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Time Management, Learning Motivation and Academic Performance of Dentistry Students

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Abstract

This study aimed to identify the time management skills and learning motivation of the dental clinicians that may impact their academic performance, and test significant difference on time management and learning motivation between the junior and senior clinicians. The research also explored whether there is significant relationship between time management, learning motivation and academic performance of the dental clinicians and proposed action plans based on the findings. Data were gathered using a standardized questionnaire that assessed time management skills which was divided into three components such as task prioritization, task listing and task scheduling; and the learning motivation of the students, adapted from motivated strategies for learning questionnaire from University of Michigan, in terms of value, expectancy and affective components. Sixty-seven dental clinicians of Doctor of Dental Medicine participated and consented the evaluation of their previous semester's General Weighted Average (GWA) in the professional subjects to assess their academic performance. The findings revealed that task prioritization is the dominant time management skill among junior and senior dental clinicians. Value is the highest learning motivation among the junior and senior dental clinicians. Furthermore, majority of the respondents have GWA of 2.00-2.49. Third year students have greater learning motivation in terms of value. There was no significant relationship exists between GWA, time management skills and learning motivation, implying that the students' GWA was not affected by their time management and their level of motivation. Proposed action plans may also be considered by the college of dentistry to help look at possible means to provide quality education that will address the current problems in student's self-regulated learning, enhance teaching strategies in motivating the students to be competent in using their time in studying and finishing their requirements.

Keywords**:** *academic performance, time management, learning motivation, value, expectancy and affective component*

1. Introduction

The collegiate years of dental students are very important to train them in being excellent dental practitioners, who are able to deliver quality dental services to the society. In their college years, the dental students acquire not only the knowledge and clinical skills, but also the necessary academic self-management skills such as good time management and learning motivation to perform well academically. These skills are essential due to the rigors and intensity of the academic and clinical responsibilities of dentistry students. Acquiring these two self-management skills enables them to achieve their goals and trains them in being efficient dentists in the future.

College students may have the tendency to be overwhelmed with feelings that there is insufficient time to complete all requirements adequately. This can be observed in the college of dentistry where some students tend to delay in completing their course requirements, thereby extending their stay in the university. However, the challenge for most dental students is not that there is inadequate time to accomplish what must be done, but that most students do not know how to manage their time wisely and be highly motivated to follow through the plan of their use of time, to accomplish every demand of their academic and clinical loads. Given the many clinical requirements, proficiency examinations and other stressors in the academic life of a dentistry student he who has difficulty in managing his time well can find it very challenging to become more successful and effective, and oftentimes having the tendency to lose his motivation to study and improve his performance.

A student may use his time differently from another student and may also be motivated in varying ways than the other. A successful student takes charge of his own learning, and more specifically takes charge of how he will use his time and attention to perform well academically (Dembo, 2013). They should acquire efficient and effective learning strategies to understand and apply knowledge, are well-motivated in achieving goals and can evaluate and produce change in behavior to improve the outcomes.

According to Kaushar (2013), time management entails creating goals and priorities, establishing strategic timeline which includes keeping a to-do list and breaking down of tasks, and organizing the hours and tasks in an orderly way to accomplish the set forth goals. Task prioritization focuses on accomplishing tasks according to their importance and urgency. Establishing goals and prioritizing selected tasks is essential so that the series of actions to take are objectively aligned toward achieving them. Upon establishing the priority level of tasks, each activity will be divided into workable units and enumerated sequentially through the process of task listing. Breaking down of tasks to do makes the work more organized and concretely measured. For each task, a specific period of time will be given and allotted to ensure when it will be done and how long will be devoted to finish the task. This is further done through the process of task scheduling, which may include the use of calendars, weekly timetables and reminder systems. Schedules guide the person systematically and enable him to go through the daily and weekly routine of the work.

Lacorte, Añonuevo, Guan, Mendoza and Pateña (2017) maintains that accurately prioritizing the work that matters most daily is one of the greatest challenges for a clinician. They engage this challenged by beginning in long procedure requirements that demand extensive time allotment such as in prosthodontics, endodontic therapy, then short procedure requirements such as oral prophylaxis, restorations and extractions. A senior clinician would have to manage his time systematically to perform all these clinical requirements, participate in lecture and laboratory classes, special studies and research, written and practice proficiency exams to be able to satisfactory pass and finish his degree.

Aside from time management skills, students should also have the motivation to acquire learning. According to McCoach and Flake (2018), motivation is considered as an important component for success in school because it serves as the fuel to ignite student's abilities and turn them into achievements. It is their driving force in doing the things that they have set their mind to do.

For each student, his motivation may vary from time to time, and is different from one person to another. Learning motivation may come from the appreciation of the Value of the course to the students. With this motivation, students understand the importance and value of the course material to them, thus having the interests to learn based on the appreciation of the benefits they can get from the course material. Another learning motivation may come from the Expectancy of responsibility and hard work coming from the students, wherein the students themselves understand that they must strive hard and put in the effort to learn and acquire the skills they need. The affective component of learning motivation focuses on the test anxiety, which influences the motivation of the students to perform during examinations. In this component, positive or negative emotions, aside from test taking skills, may play an important role in the student's motivation to perform well or poorly in their examinations.

Several researches examined how motivation is related to academic performance of college students. Self-regulated learning and motivation facilitate the effects of emotions on academic achievement (Mega, Ronconi, & De Beni, 2014). Positive emotions nurture academic achievement when they are mediated by self-regulated learning and motivation. Students who have interest and acknowledges the value of education, tend to perform well and do their tasks as guided by this mindset. While there are also some studies which reveal motivation as insignificant mediator to academic success. There were findings that students can perform well in their studies even with low motivation or lack of motivation (Robbins et al., 2004; Basila, 2014).

Due to this inconsistency, the researcher would like to explore further whether motivation level of dental students play a key role in having good academic performance. Also, as part of its institutional mission, Lyceum of the Philippines University (LPU) - Batangas is committed to provide quality education and develop leaders, lifelong learners and globally competitive professionals. With this, it is vital to monitor the student's academic performance through studying further the various factors that affect their academic success.

Furthermore, the researcher wanted to explore how time management and motivation level of dental students are related to their academic performance in the college of dentistry. In this study, the researcher assessed the academic performance of the junior and senior dental clinicians, focusing primarily on the student's general weighted average (GWA) of the professional subjects in the previous semester, when there is a great academic stress due to the many clinical requirements and dental subjects that they must cover for that period. This research determined the time management skills and learning motivation of the dental clinicians that may affect their academic performance and test significant difference on time management and learning motivation between the junior and senior clinicians. The research tested the significant relationship among time management, learning motivation and academic performance of the dental clinicians, and proposed action plans based on the findings.

The result of this study may help the dentistry students to assess their time management skills and learning motivation to further improve their academic performance. This may also benefit the college of dentistry in terms of looking at possible means to address the current problems in student's self-regulated learning and enhance teaching strategies of clinical instructors and faculty members in motivating their students to be competent and be self-directed in using their time and efforts in studying and finishing the requirements. Reinforcement of proposed action plans ultimately hopes to improve the students' academic standing, that will help them to succeed in their college life and as future dentists. Lastly, future researchers may also explore how time management and motivation level affect the academic performance of other colleges, investigate other non-cognitive factors that might affect learning, and assess the effectiveness of the proposed action plans that might be implemented consequently.

2. Objectives

The study aimed to investigate the relationship of time management skills and motivation level of the junior and senior dental clinicians in the college of dentistry school year 2018-2019, to their academic performance. Specifically, it aims the following:

1) to identify the junior and senior clinicians' time management skills; to assess the clinicians' motivation level of learning.
2) to determine the academic performance of the respondents on their professional subjects during the first semester, school year 2018-2019.
3) to test significant difference on time management and learning motivation when respondents were grouped according to year level
4) to test significant relationship between time management, learning motivation and academic performance of the dentistry students.
5) to propose an action plan based on the findings of the study.

3. Materials and Methods

Descriptive method of research was used in the study to determine the academic performance of the students in the doctor of dental medicine course. The correlational method was used to examine the relationship that exists between time management skills and academic performance on the doctor of dental medicine course, as well as motivation level of the students to their academic standing. According to Shields and Rangarajan (2013), descriptive research is commonly used to describe characteristics of a certain group of people and/or phenomenon. Moreover, a study using this method seek to explain an entity and seek solution to a relevant issue.

The researchers used the total population of the junior and senior dental clinicians batch 2018-2019 of the college of dentistry in Lyceum of the Philippines University - Batangas. The respondents were composed of the sixty-seven dental clinicians of doctor of dental medicine, who have undergone academic and clinical experiences. Forty-six of them were junior dental clinicians and on their third year dental proper, while twenty-one of them were senior dental clinicians and on their fourth year dental proper. Respondents included were only those enrolled under third and fourth year dental proper for the current school year. Excluded were those irregular students because their general weighted averages were still incomplete.

The researcher used a standardized questionnaire, as the main instrument, which was composed of three parts. Part 1 included the profile of the junior and senior clinicians of the college of dentistry. Part 2 dealt with the time management skills taken from Wayne State University (2014), which was divided into three components such as task prioritization, task listing and task scheduling. The 4-point Likert Scale (always, sometimes, often and never) was used in this part of the questionnaire. Part 3 assessed the learning motivation of the clinicians, adapted from motivated strategies for learning questionnaire from University of Michigan (Duncan et al., 2015), in terms of value, expectancy and affective components. The 4-point Likert Scale (very true of me, true of me, untrue of me, very untrue of me) was used in this part of questionnaire. Moreover, an informal interview was used to get more pertinent information to support the results of the study.

All data were encoded, tallied, tabulated and interpreted using different statistical tools. These data were treated with confidentiality. Descriptive statistical tools to be utilized included frequency distribution and ranking to identify the performance of students. To assess the time management practices of the respondents in their professional courses, weighted mean was taken. Independent sample t-test was used to test the significant difference on time management and learning motivation when grouped according to year level. In addition, all data were treated using a statistical software known as PASW version 18 to further interpret the results of the study.

In accordance with the code of ethics, the researcher ensured that all the data to be collected from the respondents will be free consent- fully volunteered from the respondents. The researcher also ensured that there is a high reverence and value regarding the integrity of their respondents in the treatment to receive an effective response from them. Hence, respecting the ideas and opinions of the respondents and recoding their advice on the research topic can ensure a fruitful study.

4. Results and Discussion

Table 1 Dental clinicians' time management skills in terms of task prioritization

Indicators	WM	VI	Rank
1. I keep my workspace tidy so that I can work efficiently.	3.37	Often	7
2. I take a positive attitude towards frustration and failure.	3.15	Often	16
3. I do tasks in order of their importance.	3.66	Always	1
4. I try to complete one task before going on to the next.	3.48	Often	3.5
5. I set myself specific and clearly defined goals.	3.37	Often	7
6. I keep scheduling so that I achieve my objectives on time.	3.22	Often	13
7. I don't just do the simple, easy things first, but the most important.	3.33	Often	10
8. I realize that efficiency and effectiveness are not the same.	3.28	Often	11
9. I don't put off making decisions.	3.03	Often	20
10. I have a daily "to do" list that I update regularly.	2.91	Often	21
11. I persevere when things are not working out.	3.10	Often	18
12. I say "no" to others when I am short of time.	3.09	Often	19
13. I agree with the principle that the best time to do something is usually now.	3.34	Often	9
14. I prioritize tasks so that I do the most important and urgent first.	3.51	Always	2
15. I manage my fear of doing things I don't like to do and realize that this is part of procrastination.	3.15	Often	16
16. I share tasks or problems with others if possible	3.15	Often	16
17. I set myself realistic and achievable goals.	3.39	Often	5
18. I don't allow constant interruptions to my work.	3.16	Often	14
19. I am able to analyze my present position and assess what action I need to take to achieve my goals.	3.37	Often	7
20. I reward myself for achieving intermediate objectives as well as my final goal.	3.48	Often	3.5
21. I am taking down notes during lecture.	2.79	Often	22
22. I listen to the professor more than I take down notes.	3.27	Often	12
23. I keep my notes organized.	2.70	Often	23
Composite Mean	**3.23**	**Often**	

Table 1 presents the clinicians time management in terms of task prioritization. The composite means of 3.23 indicates that the respondents often performed the indicators. Among the items cited, doing the tasks in order of their importance (3.66) and prioritizing tasks so that they do the most important and urgent first (3.51) topped the list and rated always.

Prioritization involves doing tasks in order of their importance and urgency, and this is practiced among dental clinicians due to the various workloads that they have in the clinical requirements, lecture subjects, research, preboards and course examinations, not to mention their other social responsibilities outside school. A clinician also mentioned that it was helpful for him to know the importance of each tasks that he will be doing so that he can engage on it efficiently, considering the time constraints and the effort it requires for it to be completed.

According to Lawrence (2015), prioritization occurs in three phases. First, determining the urgency of work in relation to its importance, which may include reviewing a rundown of tasks and their deadlines, from which, students often prioritize the assignment that is due the soonest. Second, evaluating the importance of the task to them according to some factors, such as if the assignment is needed by a course in the student's major or if it will influence their career after graduation. Lastly, devoting a specific portion of time to the assignment. Some of the clinicians practice this method and find it useful in their goal to finish their clinical requirements in due time.

Other items were assessed often and items such as having a daily "to do" list that they update regularly (2.91), taking down notes during lecture (2.79) and keep their notes organized (2.70) got the lowest mean value.

Organized note keeping is the least practiced task prioritization skills of the dental clinicians because it is becoming more common to have access to lecture handouts and notes from their professors. When time is limited, and study materials are readily available for the students, creating review notes may not be too appealing to students because of the time and effort it demands to keep this discipline in place. A clinician admitted he does not have his own made notes for each subject because he has no time to do it for each subject and it so time-consuming for him to do that. However, he contested that he just compiled the handouts given to their class by their professors, collecting as well as the copies of reports made by his classmates on their lecture classes.

Lecture handouts from their professors dissuade them from creating their own notes and keeping them organized, making their learning inefficient (Friedman, 2014). Giving notes before lecture can hinder learning because students can less likely make connections between ideas and processes that they could have learned with their own note-taking skills. The students may be encouraged to review the connections they made between ideas during instruction as effectively by letting them take generative notes from their lectures.

Table 2 Dental Clinicians' Time Management Skills in terms of Task Listing

Indicators	WM	VI	Rank
1. I use a highlighter pen or underlining to emphasize key facts in my lecture notes.	3.51	always	1
2. I write things down rather than trying to remember everything in my head.	3.34	often	2
3. I use my diary to write down appointments, deadlines and things to do.	2.52	often	7
4. I write down specific objectives in order to work towards my ultimate goal.	3.07	often	4
5. For last minute revision, I make minimal notes recording just key facts, and diagrams	2.91	often	5
6. I use lists to remind me of what I need to do and when.	3.21	often	3
7. I summarize my lecture notes when revising for examinations.	2.90	often	6
Composite Mean	**3.07**	**often**	

Legend: 3.50 – 4.00 – always (A); 2.50 – 3.49 – often (O); 1.50 – 2.49 – sometimes (S);1.00 – 1.49 – never (N)

Table 2 presents the clinicians time management in terms of task listing. The composite mean of 3.07 indicates that the respondents often performed the indicators. Among the items cited only, their using highlighter pen or underlining to emphasize key facts in their lecture notes (3.52) topped the list and rated always; followed by their writing things down rather than trying to remember everything in their heads (3.34) and their using of lists to remind them of what they need to do and when (3.21), which both are rated often.

Using highlighter pen or underlining to emphasize key facts in their lecture notes is important and well-practiced among dental clinicians to keep them focused and help them be reminded of the key

statements that they get from various topics that they need study. Because of the expanse and depth of the course materials in Dentistry, students find means to make their studying strategic by using tools that will make their learning more efficient. One of this is marking important words with highlighter. According to a clinician, she has her own set of highlighter, sticky notes and colored pens as her tool during study and review. It helped her keep track of the progress of her scheduled topics to study and break the monotony of reading entirely the topic again during scanning and reviews.

As students make progress in reading, highlighting acts as a visual motivator for them, giving pertinent information on what they are working on which they can later on review. According to Foasberg (2014), highlighters, index cards, and pens served as "productivity supplies" that aid students in studying. For undergraduate medical students, they understood that highlighting enhances their memory performance, so they use highlighter for important points yet should learn to identify which key points to mark (Yik, Yi, Somadam, Amirudin, & Ananthan, 2018). This skill of selecting what to highlight may be an important factor in the efficacy of studying.

Other items were assessed often and items such as making minimal notes recording just key facts, diagrams and formulae for last minute revision (2.91), summarizing their lecture notes when revising for examinations (2.90) and using of diary to write down appointments, deadlines and things to do (2.52) got the lowest mean value.

The least practiced item on the task listing skills by the clinicians is using of diary to write down appointments, deadlines and things to do. Most of them no longer write down on a piece of paper what they need to do on a daily basis. Based on the observation of the researcher, some clinicians are adept in using their smartphones instead for organizing their appointments, setting alarms and reminders for deadlines and listing down of things to do, especially in setting appointments for their patients in the Clinical Dentistry. Aside from the purpose of organization, smartphones, tablets and other gadgets make communication among other students, professors and their patients easy.

According to Santandreu and Shurden (2017), students can benefit from using smartphones applications and technologies that will make their time management convenient, accessible and efficient allowing them to perform their day-to-day activities and will allow the flexibility to perform multiple tasks using just one device.

Table 3 Dental clinicians' time management skills in terms of task scheduling

Indicators	WM	VI	Rank
1. I plan out a revision timetable for examinations.	2.91	often	11
2. I review my progress towards goals and revise my plans as appropriate.	3.01	often	9.5
3. When revising, I take a few minutes break every hour to refresh my mind.	3.16	often	4
4. I prepare contingency plans in case my first line of action fails.	3.49	often	1
5. I organize my work to meet deadlines in good time.	3.10	often	7
6. I know the times of day when I am most productive and schedule my most demanding work for these times.	3.30	often	2
7. I have a reminder system to remind me of when to do things.	3.13	often	5
8. I have developed effective strategies to help deal with pressure - such as taking exercise or going to the cinema.	3.01	often	9.5
9. I map out several routes towards my goals in case my first course of action fails.	3.04	often	8
10. I break difficult tasks down into their components, so that I can accomplish them one step at a time.	3.12	often	6
11. I don't procrastinate when I need to take action.	2.84	often	12
12. I set deadline to finish a specific task.	3.21	often	3
Composite Mean	**3.11**	**often**	

Legend: 3.50 – 4.00 – always (A); 2.50 – 3.49 – often (O); 1.50 – 2.49 – sometimes (S);1.00 – 1.49 – never (N)

Table 3 presents the clinicians time management in terms of task scheduling. The composite means of 3.11 indicates that the respondents often performed the indicators. Among the items cited only, their preparing contingency plans in case their first line of action fails (3.49) topped the list and rated often,

followed by knowing the times of day when they are most productive and schedule their most demanding work for these times (3.30) and setting deadline to finish a specific task (3.21).

In terms of scheduling, clinicians often have the practice of preparing contingency plans in case their first line of action fails. Because they recognize the limited period, they have in a semester to complete all the extensive course requirements, it helps them to prepare and plan ahead of time if ever their initial expected outcome will not happen. This will earn for them the benefit of not wasting time and making each day productive despite emergencies and problems that might affect their tasks. Based on the observation of the researcher, dental clinicians are consciously aware of the value of time, especially in the clinics. They would maximize the use of their clinical duty hours to accomplish what they plan to do. For instance, long procedure patients are scheduled firstly and with foresight that if this patient does not come, another patient undergoing short procedure can readily come to fill in the time.

Other items were also assessed often and items such as reviewing their progress towards goals and revising their plans as appropriate (3.01), developing effective strategies to help deal with pressure (3.01), planning out a revision timetable for examinations (2.91) and not procrastinating when they need to take action (2.84) got the lowest mean value.

Least practiced task scheduling skill is avoiding procrastinating when they need to take action. As observed in the clinical dentistry by the researcher, some clinicians would often do most of the clinical requirements during the last few days of the semester, which could have been done during the spread of the earlier months. Avoiding and putting off for a time some of the rigorous and challenging tasks that must be finished by a clinician is one of the common pitfalls that has negative impact in how they manage their time. Poor impulse control, inability to persevere, lack of self-discipline and time management skills and failure to work systematically lead to this delaying behavior, which is common to most college students (Scent, & Boes, 2014). Avoiding procrastination also ranked least in the time scheduling skills of dental clinicians in a recent research done by Lacorte et al (2017), which reveals procrastination as an ever-present concern among dental clinicians.

Table 4 Summary table on junior and senior clinicians' time management skills

Indicators	WM	VI	Rank
1. Task Prioritization	3.23	often	1
2. Task Listing	3.07	often	3
3. Task Scheduling	3.11	often	2
Overall Composite Mean	**3.14**	**often**	

Legend: 3.50 – 4.00 – always (A); 2.50 – 3.49 – often (O); 1.50 – 2.49 – sometimes (S);1.00 – 1.49 – never (N)

Table 4 presents the summary of junior and senior clinicians' time management skills. The overall composite means of 3.14 indicates that the respondents often performed the indicators. Task prioritization (3.23) ranked first, while task listing (3.07) ranked least with both indicators rated as often.

The dental clinicians find it helpful and important to practice appropriate time management skills and so they do often apply these in their day-to-day responsibilities. Their recognition of the importance and urgency of the tasks and duties assigned to them enables them to rank the different tasks based on their value on which one must be done first and must be given focus. Because they understand their priorities, this enables the clinicians to do one task at a time and align it with a working schedule that will enable them to accomplish the list of things to do.

Table 5 Dental clinicians' value learning motivation

Indicators	WM	VI	Rank
1. I prefer course material that really challenges me so I can learn new things.	3.16	TM	11
2. I prefer course material that arouses my curiosity, even if it is difficult to learn.	3.21	TM	10
3. The most satisfying thing for me is trying to understand the content as thoroughly as possible.	3.34	TM	7.5
4. When I have the opportunity, I choose course assignments that I can learn from even if they don't guarantee a good grade.	3.06	TM	13

Indicators	WM	VI	Rank
5. Getting a good grade is the most satisfying thing for me right now.	3.15	TM	12
6. The most important thing for me right now is improving my overall grade point average, so my main concern in my class is getting a good grade.	3.24	TM	9
7. If I can, I want to get better grades in my class than most of the other students.	3.01	TM	14
8. I want to do well in my class because it is important to show my ability to my family, friends, employer, or others.	3.34	TM	7.5
9. I think I will be able to use what I learn in my course in other courses.	3.39	TM	4.5
10. It is important for me to learn the course material in my class.	3.40	TM	3
11. I am very interested in the content area of my course.	3.43	TM	1
12. I think the course material in my class is useful for me to learn.	3.42	TM	2
13. I like the subject matter of my course.	3.36	TM	6
14. Understanding the subject matter of my course is very important to me	3.39	TM	4.5
Composite Mean	**3.28**	**True of Me**	

Legend: 3.50 – 4.00 – very true of me (VTM); 2.50 – 3.49 – true of me (TM); 1.50 – 2.49 – untrue of me (UM);1.00 – 1.49 – very untrue of me (VUM)

Table 5 presents the dental clinicians' value learning motivation. The composite means of 3.28 shows that the indicators are true of the respondents. Among the items cited only, the respondents being very interested in the content area of their course (3.43) topped the list and rated true of them, followed by their thinking that the course material in their class as useful for them to learn (3.42) and importance for them to learn the course material in their class (3.40).

The dental clinicians being very interested in the content area of their course indicates that they are aware of the usefulness and importance to them of their course, because this will be their future practice and career as a dentist. They are very attentive in their dental subjects because of the usefulness of its clinical implication to their dealings with the patients they are treating in the clinic, which they will further apply in their future dental practice. A clinician shared that she is highly interested in learning the practical application and relevance of the dental subjects she is studying, as to when she is treating the patients in the clinical dentistry, and hopefully in her future dental career. She is motivated by the benefits she can get from being able to apply the things she learned during her college years,

According to Harackiewicz, Smith and Priniski (2016). students are more inclined to go and give their focus in their class, be more involved and get more courses, when they are interested in an academic topic. Interest is hence described as the students' momentary experience of being captivated by an object as well as more lasting feelings that the object is enjoyable and worth further exploration. Their interest becomes a powerful motivational factor that boosts their learning, directing academic and career trajectories. It is therefore important to the students' academic success. The students give high value to their learning because they nurture the interest that they have in a certain topic or course.

Other items were also assessed as true of them and items such as getting a good grade as the most satisfying thing for them right now (3.15), choosing course assignments that they can learn from even if they don't guarantee a good grade (3.06) and wanting to get better grades in their class than most of the other students (3.01) got the lowest mean value.

Because wanting to get better grades in their class than most of the other students holds that lowest mean value, this indicates that the dental clinicians does not possess a motivation that is competitive or looking with comparison to one another. They tend to recognize their own individual pace in learning and do what they can to learn based on their capabilities and learning skills. According to a clinician, it gives her negative feelings whenever she compares herself to her classmates' progress, so she decided she will not look and compare her skills and progress to them. She recognizes her capabilities need time to develop and she has her own pace of learning. She admits that the negative feelings that she gets from comparison and unhealthy competition cripples her from learning more and being more engage during discussions and examinations. It adds pressure to her studying, and she does not want that to affect her performance in the clinics as well.

A minority of dental students in a research done by Almajed, Skinner, Peterson and Winning (2016) supported the claim that competition may affect academic performance of the students. The study

indicated that the presence of competition between dental students led to limited sharing of learning, resulting to an uncomfortable atmosphere among the students and hampering the students' learning. The competitiveness between the group members impacted them in a stressful way because it became difficult for them to work together, because some students keeping things to themselves more. Another group, who reportedly was less competitive and very open with sharing resources and supporting each other when they lack knowledge, experienced much more relaxed disposition and facilitated more learning and enjoyment in learning among themselves.

Table 6 Dental clinicians' expectancy learning motivation

Indicators	WM	VI	Rank
1. If I study in appropriate ways, then I will be able to learn the material in my course.	3.49	TM	2
2. It is my own fault if I don't learn the material in my course.	3.27	TM	4
3. If I try hard enough, then I will understand the course material.	3.55	VTM	1
4. If I don't understand the course material, it is because I didn't try hard enough.	3.30	TM	3
5. I believe I will receive an excellent grade in my class.	3.00	TM	9
6. I'm certain I can understand the most difficult material presented in the readings for my course.	2.96	TM	10.5
7. I'm confident I can understand the basic concepts taught in my course.	3.22	TM	5
8. I'm confident I can understand the most complex material presented by the instructor in my course.	2.85	TM	12
9. I'm confident I can do an excellent job on the assignments and tests in my course.	2.96	TM	10.5
10. I expect to do well in my class.	3.18	TM	6
11. I'm certain I can master the skills being taught in my class.	3.03	TM	7.5
12. Considering the difficulty of my course, the teacher, and my skills, I think I will do well in this class.	3.03	TM	7.5
Composite Mean	**3.15**	**True of Me**	

Legend: 3.50 – 4.00 – very true of me (VTM); 2.50 – 3.49 – true of me (TM); 1.50 – 2.49 – untrue of me (UM);1.00 – 1.49 – very untrue of me (VUM)

Table 6 presents the dental clinicians' expectancy component as learning motivation. The composite means of 3.15 shows that the indicators are true of the respondents. Among the items cited only, given they try hard enough, then they will understand the course material (3.55) topped the list and rated very true of them. This is followed by given they study in appropriate ways, then they will be able to learn the material in their course (3.49) and given they don't understand the course material, it is because they didn't try hard enough (3.30), both rated as true of the respondents.

It was evident among the dental clinicians that they were trying hard enough to understand the course material. Due to the various dental specialties that must be learned by the students taking on general dentistry, it takes a great effort to understand each branches of study in dentistry. The students also expected from themselves that they need to give appropriate effort and strategies and be diligent in studying their course. Because these various specialties also demand acquiring variety of skill sets and interdependent body of knowledge, dental students must be diligent and train well to comprehend and relate them to one another. Diligence, being the measure of the energy and effort toward the achievement of the goal, is an indicator of academic success among dental students (Stacey, & Kurunathan, 2015). Diligence belongs to the noncognitive predictors which also includes self-discipline, achievement-striving, task orientation, deliberation, and resilience, and enhances the prediction of students' academic and clinical performance early in the dental curriculum, and more so as they advanced through the curriculum sequence.

Other items were also assessed as true of them and items such as being certain they can understand the most difficult material presented in the readings for their course (2.96), being confident they can do an excellent job on the assignments and tests in their course (2.96) and being confident that they can understand the most complex material presented by the instructor in their course (2.85) got the lowest mean value.

The confidence level of the dental clinicians to understand the most complex material presented by the instructor in their course was rated least in the expectancy learning motivation. Some students are sometimes doubtful in their capability to produce the outcomes called forth by the dental subjects which are seemingly difficult for them. This may be due to the bulk of learning materials that they have to learn within the semester when they are also doing clinical requirements in application to the theoretical side of the course. This lack of confidence often holds them back from engaging in the difficult topics and assignments. According to one clinician, dentistry demands from her a sense of confidence and positivism that she can do what it requires, and she can do her best when called for. There are times that she thought of giving up, especially when things are not going as planned, or there are many delays and unexpected things happening in her clinical requirements, or she just sometimes lacks the motivation to continue or feel lazy to keep trying. She also mentioned how confidence may also come from the people around her who support her, especially her family and friends. Confidence combined with a healthy self-concept and self-efficacy, is very important for education. Confidence accounts for higher variance in achievement, while measures of students' previous cognitive performance in combination with other non-cognitive variables account for lesser variance compared to confidence, thereby revealing confidence as one of the strongest predictors of performance (Stankov, Morony, & Le, 2014). This motivational boost may rekindle the passion for the student's goals and get him back on track and keep him going.

Table 7 Dental clinicians' affective learning motivation

Indicators	WM	VI	Rank
1. When I take a test I think about how poorly I am doing compared with other students.	2.69	TM	5
2. When I take a test I think about items on other parts of the test I can't answer.	3.01	TM	1
3. When I take tests I think of the consequences of failing.	2.99	TM	2
4. I have an uneasy, upset feeling when I take an exam.	2.90	TM	3
5. I feel my heart beating fast when I take an exam.	2.82	TM	4
Composite Mean	**2.88**	**True of Me**	

Legend: 3.50 – 4.00 – very true of me (VTM); 2.50 – 3.49 – true of me (TM); 1.50 – 2.49 – untrue of me (UM);1.00 – 1.49 – very untrue of me (VUM)

Table 7 presents the dental clinicians' affective learning motivation. The composite means of 2.88 shows that the indicators are true of the respondents. Among the items cited only, thinking about items on other parts of the test they cannot answer (3.01) topped the list and rated as true of the respondent, followed by thinking of the consequences of failing (2.99) and having an uneasy, upset feeling when they take an exam (2.90).

Thinking about items on other parts of the test they cannot answer topping the list indicates that the dental clinicians are conscious on items and topics that they cannot understand or answer. This may aggravate their test anxiety, leading to uneasiness and being distracted in answering well the other items of the examination. Based on the observation of the researcher, the students are keen in asking their classmates and their professor whenever there are items in the examinations that they cannot answer. Some of them are worried that their answers are wrong, so they confirmed it to their classmates at the end of their examination.

This anxiety may be due to inadequate preparation for the test, discomfort with the testing situation even though they have knowledge of the covered topics, and lack of test-taking skills. Students experiencing test anxiety have negative feelings of fear, vulnerability, and a sense of failure, which may lead them to perform poorly because of the incapacitating effects that examinations trigger upon them. If left unaddressed, the students may continue to suffer from poor concentration, easy distractibility, difficulty remembering stored information, and misreading test items increases students' prevailing fears related to failing. In the long run, these issues have harmful consequences on the students' physical and emotional well-being (Shapiro, 2014).

Other items were also assessed as true of them and items such as feeling their heart beating when taking an exam (2.82) and thinking about how poorly they are doing compared with other students (2.69) got the lowest mean value.

Having the lowest mean for thinking about how poorly they are doing compared with other students, indicates that the dental clinicians less likely compare themselves to one another during examinations. This is congruent with the result found in Table 5, which further implicate the dental clinicians being less competitive and comparative to one another. The reason for this is because they recognize their individual capabilities and learning curve for both the theoretical and clinical requirements of the course. However, competition that promotes learning may be encouraged through collaboration among peers.

According to Khalaila (2015), due attention must be given to promote motivational factors such as a healthy self-concept, as well as to lessen the negative consequences of situational factors such as test anxiety when giving psycho-educational interventions to enhance students' academic performance. One of the factors that increase test anxiety is the unhealthy comparison between students that leads them to work on their own instead of collaborating with each other.

Table 8 Summary table on junior and senior dental clinicians' learning motivation

Indicators	WM	VI	Rank
1. Value	3.28	TM	1
2. Expectancy	3.15	TM	2
3. Affective	2.88	TM	3
Composite Mean	**3.10**	**True of Me**	

Legend: 3.50 – 4.00 – very true of me (VTM); 2.50 – 3.49 – true of me (TM); 1.50 – 2.49 – untrue of me (UM);1.00 – 1.49 – very untrue of me (VUM)

Table 8 presents the summary on junior and senior clinicians' learning motivation. The overall composite mean of 3.10 shows that the indicators are true of the respondents. Value (3.28) topped the list while affective motivation (2.88) got the lowest mean, both indicators rated as true of the respondents. Of all the learning motivation assessed, the dental clinicians are mostly driven by the value component of learning, where in there is utmost regard for students' appreciation and interest on the course material, subject matter, content and course assignments, as well as getting a good grade and improving it, while making their learning relevant and useful for them in the future.

To be able to recognize the importance of the dental education itself enables the students to devote their efforts in learning and mastering the skills they need to perform well in the course. Their understanding that they are the ones responsible for the outcomes of their learning should also match their capability to strategize on how they can comprehend and apply the skills, despite the difficulty and complexity of the material and technical skills they should perform. Having a realistic mind frame of what diligent effort is expected from themselves is also important for the students so that they can make progress in their learning and can be motivated to accomplish the goals they set for themselves. Even though dental clinicians are routinely exposed to examinations, whether in written or practical forms, they are less likely being motivated by affective and test anxiety. Having the confidence, competence and helpful test taking skills motivate them to learn and to be an effective clinician.

Table 9 Performance of junior/senior dental clinicians on their professional subjects, first semester., school year 2018 - 2019

Indicators	Frequency	Percentage	Rank
1.75 – 1.99	4	6.0	4
2.00 – 2.49	32	47.8	1
2.50 – 2.74	21	31.3	2
2.75 – 2.99	8	11.9	3
3.00 – 3.49	2	3.0	5

Table 9 presents the performance of junior and senior dental clinicians on their professional subjects during the first semester of school year 2018-2019. 32 out of 67 respondents (47.8 percent) achieved a general weighted average (GWA) of 2.00-2.49. This is followed by 21 out of 67 respondents (31.3 percent) that achieved a GWA of 2.50-2.74. Next to this ranking is the 8 respondents who achieved 2.75-2.99 GWA and 4 respondents achieving 1.75-1.99 GWA. The two remaining clinicians (3 percent) achieved a GWA of 3.00.

Majority of the respondents are above average in their academic performance during their previous semester. This indicates that they have good academic standing and satisfactorily completed their clinical requirements. This is because dental clinicians are required to have higher passing grade in their clinical requirements wherein in some cases, they must have grades of 80 for their case to be credited. Grades below this are not credited and they must repeat the case. Aside from this, there is a minimum requirement in student's stanine in their admission testing. The college dean and faculty also worked together to monitor the academic performance of the students on a regular basis. Only two students have GWA ranging from 3.00-3.49, indicating there are very few students who performed poorly. Despite efforts and attention being given by the college to monitor and improve the academic performance of the students, there are still few students who cannot make progress and high grades, which due to individual factors affecting academic performance such as non-cognitive factors.

According to York, Gibson and Rankin (2015), to attain academic success is to ensure that the following is present: academic achievement, engagement in educationally purposeful activities, satisfaction, attainment of desired knowledge, skills and competencies, persistence, attainment of educational outcomes, and post-college performance. Most importantly from these, persistence can capture students' academic goals across multiple programs of study and included as an important component of academic success to highlight the focus, drive, and advancement necessary for the students to finish their course.

Table 10 Difference on time management and learning motivation when grouped according to profile variables

Profile Variable	T	p value	Decision	Interpretation
Time Management Skills				
1. Task Prioritization	47.459	0.253	Accepted	Not Significant
2. Task Listing	42.174	0.721	Accepted	Not Significant
3. Task Scheduling	41.473	0.054	Accepted	Not Significant
Learning Motivation				
1. Value	56.573	0.007	Rejected	Significant
2. Expectancy	0.688	0.496	Accepted	Not Significant
3. Affective	0.480	0.633	Accepted	Not Significant

Legend: Significant at p-value < 0.05; HS – highly significant, S – significant, NS – not significant

Table 10 presents the difference of the time management and learning motivation of dental clinicians. Based from the table, in terms of value learning motivation, when grouped according to year level, the computed t – value was greater than the critical value and the resulted p-value was less than 0.05 level of significance (0.007 < 0.05) ; therefore the null hypothesis of no significant difference is rejected. Thus, there is significant difference on the value learning motivation between third year and fourth year respondents of the study. Based on the result, 3rd year students have greater learning motivation in terms of value.

The junior clinicians tend to have greater learning motivation, specifically in value because of their inquisitiveness and interest in learning and applying what they acquired during their preclinical years into their first steps in the clinical dentistry. Junior clinicians, although initially exposed to the rigors of the clinics, are excited in applying theoretical and practical knowledge to their first few patients in the basic clinical requirements of the clinics. They tend to have high hopes and interests in the dynamics and pattern of interactions in the clinics, which they have not yet experienced during their early academic years. Being able to engage well with patients, perform satisfactory under the supervision of their clinical instructors and having the proper conduct while in the clinics are just the first few steps in the junior clinician's life.

According to one junior clinician, she finds the last semester as an interesting leap in her college life because the topics she learned from her earlier years in dentistry are then finally being practiced and tested through her engagement with her patients. This motivated her to be more involved in her dental subjects and be more serious in studying. She appreciates her last semester as both challenging and rewarding since the course material and learning are becoming more practical and relatable. She also acknowledges the help of the practical wisdom that she received from her instructors and colleagues, that enables her to learn even more despite the difficulty and intensity of the training in her clinical years. Junior clinicians prefer course material that challenges them to learn new things, and which arouses their curiosity, even if it is difficult to learn and adapt at the beginning. They try to understand their dental subjects as thoroughly as possible so that they can show their abilities to apply it in the clinics and in the future.

Table 11 Relationship between GWA, time management skills and learning motivation

Profile Variable	r-value	p value	Interpretation
Time Management Skills			
1. Task Prioritization	-0.014	0.908	Not Significant
2. Task Listing	-0.077	0.535	Not Significant
3. Task Scheduling	0.044	0.725	Not Significant
Learning Motivation			
1. Value	0.162	0.189	Not Significant
2. Expectancy	0.111	0.372	Not Significant
3. Affective	0.133	0.284	Not Significant

Legend: Significant at p-value < 0.05; HS – highly significant, S – significant, NS – not significant

Table 11 shows the relationship between GWA, time management skills and level of motivation of the dental clinicians. It was observed that the resulted r-values indicate almost negligible association, and the computed p-values were all greater than 0.05 alpha level. This means that there was no significant relationship exists and implies that the students' GWA was not affected by their time management and their level of motivation.

The academic performance of the dental clinicians is not affected whether the students applied time management skills and be highly motivated in learning. This is because some students who may lack adequate time management skills and are not so highly motivated in learning, may still find the means to excel by keeping up with his duties and responsibilities as a student. There may be other factors that help him achieve good grades and perform well in his classes.

Even if the students may have difficulty in managing his time, which is highly visible in the life of a dental clinician, the student may still have his means of coping up with the academic load and find other strategies that will enable him to learn and finish his requirements in due time. Despite procrastination and limited time to complete the clinical cases, clinicians are resourceful to pursue their goal to comply with their classroom and clinical requirements.

Even without extrinsic or intrinsic goals and motivation, the dental clinicians continue to muster the courage to fulfill all academic demands. According to a clinician, there are times that he may lose his goal and motivation, but even if without motivation or drive, he keeps on going and continues to do the assigned tasks anyway. He understands that there are more problems and challenges than good times, but even so, his determination must not just be based on the positive feeling that may motivate him at times or may be gone after a while. He is convinced being a professional, he must also be trained to keep on doing the things required of him despite the difficulty and challenges.

These two non-cognitive self-management skills, time management skills and motivation, though helpful to them in terms of their studying, have no relation to student performance, also because there are other factors that affects academic performance. According to Robbins et al (2004), educational persistence theory may be a factor that influences student performance, highlighting the effects of contextual influences, which relate to an institution that may affect college outcomes, such as institutional size, institutional selectivity, and its financial support to students; social influence, embodied by perceived social

support of the students; social engagement, which pertains to social integration and belonging; and academic engagement, including student's commitment to his degree and institution.

Moreover, there are other non-intellective factors that may corelate to the academic performance which includes the student's personality traits such as conscientiousness, agreeableness, need for cognition, emotional intelligence, and extraversion; as well as the student's unique approaches to learning which may be deep, surface or strategic (Richardson, Abraham, & Bond, 2012).

Table 12 Relationship between time management skills and learning motivation

	Value			**Expectancy**			**Affective**		
	r-value	p-value	I	r-value	p-value	I	r-value	p-value	I
1. Task Prioritization	.570**	0.000	HS	.453**	0.000	HS	0.117	0.347	NS
2. Task Listing	.336**	0.006	S	0.217	0.078	NS	0.199	0.107	NS
3. Task Scheduling	.573**	0.000	HS	.562**	0.000	HS	.362**	0.003	S

*Legend: Significant at p-value < **0.01; *0.05; HS – highly significant, S – significant, NS – not significant*

Table 12 shows that the computed r-values indicates a moderate to weak direct association while not all p-values were less than 0.05 and 0.01 alpha level. Based on the result, there was a significant relationship between time management skills and level of motivation in terms of value and implies that the better the time management skills employed, the more that they are motivated as to value.

This means that the dental clinicians who possess better time management skills were motivated highly because of the value and importance of the course materials to them. Understanding the benefits of their course to themselves and appreciating the topics because of its usefulness and its relevance to them enable the clinician to focus their time into studying, prioritizing and allocating time to efficient cover the topics that they need to learn and apply. Value as a learning motivation focuses on the student's interest and appreciation of their course, thus becoming the driving force for them to be eager in learning and exploring further the topics they have at hand. Dental students are interested and engaged in learning their dental subjects during their clinical years because they are able to apply the theoretical knowledge they have acquired during their early years, as they treat different cases of dental patients.

According to Taylor (2012) task value refers to an individual's appreciation for a task's relevance and relates to the degree of personal interest a learner has for a given task and includes beliefs about utility, relevance, and importance. With this in perspective, dental clinicians can manage their time according to what interests them and what they value most in their course material.

With regard to the relationship between time management and level of motivation, it was observed that there was a significant relationship between task prioritization (0.000) and task scheduling (0.000) on expectancy. Among the dental clinicians who adequately practiced task prioritization and task scheduling, they are also highly motivated in expectancy, with the belief that self-efficacy is expected from them. This is because when the dental clinicians have ordered the tasks that they need to do in order of urgency and importance, they tend to more consciously aware that effort and due attention must come from them to achieve what they have prioritized to do.

Expectancy to follow through the tasks they have prioritized and scheduled to do reveals how well the students are aware of their role in the learning process, how they are to regulate and direct themselves in their course, and how much effort they will be giving to each task they have to accomplish. Dental students recognize the importance of self-regulated learning and being responsible to their own duties and acquiring the necessary skills in giving dental treatments. Having the awareness that quality education is not possible without their diligent participation and hard work, it urges them to devote the necessary effort, attention and passion to learn.

If the dental clinicians have this kind of awareness and willingness to learn, then the priorities that they have set in mind to do and the schedule of daily tasks will be done in an orderly and realistic way. Likewise, students who have no sense of self-efficacy and who does not own his responsibility in the learning process will find it difficult to follow through the priorities and schedule that he has in mind to do.

This is where procrastination and lack of focus come into play and add pressure on the shoulders of such students.

Furthermore, there was a significant relationship between task scheduling and affective (0.003). This means that dental clinicians who have high test anxiety tend to practice task scheduling more. This happens because students with high test anxiety tend to seek for effective strategies to help deal with pressure, and so put reminders, working timetable and helpful schedule in place. This may be their way to compensate for their anxious thoughts during examinations.

Table 13 Plan of action to improve time management and learning motivation of dentistry students

KRA/ Objectives	Strategies	Expected Outcome
Task prioritization – to assist in notes organization	- Faculty members may require students to submit synthesis of the topics as part of the course requirement	- Improved note-taking skills
Task listing – to train students to write down appointments, deadlines and things to do	- Utilize google calendar to synchronize deadlines for the course - A student workshop on managing time and organizing may be conducted.	- Improved listing and task organizing skills
Task scheduling – to eliminate procrastination	- Timeliness may be included in the rubric for the grading both in the academic and clinical requirements	- Reduced procrastination habit
Value – to promote healthy competition among students	- Course-based competition such as quiz bee may be done during annual college days	- Better valuing and interest on learning through healthy competition
Expectancy – to increase the confidence of the students in understanding the course materials	- Learning materials may be given in advance during the summer break to given them ample time to do advance reading - To boost the confidence, a personality development seminar maybe held	- Students may have higher level of confidence in understanding the course materials
Affective – to promote healthy competition among students	- Peer tutorial, wherein high performers will facilitate learning opportunities for low performers, may be conducted for collaborative student learning. - Reward system may be implemented to boost healthy competition	- Student may decrease test anxiety through collaboration

Table 13 presents the plan of action proposed by the researcher to improve time management and learning motivation of dentistry students. The basis of this action plan are the room for improvement from the least ranking for each variables. The key results areas were taken from the three components of time management and three components of learning motivation, with underlying objectives taken from the components' least practiced item. Strategies were also proposed to be able to accomplish the objectives and expected outcomes were also presented to be guided on what observable results can happen when strategies were implemented accordingly.

To improve task prioritization skills, faculty members may require students to submit synthesis of the topics as part of the course requirement to assist in notes organization. To improve task listing skills, students may utilize google calendar to synchronize deadlines for the course to train them to write down appointments, deadlines and things to do. To improve task scheduling, timeliness may be included in the rubric for the grading both in the academic and clinical requirements to eliminate procrastination.

To promote value component of learning motivation, course-based competition such as quiz bee may be done during annual college days to promote healthy competition among students. To promote expectancy component of learning motivation, learning materials may be given in advance during the

summer break to give them ample time to do advance reading, to increase the confidence of the students in understanding the course materials. To promote affective component of learning motivation, peer tutorial, wherein high performers will facilitate learning opportunities for low performers, may be conducted for collaborative student learning, to increase positive learning motivation through collaboration.

5. Conclusion

Based on the result of the study, task prioritization was the dominant time management skill among junior and senior dental clinicians. Value was the highest learning motivation among the junior and senior dental clinicians. Majority of the respondents have GWA of 2.00-2.49. Third year students have greater learning motivation in terms of value. There was no significant relationship between GWA, time management skills and learning motivation, implying that the students' GWA was not affected by their time management and their level of motivation. Plan of action was proposed based on the result of the study.

The study recommends for the dental clinicians to apply time management strategies such as note taking, using work timelines and reminder system. The faculty members of the college of dentistry may provide incentives to motivate diligence and timeliness of completion of requirements; and instill the importance and relevance of the course material to the students. The college of dentistry may organize seminars on time management and improving learning motivation of the students. Finally, future researchers may conduct similar study using different variables that were not used in the present study such as emotional intelligence, social skills and stress factors affecting dental students, since the study is limited to a particular group of dental clinicians

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