SHORT COMMUNICATIONS

Time allocation before and during enhanced community quarantine among students in a university in Manila, Philippines

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ABSTRACT

Background: The Philippines implemented the Enhanced Community Quarantine (ECQ) to contain the COVID-19 virus through home quarantine for all households. Classes in all education institutions were suspended which has disrupted normal everyday life of students.

Objectives: Following the implementation of these guidelines, this study aimed to understand and describe the time allocation of students in a university in Manila, Philippines before and during the ECQ.

Methodology: A total of 132 student respondents were involved in the survey which requested them to indicate the minimum allocated time for various academic, health, lifestyle, and social activities. A Wilcoxon-Signed Ranks test was used to determine the differences of time allocation before and during the ECQ.

Results: A significant percentage decrease among academics (-9.08%), travel (-5.56%), and shopping (-0.64%) is found. Moreover, significant percent increase is seen in activities namely rest and relaxation (+7.34%), entertainment (+3.62%), family time (+2.44%), self-development (+0.86%), household chores (+0.83%), and hobbies (0.68%).

Conclusion: It is found that the implementation of ECQ have significantly affected the everyday life of students. Significant decreases and increases of time allocated to various activities were found due to the "new normal" situation among students. The study recommends a more in-depth look at different factors related to the pandemic that leads to the decrease and increase in the time allocated for everyday life activities of students.

Keywords: *time allocation, quarantine, students, COVID-19*

Introduction

In the Philippines, an Enhanced Community Quarantine (ECQ) was implemented to contain the spread of the COVID-19 disease. During the ECQ, a home quarantine for all households was implemented. Companies and business establishments providing necessities continued operations with a skeletal workforce while others implemented work from home arrangements or ceased operations. Classes in all education institutions were suspended with a handful continuing in on-line mode.

The transition to online learning caused by the restrictions of the pandemic has caused challenges to students particularly on technological, individual, domestic, institutional, and community barrier aspects [1]. This is considered difficult especially for students who feel and experience isolation. Furthermore, synchronous learning provides specific time allocations on learning activities similar to face-to-face classes. On the other hand, asynchronous learning involves significant delays in communications between instructors and students [2]. All in all, students find the abrupt transition to full online learning challenging since most are unfamiliar with the online environment [1].

With that, the implementation of ECQ has led to a disruption of daily routine and interactions. For school and

universities, there has been rapid adoption of online learning documented by education institutions and organizations [3,4,5,6,7,8,9]. Current literature is focused on helping teachers identify distance learning solutions, curriculum, and professional development resources for the appropriate audience [10]. The goal of this study is to understand the time allocation of university students before and during ECQ. Specifically, it aims to describe the averages and percentages of time allocation of activities as well as its changes before and during the Enhanced Community Quarantine (ECQ). Results and recommendations from this study may be used to help understand the lifestyle changes of students during ECQ. More importantly, this paper responds to the direction of UNESCO to monitor the transition from face-to-face classroom learning to online learning and their impact on students [3].

Methodology

This study used a cross-sectional study design. The research described the time allocation of students in various activities as well as a comparison of average hours of activities before and during the ECQ in Metro Manila. The population of this study are students from a private university in Manila. A convenience sampling technique was used to recruit participants. Specifically, this technique involves sending survey invitations through e-mails and social media posts of students. A total of 132 student participants were involved in the survey which was conducted from the April 23 to May 15.

The survey identified 17 activities (Table 1). The respondents were requested to fill-out their estimated allocated time spent in hours for each activity before and during the ECQ. The respondents must total 24 hours by filling up each activity with estimated minutes allocated per day.

Data was analyzed using different descriptive and inferential statistics through IBM Statistical Package for Social Sciences (SPSS) ver. 20. Descriptive statistics such as frequency counts and percentages were used for the demographic profile of the respondents. Median, and interquartile range (IQR) were used to describe hours allocated per each activity. Lastly, percentages were used to describe changes in allocated time per activity. Inferential statistics is used to determine the differences in time allocation before and during the quarantine. A non-parametric test specifically, Wilcoxon Signed Ranks test was used in this study. This test was used due to a small sample size, and a non-random technique of selecting samples.

Results

Table 2 presents the profile of the respondents in this study. Overall, a total of 132 students were recruited to be part of this study. The sample shows a near equal proportion between being female (n=67, 50.76%) and male (n=65, 49.24%). Most of the respondents are below the age of 21 years old (n=110, 83.33%) as well as being an undergraduate student in the university (n=112, 84.85%) and has a family income greater than Php 75,000 (n=82, 62.12%).

Table 3 presents the results of the Wilcoxon Signed Ranks Test. On one hand, academic activities (p<0.001), travelling (p<0.001), and shopping (p<0.05) were seen to have significant differences in time allocation. However, these findings show that time allocation in these activities seemed to significantly decrease during the ECQ. This shows that students during the ECQ have significantly allocated less time for academic activities, travelling, and shopping during the enhanced community quarantine.

On the other hand, rest and relaxation (p<0.001), doing household chores (p<0.001), family time (p<0.001), self-development (p<0.05), entertainment (p<0.001), and hobbies (p<0.001) are seen to have significant increases in time allocation before and during the ECQ. This shows that students during the ECQ have significantly allocated more time for rest, household chores, family time, self-development activities, entertainment, and hobbies during the ECQ.

Table 4 presents the changes in time allocation by looking at differences percentages of hours allocated per day. These activities are seen with drastic decreases and increase. Among activities with have significant decreases based on the Wilcoxon Signed Ranks Test results, academic activities seemed to have highest percentage of hours decreased per day (-9.08%) as well as travelling (-5.56%). On the other hand, the ECQ is seen to have led to drastic increase in time allocation of some activities. Among activities with have significant increase based on the Wilcoxon Signed Ranks Test results, rest and relaxation had the highest increase in percentage change in a day (+7.34%), followed by entertainment (+3.62%), and family time (+2.44%).

Discussion

Based on the results, the implementation of the ECQ has led to significant differences of time allocated in different activities or everyday life among students. Some activities

Table 1. *Definition of daily activities*

Activity	Includes	Excludes
1. Rest and relaxation	Sleeping, napping, resting	
2. Health and hygiene	Bathing, brushing of teeth, grooming and make-up	
3. Eating	Consuming meals and snacks	Meal preparation and cooking
4. Travelling	Commuting, driving, walking to destination, biking to destination	Exercise (*e.g.* jogging, biking)
5. Work	Work from home, phone conference, video conference, email, training initiated by company	Household chores, non-work-related phone conference, video conference, and email, Training not initiated by the company
6. Academic activities	Classroom lectures academic readings, academic research projects and requirements, online classes, academic webinars	Non-academic readings
7. Shopping	Market and supermarket purchase, window shopping, bills payment, online shopping browsing, online shopping purchase and online bills payment	
8. Household chores	Cleaning, fixing, washing clothes, ironing clothes, meal preparation and cooking	
9. Family	Talking with family members, spending time with family members	
10. Friends	Hanging out, messaging phone and video calls	Work related activities and school related activities
11. Self-development	Acquiring new knowledge, Learning new skills	Academic readings and activities
12. Physical activities	Exercise, stretching, yoga, stationary bike, treadmill	
13. Entertainment	Listening to music, watching TV, watching Netflix, playing video games	
14. Hobbies	Arts, crafts, collections, and leisure activities	Exercise, stretching, and cooking
15. Religious activities	Prayer, meditation, mass	
16. No activity	Doing nothing	
17. Other activities	To be specified by respondent	

Table 2. *Profile of respondents, n=132*

Variable	Categories/Groups	Frequency	%
Sex	Female	67	50.76
	Male	65	49.24
Age	≤ 21 years old	110	83.33
	> 21 years old	22	16.67
Educational level	Undergraduate level	112	84.85
	Graduate level	20	15.15
Family income	≤ Php 75,000	50	37.88
	> Php 75,000	82	62.12

Table 3. *Wilcoxon signed ranks test results*

Activity	Before ECQ (Hours)		During ECQ (Hours)		p-value
	Median	IQR	Median	IQR	
1. Rest and relaxation	6.00	2.00	8.00	2.00	p<0.001
2. Academic activities	6.00	4.44	3.00	2.00	p<0.001
3. Travelling	1.10	1.50	0.00	0.00	p<0.001
4. Work	0.00	1.00	0.00	1.00	p>0.05
5. Entertainment	1.00	1.50	2.00	2.00	p<0.001
6. Eating	1.00	1.00	1.00	1.00	p>0.05
7. Friends	1.00	1.50	1.00	1.50	p>0.05
8. Family	1.00	0.50	1.00	1.00	p<0.001
9. Health and hygiene	1.00	0.50	1.00	0.50	p>0.05
10. Physical activities	0.50	1.00	0.75	1.00	p>0.05
11. Household chores	0.50	0.75	0.75	0.75	p<0.001
12. Self-development	0.50	1.00	0.50	0.75	p<0.05
13. Shopping	0.25	0.94	0.00	0.50	p<0.05
14. Hobbies	0.00	0.69	0.25	1.00	p<0.001
15. Religious activities	0.25	0.50	0.25	0.50	p>0.05
16. No activity	0.00	0.25	0.00	0.25	p>0.05
17. Other activities	0.00	0.00	0.00	0.00	p>0.05

Table 4. *Differences percentages of hours allotted*

Activity	% of Hours (Before ECQ)	% of Hours (During ECQ)	% Difference
1. Rest and relaxation	25.30%	32.64%	7.34%
2. Academic activities	22.59%	13.51%	-9.08%
3. Travelling	6.20%	0.64%	-5.56%
4. Work	6.19%	5.86%	-0.33%
5. Entertainment	6.01%	9.64%	3.62%
6. Eating	5.86%	5.83%	-0.03%
7. Friends	5.50%	5.00%	-0.50%
8. Family	3.98%	6.43%	2.44%
9. Health and hygiene	3.87%	3.71%	-0.16%
10. Physical activities	3.09%	3.12%	0.03%
11. Household chores	2.86%	3.69%	0.83%
12. Self-development	2.60%	3.47%	0.86%
13. Shopping	1.90%	1.27%	-0.64%
14. Hobbies	1.82%	2.49%	0.68%
15. Religious activities	1.54%	1.64%	0.10%
16. No activity	0.98%	1.12%	0.14%
17. Other activities	0.04%	0.11%	0.07%

had significant decreases; some had significant increases of hours allocated. However, there were also some that had no significant changes.

Based on the results, doing academic activities, travel, and shopping are activities that have a significant decrease in time allocation. For academic activities, a possible reason for the decrease is the elimination of waiting time for classes. During the quarantine, all levels of academic institutions were closed for safety purposes [11]. In normal conditions, students would have breaks in between classes. These breaks give students the opportunity to do various academic activities like study, research, visit the library, work on group projects, and participate in academic organizations as these students are already in an academic environment [12]. Time allocated for travel has also significantly decreased. This shows that most students have stayed home in compliance to the ECQ guidelines issued by the government [13]. Lastly, shopping has also significantly decreased. This is also expected since the ECQ closed malls and stores that are not selling essential products and services [14]. However, these restrictions do not prevent students from visiting online stores and websites to do their window shopping and availing of essential goods and services online.

There was also significant increase to some activities during the enhanced community quarantine. Time allocated for rest and relaxation has significantly increased based on the results. Quarantine measures prohibit public gatherings, which forces students to stay inside [15,16]. While at home, students may take the opportunity to sleep longer or nap during their free time. Moreover, rest and relaxation is the highest activity for time allocation before and during ECQ according to the results. Staying inside also prompted for more time in entertainment, doing household chores, and doing hobbies. These activities increased in time allocation among students due to provisions on staying inside houses. Students had increased time allocation in indoor based activities [15,16]. Time allocated for family and self-development significantly increased. Since most of the offices and business establishments are closed during the ECQ, parents and students are given the opportunity to spend more time with each other at home. These are ways of students in coping with a very mentally challenging situation put by the quarantine.

Eating, physical activities, health & hygiene, religious activities, time with friends and work did not show a significant difference in time allocation. With regard to time allocated for eating, Mattiolli *et al.* [16] suggested that individuals experiencing quarantine stress may adopt a sedentary lifestyle and develop stress related eating. For health and hygiene, students may have maintained current hygienic practices but failed to intensify them during the ECQ. It is possible that being quarantined at home may have weakened the necessity to intensify hygienic practices. For religious activities like praying, meditation, and attending mass, the closure of places of worship may have contributed to the decrease in time allocated for religious activities. There may be efforts also to encourage prayer and improve access to religious activities. Time allocated for friends remained unchanged also. This suggests that the closure of social spaces may have hindered the possibility of deepening friendships and establishing new social connections. However, this also suggests that students were able to maintain social ties with friends with the help of social media. Social connections with friends are considered critical in ensuring a collective response to the pandemic [8]. Lastly, time spent for work also remained unchanged. This may suggest that work remained a valued activity as time allocated for work did not decrease.

This study provides a description of different changes in the allocation of time in every activity a student faces each day. This reveals that a change in situation may lead to various changes in the everyday lifeworld among individuals. However, this study may also have methodological limitations such as having a small sample size and focusing on a singular institution that future studies must consider. This is so that the study can provide a more generalizable and avoid any forms of bias. All in all, the study may be used as a baseline for future studies in providing description on how the COVID-19 situation changed student lifestyle as well as coping trends amidst the pandemic.

Conclusion and Recommendations

This paper arrives at the following conclusion and recommendations: first, academics, travel, and shopping are activities that have shown a significant decrease in time allocation during the ECQ. The decrease in time allocated for travel and shopping is expected due to the closure of universities, malls, and other non-essential stores. This presents opportunities for students to allocate more time for healthier and more productive activities. The decrease in the time allocated for academic activities should be examined to identify the factors that contribute to the decrease in time allocation and examine if the reduction of hours in academic activity affects performance, knowledge acquisition and skill

development. In addition, time allocated for shopping activities during ECQ should also be studied.

Secondly, rest and relaxation, entertainment, family time, self-development, household chores, and hobbies are activities that have a significant increase in time allocation during the ECQ. However, the increase in time allocation for entertainment is greater than self-development activities. It is important that students should be made aware of the importance of allocating their time wisely.

Lastly, eating, physical activities, health & hygiene, religious activities, friends, work, no activity, and other activities showed no significant difference in time allocation during the ECQ. Despite showing no change in time allocation, these findings when examined in the context of literature provide opportunities for future research.

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