Covid-19 Pandemic: Investigating the psychological impact of remote teaching on teachers/lecturers

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Abstract

Covid-19 pandemic is unprecedent event. It came upon the whole world like a thief in the night. Due to the spread of the infectious disease, all universities had to organize remote teaching. One of the major changes is moving all face-to-face lecture to remote teaching, while this may not be a big issue for some higher education providers simply because majority of their lectures are being delivered online prior to the pandemic incident, however, for some, remote teaching is new to them, hence the impact on their mental health. Questionnaire was administered by using the school of Architecture, Technology and Engineering general staff email. Relative Importance Index (RII) was conducted on the responses. From the RII analysis, stress of remote teaching and deterioration to physical health are the major impact experience by most of the respondents, also anxiety before starting lecture and difficulty in concentrating on everyday tasks provided the most significant psychological effect of remote teaching based on the respondents' responses. It was recommended that students should be encouraged to upload profile pictures on their various MS Team account, as this will replace their 'name initials' during live lectures, thereby providing some sort of relieve for lecturer, this is supported by over 65% of respondents, this is a simply solution, which has the potential to improve psychological impact of remote teaching on lecturers.

Keywords: *Covid-19, Remote teaching, Psychological, mental health*

1.0 Introduction

Covid-19 pandemic can be described as unprecedent event. It came upon the whole world like a thief in the night [1]. Due to the spread of the infectious disease, all universities had to organize remote learning/teaching. The complete transition from face to face to remote learning created significant number of problems, both of technical and psychological kinds. The main loading fell on the academic staff, who had to radically revise the mode of lecture delivery. One of the major changes is moving all face-to-face lecture to remote teaching. There was a need to adapt so many things from both lecturers and students point of views. Most lecturers were concerned about their students, want to give them the best, trying to make sure that students' learning outcomes are not negatively affected because of the pandemic. One major point not taking into consideration is the psychological impact of this sudden change of delivering mode on lecturers. It is against this background that this research is embarked upon to investigate the psychological effect and impact of remote teaching on lecturers.

2.0 Preparedness of lecturers

Previous studies showed that lecturers were physically and materially ready to switch to remote teaching formats, however, they were not psychologically ready for the challenges of remote learning as some of the lecturers that participated in the research engaged in remote teaching for the first time [2]. At the university of Brighton and most other universities in the UK, the change from face-to-face to remote teaching was immediate, under the Covid-19 rapid closures and lockdowns, conveyed through a confusing array of directives from the UK government. It was agreed by most universities that students would need to be taught remotely, in addition, this was tied to the need for social distancing, this position didn't only relate to the UK universities, universities in other part of the world also had to do the same [3]; [4].

2.1 Concept of remote teaching

According to Bao [5] remote teaching was adopted by many universities to support students in their educational development and to allow students to progress with their degrees instead of completely stopping everything during the covid-19 pandemic. The phrase remote teaching is being used throughout the educational sector to refer to the practice whereby there is a provision of online support of student learning on courses which were designed for face-to-face or blended delivery. In addition to this, it has weighty challenges for the assessment of students; for example, unseen supervised written exams needed to be replaced with assessments which can be taken remotely, for instance on the

modules I was leading, all exams during the pandemic were changed from unseen invigilated exam to 48 hours open book exam. This sudden change has the potential to have some form of psychological and mental health challenges on both lecturers and students [6].

2.2 Psychological and Mental health issues relating to remote teaching

According to Puertas-Molero et al [7], COVID-19 pandemic has had a relevant impact on the well-being and mental health of lecturers around the world, including by increasing the risk of burnout. Burnout was described as the result of an individual, continuous, chronic, and gradual process and characterised by three dimensions, which are, the feeling of energy depletion or exhaustion; a lack of interest and motivation at work and reduced professional efficacy [8]. It was found that 40% of lecturers were against remote lecture delivery, some of the reasons for their responses were lack of direct contact with students; more time required to prepare for the lectures, thereby creating another level of psychological fatigue, increased emotional fatigue, anxiety before lectures [2]. It can be concluded that the immediate shift from the classic, face-to-face approach to remote teaching seems to have contributed to some of the psychological effected outlined by the respondents in this study.

3.0 Research methodology

The driving forces for the choice of a research methodology in any study are not the advantages or disadvantages associated with a particular method [9]. Mertens [10] asserted that the factor that influences the choice of one approach over another is the nature of the research problem or the objectives of the study. Thus, the research paradigm for this study is quantitative in nature. The quantitative concept implies that the reasoning of the research is largely deductive, involving gathering data through questionnaire administration, to be able to draw conclusion, which may be said to be representative of certain population. The questionnaire was administered by using the school of Architecture, Technology and Engineering general staff email, which comprises of 221 email addresses. Data analysis was carried out by using SPSS software. First, descriptive statistics were conducted on the responses to obtain the overall demographic information in support of the validity of the findings. Further descriptive statistics, such as Relative Importance Index (RII) was conducted on the responses.

4.0 Result and discussion

Total of 23 responses were received amounting to 10.4% while these response rates are lower than the ideal for survey analysis, they are not unusual for voluntary unsolicited questionnaire surveys given that no incentive was offered. The response rate obtained in this survey appears to be lower compared to the standard response rate for online questionnaires, indeed, lower response rates in the region of 14.7% [11] have been described as the norm for comprehensive questionnaires. Others such as Samwinga [12] reported a response rate of 11% in his research; Sutrisna [13] reported a response rate of 8.8% and Ankrah [14] reported a response rate of combined pilot and main survey of 15.42%. Thus, owing to the sensitive nature of the research, a response rate of 10.4% can be considered adequate and valid for the purposes of analysis.

4.1 Socio-demographic Characteristics

Socio-demographic assessments were carried out to ascertain the level of representation in terms of gender, lecturing experiences, and respondents' remote teaching experience prior to covid-19 lockdown. This was intended to provide a context within which the findings of the survey and subsequent analyses can be taken as valid, to ensure that any inferences extended to the population from the sample are valid. Table 1.0 shows the gender distribution of respondents. 52.2% of respondents were male and 39.1% were female, 8.7% of the respondents were in the category of those that preferred not to indicate their gender. It can be inferred from Table 1.0 that the result is heavily weighted towards male respondents.

Table 1.0 Gender distribution of respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	12	52.2	52.2	52.2
	Female	9	39.1	39.1	91.3
	Prefer not to say	2	8.7	8.7	100.0
	Total	23	100.0	100.0	

Respondents were asked if they had previous experience of remote teaching prior to Covid-19 lockdown. Table 2.0 illustrates the result. 65.2% of respondents had no prior experience, only 34.8% of respondents had had one form of remote teaching or the other.

Table 2.0 Number of respondents with prior experience of remote teaching before covid-19

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	8	34.8	34.8	34.8
	No	15	65.2	65.2	100.0
	Total	23	100.0	100.0	

4.2 Analysis of severity of impact of remote teaching/lecturing

Information on severity of the impact of remote teaching on lecturers was gathered using a five-point Likert scale ranging from 'extreme impact' to 'no impact'. A weighting was allocated to each extent; where 'extreme impact' = 5, 'high impact' = 4, 'moderate impact' = 3, 'marginal impact' = 2, 'no impact' = 1. The relative importance index (RII) method was used to rank the responses obtained from the Likert scale questions. RII is a method used to evaluate the comparative importance of a single item to others [15] and has been used successfully to rank factors according to their relative importance by various researchers [16]; [17]. Table 3 presents the RII values for severity of impacts and the consequent ranking of factors. Stress of remote teaching (0.70) was the top-ranked impact, closely followed by 'Deterioration to physical health due to need to be online for longer period' (0.64), 'Deterioration of mental health' ranked no 3. Low ranked impact was 'Worrying about loneliness' (0.37). This result is in line with the result presented by Grigoriev [2], where stress of distance remote teaching was identified as major reason why about 40% of lecturers have negative attitude towards this mode of lecture delivery. Also, deterioration of physical health, which can be linked to psychological fatigue concurred with previous research by the same authors.

Table 3: Ranking of severity of the impacts of remote teaching according to relative importance index (RII) values

Impact factors	Number of Responses with the highest weight	Number of responses with no impact	Relative Importance Index (RII)	Ranks* R (Based on RII value)
Stress	1	0	0.70	1
Anxiety	1	6	0.47	5
Worrying	0	9	0.37	6
Strains between family	5	6	0.55	4
Deterioration to physical health	3	1	0.64	2
Deterioration of mental health	4	2	0.63	3

*Equal RII values ranked according to the number of responses with the highest weight

4.3 Analysis of psychological effect of remote teaching on lecturers

Apart from the severity of the impact of remote teaching on lecturers, other serious long-term effects is the psychological effect. The RII values was used to apportion the value of psychological effect of remote teaching on lecturers, the results are illustrated in Table 4.

Table 4: Ranking of the frequency of psychological effect of remote teaching according to relative importance index (RII) values

Psychological effect	Number of Responses with the highest weight	Number of responses with no effect	(Relative Importance Index (RII)	Ranks R (Based on RII value)
Anxiety before starting lecture	5	0	0.63	1
Anxiety during lecture	0	2	0.56	3
Anxiety after lecture	0	4	0.47	6

Depression	5	8	0.45	7
Sleeplessness	0	5	0.51	4
Nightmares	0	13	0.34	8
Increased anger	0	5	0.50	5
Increased tensions in relationships	0	6	0.50	5
Difficulty concentrating	10	1	0.62	2

Information on how often respondents were affected by psychological effects due to experience of remote teaching was gathered using a five-point Likert scale ranging from 'always' to 'never'. A weighting was allocated to each extent; where 'always' = 5, 'very often' = 4, 'sometimes' = 3, 'rarely' = 2, 'never' = 1'. The relative importance index (RII) method was used to rank the responses obtained from the Likert scale questions. Table 4 illustrates the RII values for effects and the consequent ranking of factors. As can be seen 'anxiety before starting lecture' (0.63) was the top-ranked psychological effect, closely followed by 'Difficulty concentrating on everyday tasks' (0.62). Low effects were 'nightmares' (0.34) and 'Depression' (0.45). It can be inferred that having nightmares has no significant psychological effect on lecturers due to remote teaching, as approximately 56.5% of respondents indicated that they do not suffered nightmares because of remote teaching.

Since 'Anxiety before starting lecture and Difficulty concentrating on everyday tasks' are the two top ranked psychological effects suffered by lecturer because of remote teaching. Based on this, the question can be raised; will having students' still photo images on screen during remote teaching session would help them psychologically? Table 5.0 shows that over 65% of the respondents are of the opinion that having students' photos on their screen when remote lectures are being delivered have the potential to reduce psychological impact of remote teaching. This is also concurred with the result of Grigoriev [2], research, presented in section 2.2 of this report.

Table 5.0: Distribution of respondents' perceived importance of having students' photos rather than initials

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	15	65.2	65.2	65.2
	No	4	17.4	17.4	82.6
	Not sure	4	17.4	17.4	100.0
	Total	23	100.0	100.0	

5.0 Conclusion and recommendations

While everything was done to make sure that students were not adversely affected during lockdowns that were put in place by government to reduce the impact of covid-19 outbreak on the society. Little was done in preparing lecturers for the potential psychological effect of sudden change of lecture delivery from face-to-face to remote. From the relative importance indices presented in this study, it can be concluded stress of remote teaching and deterioration to physical health are the major impact experience by most of the respondents, on the other hands, anxiety before starting lecture and difficulty in concentrating on everyday tasks provided the most significant psychological effect of remote teaching based on the respondents' responses. To reduce the psychological effect of remote teaching on lecturer, it is recommended that students should be encouraged to upload profile pictures on their various MS Team account/Zoom, as this will replace their name initials during live lectures, thereby providing some sort of relieve for lecturers, this is supported by over 65% of respondents.

5.1 Limitations and area for further studies

Due to time constraint, the output of this research project has the following limitation, thus, the result should be used with the following caution: The sample size is limited to only one school in the whole of University of Brighton. There is possibility that the results would be different if the entire university teaching staff were sampled. Correlation analysis was not carried out due to the small sample size

Based on this limitation, the following areas for further study are hereby recommended:

1. A nationwide survey of higher education lecturers should be conducted to investigate the effect of remote teaching on lecturers
2. Control experiments should be carried out, where one part will deliver remote lecture with students' photos on the screen and the other with just initials and the psychological impact should be measured between the two scenarios.

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