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Behavioral aspects and the academic performance during pandemic of sixth graders

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Abstract: This study sought to determine the behavioral aspects during the pandemic and the academic performance of Grade VI pupils at Bulalacao Central School as the basis for proposing an intervention program. This study made use of descriptive-correlation methods of research. Randomly selected respondents were from three (3) sections. The study used a validated researcher-made instrument that had reliability testing. Results revealed many behavioral aspects during the pandemic across indicators (mental aspects—2.81; emotional aspects—2.87; social aspects—2.99; and physical aspects—2.94). Pupils are on a satisfactory level of academic performance during the first and second quarters. Moreover, a significant relationship existed between the variables. With these, pupils had a great extent of behavioral aspects during the pandemic and had a satisfactory performance during the first and second quarters; the extent of their behavioral aspects during the pandemic affects the level of their academic performance; and the implementation of the psychosocial program was needed to boost their mental aspects as pupils.

Keywords: behavioral aspects; mental aspects; emotional aspects; social aspects; physical aspects; proposed intervention program; academic performance

1. Introduction

Nowadays, behavioral aspects pertain to students' behaviors in the existing phenomenon, including frustration, aggressiveness, self-control difficulties, poor communication, and decreased ability to initiate conversation. Extended school lockdowns hindered pupils from accessing essential school services such as organized recreation and face-to-face interaction with teachers, which were necessary for child development. Dealing with the COVID-19 pandemic's adverse behavioral effects on their kids might be challenging for parents because it was a traumatic event that negatively impacted students' academic performance and psychological health.

The pandemic pressured learners because of modular instruction platforms. Millions suffered from the new approach to teaching. Face-to-face classes were more effective in ensuring that understanding of lessons was effective than modular-based learning. In this context, they recommended modular-based instruction where learners could no longer adjust what they did to follow the strategy to cope with the changes in the teaching-learning process. The new educational platform brought about by the pandemic contributed to altering the behavioral aspects of learners. The normalcy of learners, routine setting at a particular time, attending classes at a specific time, and coming home at certain times reversed; thus, behavior and academic performance alternately varied and exchanged.

During the COVID-19 pandemic, the majority of children had more significant irritability, mood swings, and anxiety. Aside from that, they grew up wiser and lazier, making it difficult for them to adapt to the different limitations and restrictions of the new settings. Concerns about problematic technology use, increased gaming, and spending more time on social media might necessitate intervention among kids with access to digital learning resources. Guerrini Usubini et al. [1] stated that anxiety and stress levels rose dramatically throughout COVID-19, whereas depression levels remained stable, regardless of gender or study year. Students' stress, anxiety, and depressive thoughts were primarily associated with trouble concentrating, sleep disturbances, reduced social interactions owing to physical separation, and increasing concerns about academic success.

The pandemic has led students to experience negative emotions like nervousness, uneasiness, fear, and doubt. Most of the students got worried about the effects of the pandemic on their routines and even on their families. Hesitations and confusion were among the contributing attitudes resulting from suffering from their holistic aspect in their mobility zone [2]. This is supported by Tee [3], who said that severe stigma to mental health had a psychological impact on the part of learners, which contributes to depression, anxiety, and stress.

The Philippine government issued strict "lockdown" guidelines in March 2020, with everyone advised to stay home. It had a significant effect; transportation was down, public areas were closed, and only the most basic administrations continued functioning, albeit with restrictions and precautions. Rapid rises in COVID-19 cases have resulted in the closure of educational institutions, including elementary, secondary, and even post-secondary institutions, hoping to stop the virus's spread. Several schools worldwide have had to postpone or cancel all their school activities to reduce the number of people infected by this virus. Furthermore, all pupils have been encouraged to stay home for protection [4].

The Department of Education (DepEd) in Oriental Mindoro declared an educational break from 17–22 January 2022 altogether, in public elementary and secondary schools because of the resurgence of COVID-19 cases within the province, in line with its announcement on Friday, 14 January 2022. The agency said the break allowed all personnel and learners in the division to ensure their health and safety during this period.

Researchers in this study found breaches and considered backlogs in determining the effects of the pandemic on the behavioral aspects of Grade VI pupils at Bulalacao Central School. The weak psychosocial program of parents to their children due to incomplete education and lack of understanding about the behavioral growth and wellness of their child was considered a spotted gap. Second, the school needed a detailed Registered Guidance Counselor item to cater to the issue of enriching behaviors and psychosocial aspects of learners. It was critical and severe on the part of the child because they believed that in this pandemic, someone would help enrich their moral and emotional aptitudes.

Another gap that boiled down to the pandemic-behavior-related concerns was technology's negative impact. The improper use of technology has altered the behavioral perspective of learners. Thus, routines and everyday social interactions change into abnormal conditions of vulnerability. Moreover, there was a need to

augment the psychosocial approach intended for young learners so that the effects of the pandemic would not have adverse effects and academic performance could improve.

According to Zimmerman et al.'s [5] study from 2021, there has been a noticeable rise in anxiety and depressive symptoms among college students as compared to before the COVID-19 epidemic. This finding suggests that disruptions to daily life and social interaction associated with the pandemic can negatively impact mental well-being, potentially leading to changes in behavior and academic performance. While the study focused on college students, it highlights the potential vulnerability of younger students, like sixth graders, to similar challenges during the pandemic.

Furthermore, a pandemic-related shift to online learning created difficulties that impacted student performance, according to a study conducted by an online university. These challenges included disruptions to routine, lack of social interaction, and difficulties with self-regulation [6]. Likewise, pandemic disruptions to learning negatively affected academic performance and mental well-being, with younger students potentially more vulnerable [7].

Meanwhile, a study about the effects of the Ebola virus on education in Liberia found that school closures, fear of infection, and economic hardship increased child labor and negatively impacted educational opportunities [8].

Behavioral aspects during the pandemic were the focus of the researchers in this study. For this reason, the proponents wanted this study to establish concrete evidence that there was a significant relationship between the behavioral aspects during the pandemic and the academic performance of Grade VI learners. Specifically, it sought to find out the extent of behavioral aspects regarding the mental, emotional, social, and physical well-being of the sixth graders. Also, it sought to determine the level of academic performance and how it is affected. Conversely, the results served as the basis for proposing an intervention program to lessen the pandemic's effect on the learners' behavioral status while increasing academic performance.

Theoretical background

This study is anchored to Self-determination Theory (SDT) and Social Cognitive Theory (SCT). SDT posits that intrinsic motivation, driven by interest and enjoyment, leads to better academic performance and well-being. During the pandemic, with limited opportunities for social interaction and engagement, students might have struggled with intrinsic motivation, impacting their academic performance. It posits that fulfilling our needs for autonomy, competence, and relatedness fosters positive mental, emotional, and social well-being. Feeling in control, capable, and connected can enhance cognitive function, self-esteem, and emotional regulation. Conversely, lacking these needs can lead to negative experiences like stress, anxiety, and difficulty in social interactions.

On the other hand, SCT emphasizes the role of self-efficacy, observational learning, and social expectations in shaping behavior and learning. The pandemic might have disrupted students' sense of self-efficacy due to changes in learning methods and a lack of peer interaction. It suggests that observing successful models, believing in one's capabilities (self-efficacy), and navigating social expectations

influence mental, emotional, and social aspects. Witnessing positive outcomes and having high self-efficacy can enhance cognitive function, positive emotions, and social engagement. Conversely, negative experiences and low self-efficacy can lead to negative thoughts, emotions, and social difficulties.

2. Methodology

This study used the descriptive-correlational research design. Descriptive research is quantitative research used to describe a population, situation, or phenomenon and commonly utilizes different research methods to examine more than one variable. It was primarily concerned with discovering “what is” rather than “why is” the research subject. This study described the extent of behavioral aspects during the pandemic in terms of mental, emotional, social, and physical aspects, as well as the academic performance of Grade VI pupils at Bulalacao Central School. Correlational or associational research measures a relationship between two variables without controlling them [9].

In this study, mean and correlational analyses were employed to examine the relationship between the behavioral aspects of the pandemic and the academic performance of Grade VI pupils. Mean analysis was utilized to assess the participants’ average level of behavioral responses across various dimensions (mental, emotional, social, and physical). A correlational analysis, on the other hand, was employed to explore the associations between these behavioral aspects and the pupils’ academic achievements during the first and second quarters. These analytical approaches were chosen for their suitability for investigating the potential connections and patterns within the dataset, providing valuable insights into the interplay between students’ pandemic-induced behaviors and academic outcomes.

The researchers of this study used simple random sampling to choose Grade VI pupils at Bulalacao Central School. It took place last school year, 2021-2022. In order to collect data from the respondents, a letter of permission was prepared and sent to the school principal. Another letter was sent by the researchers to the respondents’ parents stating the study’s intention. The administration of questionnaires was the same as how the teacher distributed modules to students to follow health protocols and preventative measures due to the COVID-19 pandemic. Researchers were coordinated advisers of Grade VI pupils for seeking assistance.

The study observed ethical considerations in gathering data. These included informing respondents about the purpose of the study and humbly requesting to participate freely. Also, researchers kept the responses based on the agreement, organized, tabulated, computed, and interpreted.

Meanwhile, the extent of the behavioral aspects during the pandemic regarding the mental, emotional, social, physical, and academic performance of Grade VI pupils at Bulalacao Central School was determined. The mean results from the average grades per quarter were categorized using criteria stipulated in DepEd Order No. 8, Series of 2015, and DepEd Order No. 031, Series of 2020. Lastly, Pearson’s Product Moment Correlation Coefficient was used to analyze the relationship between the variables.

3. Results and discussion

3.1. Extent of behavioral aspects

3.1.1. Mental aspect

Table 1 shows students' mean extent of the behavioral aspects during the pandemic regarding the mental aspect. Item no. 8, which stated that "I do everything to pass my studies," obtained the highest rank with a mean score value of 3.40, a very high extent. Item no. 1 obtained the lowest rank with a mean score of 2.28, described as a low extent, stating, "I understand the lesson without teacher's explanation." The overall mean was 2.81, which is a high extent.

Table 1. Mean extent of the behavioral aspects during pandemic in terms of mental aspects.

Statement	Mean	Rank	Description
1. I need the teacher's explanation to understand the lesson.	2.28	10	Low extent
2. I am motivated to do my lessons on modules.	2.79	6	High extent
3. I am not easily distracted by any unwanted distractions.	2.59	9	High extent
4. I can answer my lessons with the help of my family members.	2.88	5	High extent
5. I am inspired to study because my mother helps me with my lessons.	2.61	8	High extent
6. I can quickly get correct answers in activities and assessments.	2.94	3	High extent
7. I develop my style to improve my studies.	2.89	4	High extent
8. I do everything to pass my studies.	3.40	1	Very high extent
9. I can pass my learning activity on time.	2.95	2	High extent
10. I condition myself before engaging in self-study.	2.77	7	High extent
Overall Mean	2.81		High extent

Results imply that pupils commit to their studies and are willing to learn by doing everything to pass. Aside from that, they were eager to consider other alternative ways so they might continue to study peacefully at home despite the pandemic. It also illustrated how much teachers' explanations were needed by their learners in order for them to properly comprehend the lessons, mainly when those lessons were unfamiliar to them or when they lacked comprehension. Additionally, teachers could not be substituted to facilitate learning for the students. Results indicated that pupils could still manage their mental conduct while studying at home during the pandemic. They were also aware of managing their time and needed internal motivation from their families and themselves to excel. Also, they understood the value of studying at home, whether with or without the assistance of their family.

It related to Timotheou et al. [10], who highlighted that competence is met through clarity, assistance, advice, encouragement, and adapting instruction and resources to students' skill levels. By being kind, caring, and interested in their students' needs, teachers could promote their need for relatedness. In addition, it was crucial for teachers to stay in touch with their pupils frequently and to encourage

interclass communication.

3.1.2. Emotional aspect

As shown in **Table 2**, item no. 5 got the highest rank with a mean score value of 3.35, described as a very great extent, which stated, “I work so hard when I do not get what I expect in my studies, so that I can achieve good grades.” Item no. 8, “I am more comfortable studying at home than in school,” got the lowest rank with a mean score of 2.10, described as a low extent. Overall, the mean score was 2.87, which is a high extent.

Table 2. Mean extent of the behavioral aspects during pandemic in terms of emotional aspects.

Statement	Mean	Rank	Description
1. I am happy to stay home with my family as they help me do my lesson.	2.85	7	High extent
2. I always receive encouragement from my teachers and parents. That's that is why I am motivated to answer the module.	3.04	5	High extent
3. I show genuine interest in learning.	3.12	2.5	High extent
4. I am quick to do my activities in the learning Module.	2.65	8	High extent
5. I work so hard when I don't get what I expect in my studies, so that I can achieve good grades.	3.35	1	Very high extent
6. I am confident that most of my answers are correct and appreciate by my teacher.	2.92	6	High extent
7. I can expect that I can receive good grades in my lessons.	3.12	2.5	High extent
8. I am more comfortable to study at home than in school.	2.10	10	Low extent
9. I answer activities that I need to become more familiar with.	2.52	9	High extent
10. I stay calm and relaxed in answering my learning activities, even if challenging.	3.07	4	High extent
Overall Mean	2.87		High extent

It only illustrated that even though there was the existence of a pandemic, pupils had the goal to have good grades and work hard to meet the passing grade. They inspired themselves to perform better the following time they answered the module. It also implied that students were more at ease studying in school. They cannot study at home because of distractions like objects or actions that interfere with mental focus, the noise of their siblings, pets, and people or neighborhoods. Aside from that, it showed that when pupils had a solid emotional ability and were positive in life, they had fewer emotional issues. Positive emotions and feelings also increased students' motivation to complete their assignments or modules.

Results aligned with Durlak et al. [11], who cited that students with solid social-emotional abilities do better in school and have fewer behavioral issues. Positive emotions and feelings also increased students' motivation to complete their assignments or modules. Positive emotions also help pupils see new possibilities, making learning new things easier and advancing their skills. As a result, they perform better on assignments and tasks. On the other hand, the theory that supported this finding was the James-Lange theory, considered one of the most well-known

physiological theories of emotion. Viewing an external stimulus causes a physiological response. How one interprets physical reactions determines one's emotional response. The emotions of the pupils depended on the situations of their environment [12].

3.1.3. Social aspect

As shown in **Table 3**, results depicted how students benefitted from collaboration by better understanding the course and learning new information or knowledge about the subject. In addition, students developed self-confidence and were free to seek clarification from others if they needed to comprehend the lessons. Also, it showed that there were pupils who were unable to collaborate with family members because their parents and other family members were perhaps busy with other activities. At one point, these students believed that if they collaborated with their classmates, they would truly understand the lesson more. By working together, pupils acquire knowledge that makes completing their tasks on time easier. On the other hand, learners often assumed that they did not truly learn the lesson, did not perform with their family members, or were reluctant to work with them because they believed they might be mistaken.

Table 3. Mean extent of the behavioral aspects during pandemic in terms of social aspects.

Statement	Mean	Rank	Description
1. I complete my work independently	3.01	5	High extent
2. I am interested in doing my learning activities with my family members.	2.73	10	High extent
3. I participate in the activities and performance tasks included in the modules.	2.90	8	High extent
4. I understand the lesson easier when someone explains it to me.	3.42	1	Very high extent
5. I prefer to do my schoolwork in a conducive learning environment.	2.96	6	High extent
6. I ask for help from my parents if I need help understanding the lessons.	3.03	4	High extent
7. I accomplished my learning module at my leisure.	3.10	2	High extent
8. I can do my projects or schoolwork well with family support.	3.05	3	High extent
9. I feel at ease answering modules when my family is always around.	2.77	9	High extent
10. I prefer studying at home to visiting my classmates' or friends' houses.	2.94	7	High extent
Overall Mean	2.99		High extent

It was comparable to the findings of Durlak et al. [11] that health and social development were vital because they affected a child's entire life. Learners with high social and enthusiastic abilities have higher Scholastic execution and school practices. Thus, fewer behavioral difficulties, better relationships with friends and family, and fewer health issues were among the contributory factors that aggravated the behavioral conditions of the child.

3.1.4. Physical aspects

Table 4 illustrates the mean extent of the behavioral aspects during the pandemic in students in terms of physical aspects. Item no. 9, which stated that “I eat breakfast before answering modules,” acquired the highest rank with a mean score value of 3.45, a very high extent. On the other hand, item no. 3 gained the lowest rank with a mean score of 2.46, described as a low extent, and stated, “I take vitamins regularly.” Overall, the mean score was 2.94, which is a high extent.

Table 4. Mean extent of the behavioral aspects during pandemic in terms of physical aspect.

Statement	Mean	Rank	Description
1. I drink eight glasses of water a day.	2.87	7	High extent
2. I sleep 8 hours at night.	2.89	6	High extent
3. I take vitamins regularly.	2.46	10	Low extent
4. I prefer to have proper exercise than watching movies.	3.13	2	High extent
5. I eat nutritious foods like fruits and vegetables regularly.	3.10	3	High extent
6. I avoid eating junk foods and concentrated beverages.	2.65	9	High extent
7. I have enough strength to do physical activities in our home.	3.06	4	High extent
8. I seldom get sick during the pandemic.	2.81	8	High extent
9. I eat breakfast before answering modules.	3.45	1	Very high extent
10. I ensure to get enough sunlight every day.	2.97	5	High extent
Overall Mean	2.94		High extent

It implied that students knew how crucial it was to have breakfast before engaging in school-related activities inside their homes. They also knew the value of eating breakfast to help them concentrate and focus on their home-based learning activities. Also, students might be healthy kids who were developing typically and eating a variety of nutritious food; that is why they did not need to take vitamins. Aside from that, regular meals and snacks could provide them with all the nutrients that most pupils need, especially nowadays when the pandemic still exists. One of the main reasons some students do not take vitamins is the lack of finances or the expense of vitamins. However, vitamins have different jobs to keep the body working. That is why parents encourage taking vitamins for a healthy lifestyle pupils need.

Results suggested that even in the face of the pandemic, the majority of the pupils were able to take care of their bodily needs while they were studying at home. They were aware of the advantages of eating fruits and vegetables for themselves. According to the research findings of the World Health Organization [13], physical activity is an essential aspect of human health. Physical activity dramatically improves pupils’ academic performance. Regular physical activity strengthens the immune system, boosts the production of happy hormones, and promotes a sense of well-being.

3.2. Level of academic performance of sixth graders

Table 5 presents the frequency and percentage distribution of the level of academic performance of Grade VI pupils. Based on the table, out of 106 Grade VI

pupils, 41, or 38.68%, were satisfactory (80%–84%), and 27, or 25.47%, were fairly satisfactory (90%–100%); results imply that 41 out of 106 respondents received average scores between 80% and 84%, and 14 students, or 13.21%, got 90% to 100%, outstanding. It suggests that most pupils need help adjusting to the new modular approach to education. In adjusting to the new guidelines of schooling, they continue to require the direction and assistance of others. It also implied that in order for the pupils to succeed academically, parental assistance was still necessary on their part.

Table 5. The level of academic performance of grade VI pupils at Bulalacao Central School.

Academic performance	Frequency	Percentage	Description
90–100	14	13.21	Outstanding
85–89	24	22.64	Very satisfactory
80–84	41	38.68	Satisfactory
75–79	27	25.47	Fairly satisfactory
Total	106	100	

Despite the pandemic, parents play an essential role in ensuring their kids’ academic achievement. Parental participation in a child’s education is critical and essential. The more parents were involved, the more significant the impact on a child’s academic performance. Children with involved parents were also more likely to receive better grades and teacher praise than students with disengaged parents. The world’s problems have grown more complex, and so have the answers. Finding solutions to numerous difficulties necessitates the assistance of experts. Finding the right solution to these challenging problems in social life depends on guidance. Students who lack significant expertise in problem-solving are the ones who require help the most. In some situations that are challenging to resolve naturally, they require assistance from others [14].

3.3. Relationship between the extent of behavioral aspects during pandemic and the level of academic performance of sixth graders

Table 6 presents the computed *r*-value for mental behavior as 0.674, described as a moderate positive correlation, while the computed *r*-value for emotional aspects was 0.525, described as a moderate positive correlation. Also, the computed *r*-value for the social aspect was 0.595, and the physical aspect was 0.595, a moderate positive correlation. Hence, it rejects the null hypothesis.

Table 6. Correlational analysis between the extent of behavioral aspects during pandemic and academic performance of sixth graders.

Extent of behavioral aspects	Academic performance			
	Computed <i>r</i> value	Interpretation	Result	Decision
Mental aspects	0.674	Moderate positive correlation	Significant	Reject null hypothesis
Emotional aspects	0.525	Moderate positive correlation	Significant	Reject null hypothesis
Social aspects	0.595	Moderate positive correlation	Significant	Reject null hypothesis
Physical aspects	0.595	Moderate positive correlation	Significant	Reject null hypothesis

Degrees of Freedom: 104; Level of Significance: 5%; Critical *r* Value: 0.195.

Results indicated that the extent of behavioral aspects during a pandemic, including mental, emotional, social, and physical aspects, was associated with the level of academic performance of Grade VI pupils during the first and second quarters. Therefore, it revealed that as the extent of the behavioral aspects of the students during the pandemic increases, their academic performance also increases. It is comparable to the findings by Lee et al. [15] that there are connections between behaviors and academic performance among middle school children since the pandemic started. It explains how behavior, especially self-control and motivation, relates to academic success.

Results also implied that pupils can still manage their mental, emotional, social, and physical aspects amidst the pandemic, which led to their academic success during the first and second quarters. The relationship existed between the extent of behavioral aspects during the pandemic. The level of academic performance across the indicators showed that pupils learned to adapt to their environment, which made them eager and inspired to perform well to meet the passing grade despite the pandemic. They believed that collaborating with others contributed to them gaining new information and knowledge, and they could care for their physical needs while studying at home.

Moreover, Behaviorism or Behavioral Learning Theory supported this study, connected to the famous psychologist B.F. Skinner as cited by EdTechReview [16]. This theory states that observed behaviors come from the environment and that innate or inherited factors have little influence on behavior. It emphasized that interaction with the environment can develop one's behavior.

4. Conclusion

In the light of the salient findings of the study, the following conclusions were drawn:

- 1) Grade VI pupils exhibited a profound manifestation of behavioral repercussions stemming from the pandemic, encompassing mental, emotional, social, and physical dimensions. Their responses underscored the multifaceted impact of the crisis on their overall well-being.
- 2) Remarkably, Grade VI pupils showcased commendable academic performance across all subject areas throughout the first and second quarters. This resilience in scholastic endeavors amidst unprecedented challenges is noteworthy and indicative of their adaptability and determination.
- 3) The comprehensive assessment of the pandemic-induced behavioral aspects, spanning mental, emotional, social, and physical realms, revealed a discernible correlation with the academic achievements of Grade VI pupils during both the first and second quarters. This interplay underscores the intricate relationship between students' holistic well-being and their educational outcomes, emphasizing the importance of addressing socio-emotional needs alongside academic endeavors for fostering optimal learning environments. The researchers proposed a psychosocial program aiming to boost the mental aspects of pupils and improve their socialization abilities, communication, trust, and unity with the aid of the selected activities.

Authors contributions: Conceptualization, EMG and GDS; methodology, RBG; software, NMB; validation, LTS, GGC and NMB; formal analysis, GDS; investigation, EMG; resources, RBG; data curation, NMB; writing—original draft preparation, GDS; writing—review and editing, GDS; visualization, LTS; supervision, LTS; project administration, GGC; funding acquisition, GGC. All authors have read and agreed to the published version of the manuscript.

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