstances that the pandemic has posed.

Apart from the requirement of flexibility in research programmes, including giving research period extensions to students, extending financial assistance is crucial. Researchers from our study clearly mention that research period extensions without financial support cannot help them to finish their programmes. While the UGC has granted four semesters of dissertation submission extension to research scholars, they have not extended fellowship periods (UGC, 2020, 2021a, 2021b). In a recent circular, the UGC has recommended a fifth submission extension for terminal students that public universities can consider on a case-to-case basis (UGC, 2022). JNU has implemented all five. While research extensions have been much needed considering the precarious state that research scholars' work and finances have reached in the last two years, these extensions have been announced at the 11th hour, causing much distress to students. Further, all the initiatives by the UGC have primarily focused on terminal students, without considering early and mid-term PhD students.

Our study shows that fellowships are the minimum source of sustenance for research scholars, and hence financial constraints emerged as a significant aspect of concern during

the pandemic. Every second scholar reported fast depleting savings and lack of clarity regarding fellowship extension as substantial reasons for anxiety. Not only have fellowship periods not been extended, our data reveals a bottleneck of many months in existing fellowship disbursement. With the pandemic amplifying financial hardship, delay in fellowship disbursement has created additional distress and anxiety for scholars as it is the only source of income for most scholars. Given family responsibilities and increase in healthcare expenses, 40% of scholars said they used their fellowship to support their family. Scholars have even had to take loans to meet expenses during the lockdown. However, despite several depositions and letters to the JNU administration, there has been no solution to the delay in fellowship disbursement (Bhattacharyya, 2020). Understanding the significant financial strain on researchers, way back in the early stages of the pandemic (since April 2020), the UK Government, via UKRI, has committed 60 million pounds to support doctoral students (UKRI, 2021a). Similarly, the University of Melbourne had given a universal six-month fellowship extension in 2020 to all Research Training Program (RTP) scholarship fellows. In the last two years, the UGC has not once extended financial assistance to scholars on account of the pandemic.

Aligning with other studies on COVID-19 and doctoral students' mental health, this survey too reveals the significant stress and anxiety researchers have grappled with during the pandemic. Multiple factors are reported as causing anxiety to scholars ranging from stalled field work, chalky career prospects, lack of clarity regarding research and fellowship extensions, and the financial situation at their homes. In line with the UGC recommendations, in June 2020, the JNU students' union (JNUSU) wrote a letter to the administration to set up a mental health helpline. Even with most of its students displaced from campus, JNU did not start an online mental health counselling service. The university health centre had only one mental health practitioner to cater to all its students, its academic, and administrative staff. This sluggish attitude reflects a lack of empathy, and a lack of importance given to the mental health of research scholars in India.

With the blurring of work and home boundaries, 39% of scholars expressed concern regarding increased household and caring responsibilities. Almost every second women scholar reported increased demands in housework and family responsibilities since the onset of the pandemic. Acknowledging care responsibilities that researchers have to attend to, universities like the Open University (UK) have begun to consider domestic commitment as a reason for work disruption (Álvarez et al., 2021), and the University of Melbourne (Australia) has increased paid COVID-19 leave from 60 to 90 days (Le, 2021). In India, we are nowhere near acknowledging care responsibilities as a reason for disruption of academic work. There is little use of giving research extensions if the primary causes of scholars' anxiety remain unrecognised and unaddressed. In fact, this is a catalyst for dropping out of higher education programmes as they are lengthy and intensive.

As a central university situated in New Delhi, JNU had to follow broader COVID-19 directives issued by the Union Government and Delhi State Government. Given the autonomous stature of the university, the administration could have arrived at mechanisms to facilitate scholars' research while adhering to government protocols. However, the administration's action since March 2020 has been one of indifference towards researchers. The administration has been keen on researchers vacating hostels (Shankar, 2020), closing offline activities like students' entry into the central library (Express News Service, 2021; Kalyanikar, 2022), and not setting up a Covid care facility for researchers (Express News Service, 2022).

As discussed in this article, the existing literature highlights the prevalence of dropouts in India's higher education system. At an average of 12%, JNU too has its fair share of dropouts. In 2018, 16.9% of the 2014–2015 MPhil/PhD students dropped out. 7.6% and 2.7% of those from the 2015–2016 and 2016–2017 batches had already dropped out by 2018 (Talwar, 2018). Students belonging to specific socio-economic statuses are more vulnerable to dropping out than others. The survey results stress that within just 4 months into the COVID-19 pandemic, researchers' socio-economic identities influenced their decision to drop out or deregister from research programmes. There is a great degree of association between the possibility of dropping out in the aftermath of the pandemic and researchers' social identities, including gender, caste, and class. When exploring the reasons for dropping out with respect to the gender of participants, we find that the responses reflect the patriarchal structure of Indian society, where male members bear the burden of being the breadwinners of their families, and female members are married off early to be the caregivers. Similarly, a strong association between scholars' caste identity and dropping out implies the difficulties of those belonging to specific social categories in completing higher education. Every second OBC and SC scholar was vulnerable to dropping out for reasons concerning financial status at home and societal pressure to get married. Again, a strong association was noted between scholars from low-income backgrounds and their need to drop out from their research programme. These scholars are responsible for sustaining their families financially, given the vulnerable financial situation at home. As should be evident, research scholars, like others from their age group working outside academics, need regular pay and need to be treated as academic workers. Denying or delaying remuneration will cause their (research) work and their livelihoods to be in jeopardy. These results mirror the ones found by Johnson et al., (2022). They found that nearly half (45%) of the research scholars in Australia may be forced to give up their research due to financial constraints, leading to a 'gentrification' of the PhD, meaning that only the rich would get PhDs and those from lower socio-economic backgrounds would be forced to drop out. Similarly, our results show a strong correlation between the stage of the research program and the possibility of dropping out. Further, every second non-terminal student said they would drop out if there was to be no fellowship extension or if they had to look for a job to sustain their family.

The responses to the questions on dropouts/deregistration revealed the social economic inequalities that had risen within the first few months (March to July) of the pandemic and the nationwide lockdown. The happenings of the last 2 years may only have widened the already existing social inequalities in the higher education sector in India.

## Limitations of the research

There are several limitations to this study. The longevity of the pandemic extending to 2022 was unpredictable when the study was conceived in May 2020 and executed in June 2020. Given social distancing norms and the extended lockdown, we did not have access to diverse stakeholders, like the university administration and the union and state governments, to involve them in our study to get a holistic understanding of the impact of the pandemic on researchers. The mode of data collection had to be online since the pandemic prevented any in-person contact with potential participants. Therefore, only students' experiences were recorded, via multiple choice questions. We also acknowledge



that studies on the impact of the teacher-student relationship on scholars' lives are necessary to help map the long-term impact of the pandemic on researchers' work. The current study could also not focus on the large-scale pedagogical impact on research scholars' course-work, their teaching duties, or the many discussions they usually have with their supervisors and peers. Pandemic-induced pedagogical changes in research is an area unexplored and, thus, warrants enquiry. However, notwithstanding these limitations, this survey is a significant intervention as it is the first quantitative survey to understand the lives of research scholars in India since the pandemic.

## Conclusion

This article reveals the abysmal state of the lives of research scholars of JNU as reported after the first four months of the pandemic. The long-term impact of the pandemic on research workers and research in higher educational institutions will become evident only in the years to come (Jackman et al., 2021). A decline in research degrees may cause a dip in economic growth by slowing the development of new technology and skills in the production and service sectors. (Larkins et al., 2020). Thus, targeted interventions are the need of the hour, focusing on the discipline of research, year of the programme, and social and economic inequalities. In the context of the pandemic, the amount spent by the Ministry of Health in 2021 (Rs. 806.94 billion) has increased by 25% compared to the previous year's (Rs. 642.58 billion) expenditure (PRS, 2021b, 2022b). However, for the same duration, the amount spent by the Department of Higher Education was slashed by 12.3%, i.e. from Rs. 369.16 billion in 2019-20 to Rs. 323.78 billion in 2020-21 (PRS, 2021a, 2022a). There has been no special provision or financial allocation for research scholars in the union budget presented since the onset of the pandemic. It is true that during a pandemic, any nation would have had to prioritise its national budget and spend more on healthcare, but it cannot leave its higher education sector and research community uncared for. A substantial percentage of scholars are likely to drop out of their research programmes during or in the aftermath of the pandemic, i.e., this year and in the next few years, unless the roadblocks of stalled research work and poor finances that they face are mitigated. Considering the responses from our participants on dropout/de-registration possibilities, mere research period extensions, unaccompanied by scholarship and accommodation facility, will be unsuccessful. The response of the Indian Government towards researchers has been that of indifference. Except for research extensions for final-year students, there have been no concrete policy recommendations to address the plight of the research community. However, to arrive at policy recommendations, one must first acknowledge the problems faced by the research community.

India cannot afford to abandon its researchers and academic workers. The need of the hour is a flexible mitigatory policy that permits the modification of the scope of a doctoral research project, including a change in the dissertation title, a change in scope of research, and an evolving criterion for the availability of additional funding. It must also consider the intersectional inequality between caste, class and gender, and dropouts from research programmes. Such a policy will help more research scholars to submit their PhDs without the need for continued work-period extensions.



## Appendix 1

**Table 3** Social representation of the survey in comparison to that of JNU's research scholar population

<i>Social category</i>	<i>Share of JNU MPhil/PhD scholars (%)</i>	<i>Share of Survey's MPhil/PhD scholars (%)</i>
Unreserved + foreign national	41.5	44.7
SC	15.1	15.2
ST	8.1	7.2
OBC	32.1	31.1
PH	3.1	1.8

Source: Column 2: JNU category-wise student's enrolment as on 01.09.2019 in university departments (JNU, n.d). MTech students represented in the survey are excluded as JNU does not provide exclusive figures for them; Column 3: Calculated from primary data

**Table 4** Resources needed for research ( $n = 511$ )

<i>Types of resources</i>	<i>Share of scholars (%)</i>
Libraries	69.3
Archives	38.9
Science laboratory	11.9
Human population (e.g., doing surveys, interviews etc. with certain population)	44.9
Plant/animal population	0.7
My thesis is not dependent on any of the above resources	6.0
Other	12.4

Source: Calculated from primary data

**Table 5** Availability of required research material online ( $n = 472$ )\*

<i>Online availability of research material</i>	<i>Within JNU e-library (%)</i>	<i>Other libraries/archives (%)</i>
No required material available	21	19.5
Only some required material available	68	61.4
Most of the required material available	9	15.3
All required material available	2	3.8

Source: Calculated from primary data

\*For 58 scholars, all research material was available offline

**Table 6** Types of research fellowships ( $n=528$ )

<i>Financial sources (per month)</i>	<i>Share of scholars (%)</i>
Junior Research Fellowship/Rajiv Gandhi National Fellowship (JRF/RGNF & equivalents (Rs.31,000)	28.8
Non-NET (National Eligibility Test) ( Rs.5000)	23.5
Former fellowship holder (do not receive any fellowship currently)	20.5
Senior research fellowship (SRF) equivalent (Rs.35,000)	9.3
Non-NET (Rs.8000)	9.1
ICSSR fellowship (Rs.20,000)	3.8
Others	3.8
Foreign national (self-financed)	0.9
Foreign national (home government financed)	0.4

Source: Calculated from primary data

**Table 7** Association between drop-out reasons and socio-economic identities of scholars

Variables	Reasons for dropping out		
GENDER	<i>Research period extended but scholarship is not extended (n=517)</i>	<i>Look for a job to sustain my family (n=517)</i>	<i>Pressurized by family to get married (n=517)</i>
Male	111 (51.4%)	105 (48.6%)	18 (8.3%)
Female	114 (37.9%)	111 (36.9%)	41 (13.6%)
	Chi-square value=9.345†	chi-square value=7.118†	chi-square value=3.478*
SOCIAL CATEGORY	<i>Pressurized by family to get married (n=510)</i>	<i>Look for a job to sustain my family (n=510)</i>	
OBC	25 (15.6%)	81 (50.6%)	
SC	12 (15.4%)	36 (46.2%)	
ST	0 (0)	15 (39.5%)	
None of the above	20 (8.5%)	81 (34.6%)	
	chi-square value=10.992**	chi-square value = 10.782**	
FAMILY INCOME	<i>Research period extended but scholarship is not extended (n=505)</i>	<i>Look for a job to sustain my family (n=505)</i>	
Below 0.5 million per year	69 (52.3%)	67 (50.8%)	
0.5 million–0.3 million per year	55 (50%)	52 (47.3%)	
0.3 million–0.6 million per year	53 (41.4%)	52 (40.3%)	
Above 0.6 million per year	40 (29.9%)	41 (30.6%)	
	chi-square value=16.478††	chi-square value=12.717†	

Notes: \* $p < 0.1$ , \*\* $p < 0.05$ , † $p < 0.01$ , †† $p < 0.001$

Source: calculated from primary data

Figures in parentheses are percent share of responses out of total respondent in respective variables mentioned above

**Table 8** Association between drop-out reasons and progress of research work

Variables	Reasons for dropping out		
YEAR OF ACADEMICS	<i>Cannot access resources for my research (n=519)</i>	<i>Research period extended but scholarship is not extended (n=519)</i>	<i>Look for a job to sustain my family (n=510)</i>
<i>Non-terminal students</i>	181 (57.6%)	151 (48.1%)	145 (46.2%)
<i>Terminal students</i>	99 (48.3%)	76 (37.1%)	72 (35.1%)
	chi-square value=4.356**	chi-square value=6.116**	chi-square value=6.232**
WHETHER IN COURSE-WORK	<i>Research period extended but scholarship is not extended (n=509)</i>		
<i>In course work</i>	32 (28.1%)		
<i>Not in course work</i>	195 (48.1%)		
	Chi-square value=14.573††		

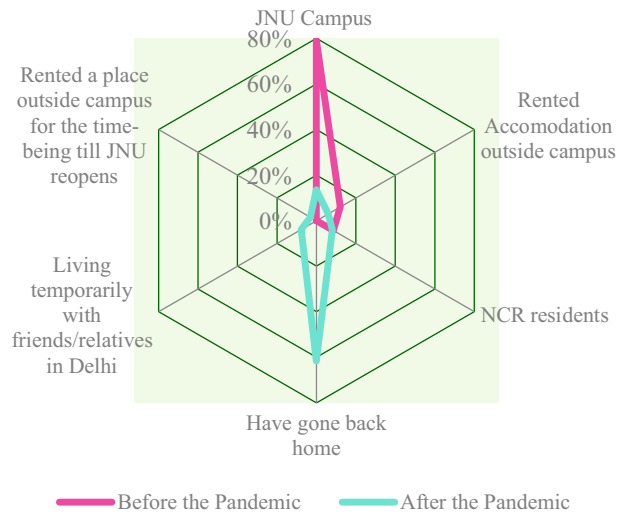
Notes: \*\* $p < 0.05$ , †† $p < 0.001$

Source: calculated from primary data

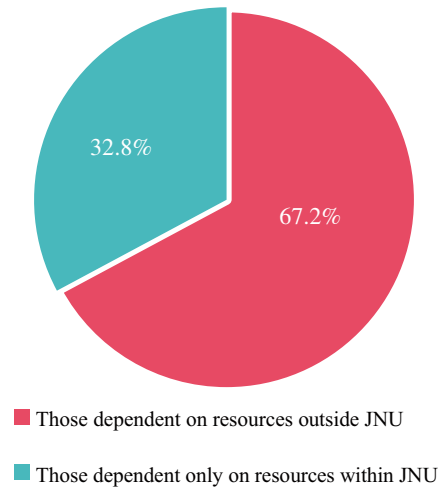
Figures in parentheses are percent share of responses out of total respondent in respective variables mentioned above

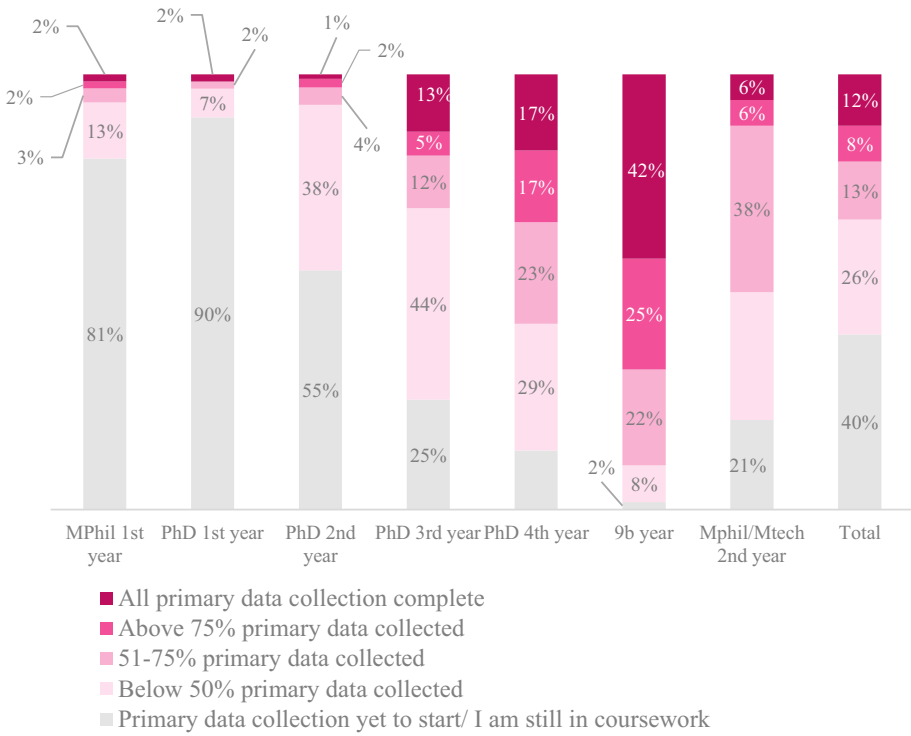
## Appendix 2

**Fig. 1** Spatial dispersion of scholars before and after pandemic

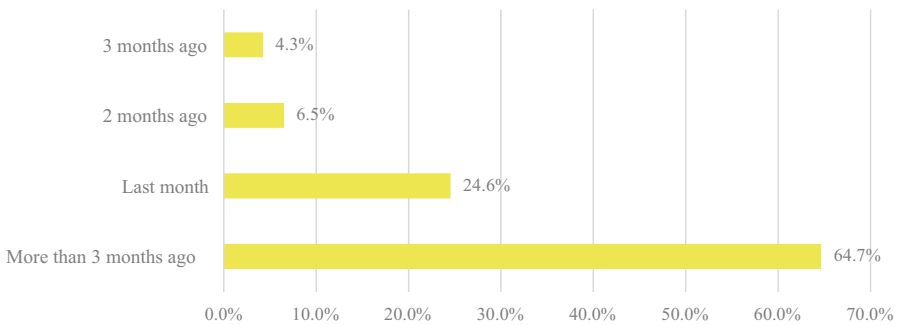


**Fig. 2** Location of theses/synopsis-related material



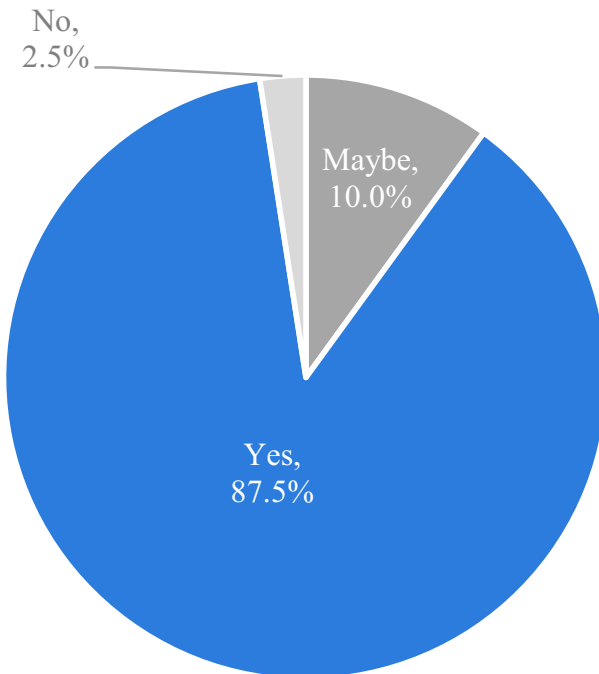
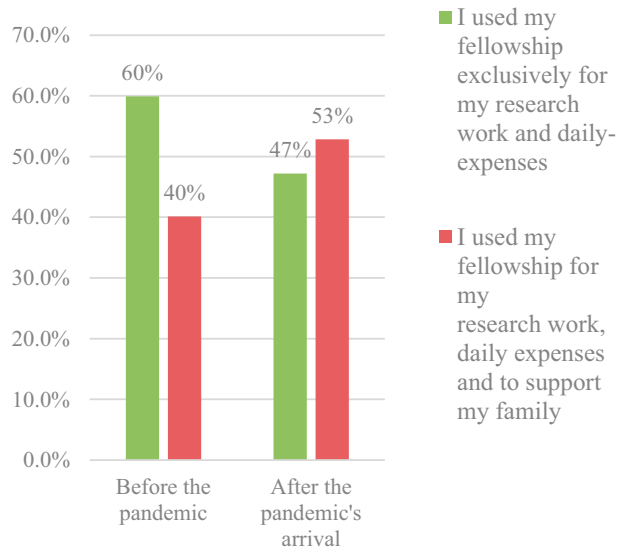


**Fig. 3** Status of primary data collection

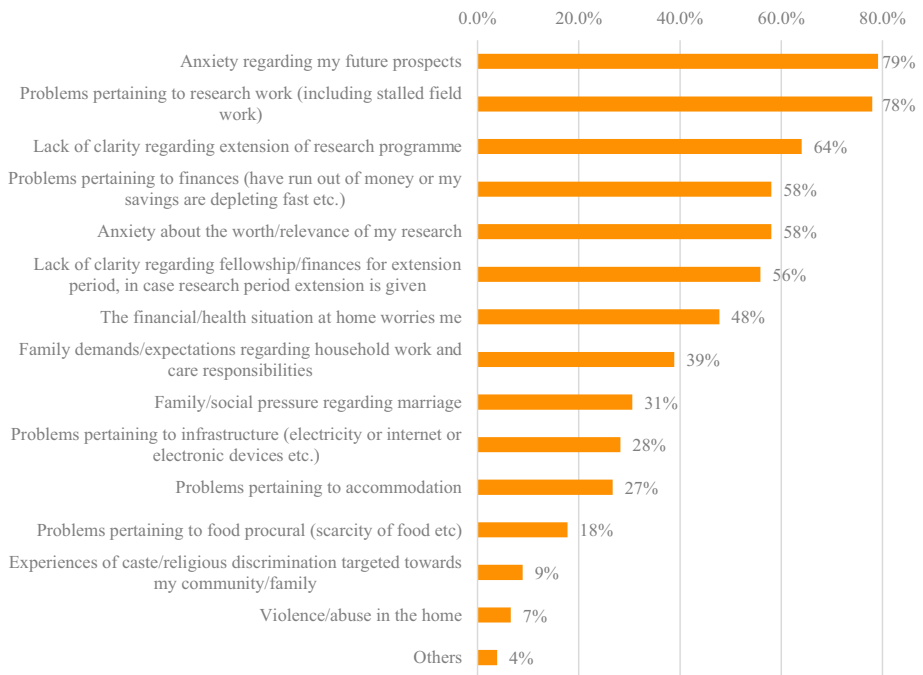


**Fig. 4** Last received fellowship

**Fig. 5** Expenses of current fellows before and after the arrival of the pandemic



**Fig. 6** Share of scholars who reported being worried/anxious



**Fig. 7** Share of scholars and their reasons for anxiety

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## Declarations

**Ethics approval** Not required.

**Conflict of interest** The authors declare no competing interests.

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