Perception of Students and Faculty Members of the Impact of a Preparatory Year Program on the Students of Health Professions Education Colleges
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Abstract

Objective: The Preparatory Year Program (PYP) is a one-year preparatory program to prepare students for a full multi-year degree curriculum. It offers a bridge between students’ high-school and university-level studies. The study aimed at evaluating the impact of the King Abdulaziz University preparatory year program on students of the health professions education colleges from both students' and faculty viewpoints. Methods: This is a descriptive study that depended on the collection of data from both students and faculty members based on their perceptions. It was conducted during the period from May 2019 to January 2020. Data was collected from students through self-administered questionnaires and from faculty members through structured interviews. Descriptive statistics were applied. Results: Around half of the students agreed that the preparatory year made them self-confident and reinforced...
their discipline (49.2% and 46.9%, respectively). Less than two-thirds agreed that the preparatory year reinforced their sense of responsibility and helped them adapt to the university educational environment (60.6% and 64.3%, respectively). On the other hand, more than half of them (58.5%) disagreed that the preparatory year classes helped them select their majors. Also, more than half of them (57.2%) disagreed that the preparatory year prepared them for their major classes. **Conclusion:** The impact of the preparatory year on students of the health professions colleges is weak. This is the opinion of both students and faculty members. In-depth studies are needed to further investigate this impact.

**Keywords:** Universities; Health Occupations; Undergraduate; Curriculum; Saudi Arabia.

**Introduction**

The Preparatory Year Program (PYP) is a one-year preparatory program to assist students in preparing for a full multi-year degree curriculum that offers a bridge between students’ high-school studies and university-level studies. It has been reported that the existence of PYP reflects the weaknesses of general education in real-world settings.²

Several higher education theories and cognitive models have tried to explain the factors involved in students’ transition from high school to university and help them adapt to the new academic context.¹³ Astin’s involvement theory⁴ indicated that academic pre-college experiences could help students’ involvement in the college experience. The role of the PYP can be explained based on this theory. The preparatory year aims to help students’ transition from the high school system of teaching/learning to that of the university, acquaint students with the various academic disciplines at the university, and integrate them into the university environment before choosing the right fields of study from the different academic disciplines.⁸ The program also prepares students psychologically for their prospective fields of study in subsequent years.⁹,¹⁰ It was reported that foundation courses for first-year MBBS students helped in reducing students’ anxiety and boosting their confidence.¹¹ Furthermore, it offers intensive training courses to set students on the right track towards their professional careers and enrich their cultural background.⁸ Among such courses are the English language courses, which are of high impact on students learning and assessment in subsequent college years.¹²,¹³

One established aim of the PYP is to enable new students to explore the academic disciplines of the university and be familiarized with the campus environment.⁹,¹⁴ As a result, they are provided with the necessary support to become meaningful contributors in their personal and professional lives at the
university and beyond. Moreover, the preparatory year seeks to develop a good relationship with the community through official visits to private and governmental institutions, and to build the student’s self-concept to become an effective person in society.

One beautiful phrase summarizes the ample goals of a PYP in these words; “The PYP is but a springboard over which ambitious and hardworking students leap energetically, assisted by their experienced faculty, towards their prospective careers, availing themselves of every moment and making full use of all affordable resources”. It is an open invitation for both students and faculty to always be active and on the alert so as to attain the aspired goals.

At King Abdulaziz University, the subjects taught in the PYP include English language, biology, chemistry, physics, communication skills, math, statistics, and computer skills. This content forms the scientific track, which targets students of health, engineering, and science colleges.

Not too much is known about the overall impact of the PYPs in Saudi universities and their impact on the preparation of health professions education students. Only a few studies have addressed certain aspects pertaining to PYPs in some Saudi universities. An example is Kaliyadan et al. who addressed English language learning in the PYP. However, the overall impact of PYP is not studied to the best of our knowledge. So, this study aimed at exploring the perception of students and faculty members about the impact of the preparatory year at King Abdulaziz University on students of health professions education colleges (Medicine, Dentistry, Pharmacy, Nursing, and Applied Medical Sciences) as a step toward further improvements of the program.

Methods
The study used a descriptive, cross-sectional design. It was conducted at King Abdulaziz University in Jeddah, Saudi Arabia. Data were collected from both male and female students (n = 633) of the first year of the Colleges of Medicine, Dentistry, Applied Medical Sciences, and Pharmacy who have completed the PYP the previous year. Additionally, faculty members who teach the PYP students (n = 24) were also involved in the study. Instruments used for data collection were: 1) A questionnaire for obtaining students’ responses. The questionnaire was based on a 5-point Likert scale and included 30 items. The questionnaire was developed and validated by Al-Rabia et al. 2) Structured interviews with faculty members to obtain their views on the different aspects of the preparatory year. This was
based on a list of 10 open-ended questions that explore the viewpoints of PYP teachers regarding the preparatory year. The 10 questions addressed during the interview are presented in table 1.

Responses to the questions were grouped under three pre-established themes, which are 1) Content of the preparatory year program, 2) Value of the preparatory year in preparing students to study in health professions colleges, and 3) Need for a separate track for health professions colleges. Verbal consent was obtained from all participants.

Quantitative data was analyzed using SPSS v.24. Descriptive statistics were applied and $P < .05$ was considered the point of statistical significance.

Qualitative data (viewpoints of faculty members) was analyzed and thematic descriptions were applied to the collected data. Conversations were recorded by the researchers. Then the recordings were transcribed and analyzed. Data relevant to the pre-established themes were taken into consideration in the analysis.

This study is part of a research project that was approved by the Research Ethics Committee of the Faculty of Medicine, King Abdulaziz University.

**Results**

The study was conducted on a sample of 633 students ($n = 633$; response rate = 88.3%) from the different health professions colleges at King Abdulaziz University, in addition to faculty members who teach in the preparatory year of the university. The aim was to assess the impact of the preparatory year on students through exploring the viewpoints of both students and faculty.

*Table 2 here*

Table (2) shows that around half of the study sample agreed that the preparatory year made them self-confident (49.2%) and reinforced their discipline (46.9%). Less than two-thirds agreed that the preparatory year reinforced their sense of responsibility and helped them adapt to the university educational environment (60.6% and 64.3%, respectively).
On the other hand, more than half of them (58.5%) disagreed that the preparatory year classes helped them select their majors. Also, more than half of them (57.2%) disagreed that the preparatory year prepared them for their major classes.

Nearly two-thirds (64.8%) of the students disagreed that the preparatory year provided activities that developed their various personal skills (e.g., social, physical, cultural, creative …). More than half of them disagreed that the faculty motivated them to develop their creative and innovative abilities (56.4%), the academic counselor was helpful (58.5%), the interaction with the academic counselor was adequate and fruitful (57.7%), and teaching was interactive rather than spoon-feeding (53.4%). Regarding the ease of communication with their faculty, 40.6% of them agreed while around one-quarter of them (24.5%) were neutral and one-third (34.9%) disagreed. Mean scores for their responses were low, except for ease of communication with faculty which was a bit higher.

Greater percentages of the students agreed that the assessment tasks were appropriate (45.7%), adequate awareness sessions were planned for newcomer students (45.7%), student guidebooks were informative (55.8%), teaching timetables were set out appropriately (49.7%), and the academic affairs services were easily accessible (41.4%). On the other hand, less than one-third of them (28.9%) agreed that student support services were adequate.

About two-thirds (63.5%) of the students agreed on the appropriateness of the facilities like library, computers, data shows, smart boards … etc. Also, around half of them (45.6%) agreed on the appropriateness of the places designed for student rest.

On the other hand, more than half of them (56.4%) disagreed about the suitability of food purchasing areas for all students.

Around half of the students agreed that after the preparatory year, they have confidence in their abilities to research information (51.9%), their thinking skills have improved (46.6%), their computer skills became more sophisticated (46.1%), and they can access and use learning resources (53.5%). Although greater percentages of students disagreed about the improvement in their research and scientific writing skills, the percentage of them who agreed about that is more or less similar. In all cases, we cannot judge that these changes in different skills are caused by exposure to the preparatory year and maybe some other factors contributed to that.
Table (3) shows that there was no statistically significant overall difference between male students of different colleges in their perception of the overall effect of the preparatory year ($F = 2.045, P = .108$). However, there were statistically significant differences between male students of different colleges regarding their responses to different studied factors of the questionnaire ($p < .05$).

Table (4) shows statistically significant differences between the colleges. The differences appeared between Pharmacy and Dentistry colleges in the factors: “University conduct”, “Administrative and regulatory matters”, and “Generally after completing the preparatory year”. All the differences were to the side of the College of Pharmacy (that was higher in mean scores). This indicates that there is a bigger effect of the preparatory year on Pharmacy male students compared to Dentistry male students.

Table (5) shows that there was a statistically significant difference between female students of different colleges in their perception of the effect of the preparatory year ($F = 3.238, P = .012$). Also, there were statistically significant differences between female students of different colleges regarding their responses to different studied factors of the questionnaire ($P < .05$), except for the factor “Facilities and services”.

Table (6) shows the statistically significant differences between the colleges. There are differences between female students of Dentistry and Medicine in the factors “University conduct”, “Perception of faculty, teaching and assessment” and the sum of the whole questionnaire. Also, there are differences between female students of Dentistry and Nursing in the factors “Perception of faculty, teaching and assessment”, “Generally after completing the preparatory year”, and the sum of the whole questionnaire. Furthermore, there are differences between female students of Dentistry and Pharmacy in the factors “Generally after completing the preparatory year” and the sum of the whole questionnaire. All the differences were found to be to the side of Dentistry female students. This means that there was a greater effect of the preparatory year on Dentistry female students compared to their female colleagues in the Colleges of Medicine, Pharmacy, and Nursing.
In addition to students’ perceptions of the effect of the preparatory year on preparing them for studying in the health professions education colleges, the faculty viewpoints on the preparatory year were also elicited through ten questions in structured interviews. Responses to each question were qualitatively analyzed by the researcher through reading them critically, linking them to the aim of the study, and categorizing them according to the three pre-established themes.

The synthesized data are detailed below under each theme, with selected quotes by the interviewed faculty.

**Theme 1: Content of the preparatory year program:**
Success of planning for the preparatory year program requires careful consideration of the contents of the courses offered to the students. Revision and update of such courses with the knowledge and skills needed by the students are required.

“Arabic language is one of the subjects taught to the students in the preparatory year. It is good. However, in Arabic language, the students study only some irrelevant topics to their health professions studies.”

“Some topics studied by the students in Biology are outdated. I think we need to pay more attention to the specific and up-to-date medical sciences like molecular biology.”

**Theme 2: Value of the preparatory year program in qualifying students to study in health professions colleges**
The preparatory year program consists of general subjects that are similar to those studied in high school. The content related to health professions studies (i.e., in biology, chemistry, and physics courses) is small and general in nature. For preparing health professions students, such content should be strong and up-to-date. This was clearly indicated in the responses of the faculty members interviewed.

“Most of the courses in the preparatory year program are general courses that don’t help prepare the students to study in the health professions colleges. Attention should be paid to such courses to make them relevant to the goal of that program.”

“We are preparing students to study medical sciences so it is better to give them the background knowledge for such sciences in the preparatory year, and no need to waste their time in studying irrelevant content.”
Theme 3: Need for a separate track for health professions colleges

In general, faculty members feel the need for a separate track in the preparatory year for health professions colleges. They argue that the presence of a separate track will provide a better chance to include subjects that are directly related to the study of health professions (like molecular sciences, genetics, medical terminology, English for medical purposes … etc.).

“A separate track for health professions students would be a great idea that will better help them be prepared for further studies in that sensitive field of study.”

“Having a separate track for health professions students will help avoid wasting the time of the students in studying irrelevant content that will not fit well in their preparation for studying in health professions education colleges.”

Discussion

Findings of the study indicate that the impact of the PYP on the students, in general, was weak. Alkathiri\textsuperscript{19} found similar results in his evaluation of the preparatory year program. This is against the principle upon which the preparatory year program was originally planned, being an important transitional stage between the high school life and the university life that should prepare the students for the new academic context they are about to start in terms of alleviating anxiety they may have from university,\textsuperscript{20} giving them a solid linguistic base of the foreign language that will be used in instruction,\textsuperscript{12} and help them shift from child education to adult learning.\textsuperscript{21}

Although teaching, assessment, and student support are the most important activities in the PYP and special attention should be given to them, it is clear from the responses of the students that they negatively perceive teaching, faculty, and assessment and they are not satisfied. As stated by Alkathiri,\textsuperscript{19} it is a big challenge to attract and train qualified faculty for the success of the preparatory year. Zeller\textsuperscript{22} and Zlotkowski\textsuperscript{23} argued that universities should strive for attracting qualified faculty for the preparatory year, otherwise the program may become continuously questioned which will be reflected on the impact on the quality of the outputs of the preparatory year and thus may affect reviewing the importance of such program in the future.

Students in the preparatory year are still in need of guidance and help. Student support services are among the most important services those students need to support their transition into university. To achieve good support to those students, policies and practices should be there and they should be consistent with academic policies. Starting from admissions to the end of the year, preparatory year
officials should recognize that clear instructions, effective communication, and support to provide all means of success is their responsibility.\(^1\,2\,4\,25\)

For the success of any academic curriculum, suitable and enough educational facilities should be available for the students.\(^26\) In a similar study, Alghamdi\(^27\) reported an average level of satisfaction of the preparatory year students by the services provided by the university. Although cafeterias and food purchasing areas are not educational facilities, they are considered very important services that make the life of students on-campus easier.

Also, the role of the academic adviser is very important, and his/her role should be strengthened so that the students can benefit well from it. The academic adviser should be more interactive with the students and helpful to them in different aspects. This is important, as the preparatory year is the first university year for the students and they may feel lost and need much help and guidance from their academic advisers to orient them about the rules and regulations and also guide them through their study process in the university.

Regarding the preparatory year faculty, they need to make their lectures more interactive and give the students an active role in their learning as adults to help them change their mindset from dependent to independent learners. This will lead to the development of students’ cognitive skills and make them more able to go through university medical studies that require the use of higher cognitive functions.\(^28\)

Also, the preparatory year faculty needs to encourage the creative skills of students through creating a safe learning environment for stimulating the students to discover and develop their creative and critical thinking skills.\(^19\)

Mean scores for the females are greater than those for males in all factors except the factor “Generally after completing the preparatory year”, where the mean scores were higher to the side of the males. The differences were statically significant. This means that although female students reported more satisfaction than male students by the preparatory year, male students reported a greater impact of the preparatory year than female students.

In Saudi Arabian universities, there is a separation between male and female campuses. Even the faculties are different on both campuses. This is expected to be the reason for differences in mean scores of different factors. The reason behind high scores for females maybe because there is a better educational environment (both educational and physical) on their campus. On the other hand, male
students’ mean scores are higher regarding the last factor (Generally after completing the preparatory year) maybe because they don’t depend mainly on the preparatory year in the studied factors. This finding would need further explanatory research.

Regarding the other two factors, which are “Perception of faculty, teaching and assessment” and “Facilities and services”, the differences appeared between male Dentistry students and both Medicine and Applied Medical Sciences male students. This indicates that there is a higher impact of the preparatory year on male Dentistry students compared to Medicine and Applied Medical Sciences male students, especially in those two factors.

Dentistry students (both males and females) perceived the effect of the preparatory year more positively than their colleagues in other health colleges, maybe because they felt that the subjects they studied in that year (especially physics) benefited them much in studying dental subjects.

This study has some limitations. First, the study focused only on one university. Although King Abdulaziz University is the biggest government university in Saudi Arabia, findings would have been more valuable and more generalizable if more universities were included. Second, the study included students and faculty members as the most important stakeholders, but it would have been of great value to include university officials responsible for the PYP through interviewing or conducting focus groups.

**Conclusion**
In conclusion, we found that the impact of the preparatory year on the students of the health professions colleges at King Abdulaziz University is weak. This is the opinion of both students and faculty members. Overall, there is no statistical difference between males and females. Special courses for the health professions students should be included in such an important year. We recommend further in-depth studies in this field to study meticulously the effect of different components of that year on the students and to formulate recommendations for improvement and reform for decision-makers.

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**Conflict of Interest**
The authors declare no conflicts of interest.

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Table 1

| No. | Questions |
|-----|-----------|
| 1   | What do you think about the preparatory year in terms of its contents? |
| 2   | What do you think about the preparatory year in terms of its usefulness for health professions education students? |
| 3   | Do you think that the preparatory year, in its current shape, would help in preparing students to join the health professions colleges? Why/why not? |
| 4   | In your opinion, what are the subjects in the preparatory year that the health professions students do not need to study? |
| 5   | In your opinion, what are the subjects that are required to be included in the preparatory year |
program?

6 Do you think that students of the health professions colleges need a separate pathway for health professions studies in the preparatory year? Why/why not?

7 Do you think that the relative weight of the grades students gain in the preparatory year, as one of the admission criteria in health professions colleges, is suitable? Why/why not?

8 In your opinion, what are the most important challenges of the preparatory year?

9 What are your suggestions for reforming the preparatory year?

10 Generally, what is your evaluation of the preparatory year?

Table 2: Frequencies (N) and percentages (%) for students’ responses

| No. | Statement                                                                 | Disagree | Neutral | Agree |
|-----|--------------------------------------------------------------------------|----------|---------|-------|
|     |                                                                           | N        | %       | N     | %    |
|     | University conduct                                                       |          |         |       |      |
| 1   | The preparatory year made me self-confident                             | 204      | 32.3    | 117   | 18.5 |
| 2   | The preparatory year reinforced my discipline                           | 217      | 34.3    | 119   | 18.8 |
| 3   | The preparatory year reinforced my sense of responsibility              | 157      | 24.8    | 93    | 14.7 |
| 4   | The preparatory year helped me adapt to the university educational environment | 139      | 22      | 87    | 13.7 |
| 5   | Preparatory year classes helped me select my major                       | 370      | 58.5    | 103   | 16.3 |
| 6   | I feel that the preparatory year classes prepared me well for my major’s classes | 362      | 57.2    | 103   | 16.3 |
|     | Perception of faculty, teaching and assessment                           |          |         |       |      |
| 7   | The preparatory year provided activities which developed my various personal skills (e.g., social, physical, cultural, creative …) | 410      | 64.8    | 110   | 17.4 |
| 8   | Communication with faculty was easy                                      | 221      | 34.9    | 155   | 24.5 |
| 9   | Faculty motivated me to develop my creative and innovative abilities     | 357      | 56.4    | 163   | 25.8 |
| 10  | Faculty showed attributes of professionalism (e.g., honesty, integrity, altruism …) | 285      | 45      | 184   | 29.1 |
| 11  | My academic counsellor was helpful                                       | 370      | 58.5    | 149   | 23.5 |
|   | Interaction with my academic counsellor was adequate and fruitful |   |   |   |   |
|---|---------------------------------------------------------------|---|---|---|---|
| 12 |                                                                 | 365 | 57.7 | 161 | 25.4 | 107 | 16.9 |
|   | Teaching was interactive rather than spoon-feeding            | 338 | 53.4 | 164 | 25.9 | 131 | 20.7 |
| 14 | Feedback on student assessment was helpful                    | 235 | 37.1 | 208 | 32.9 | 190 | 30  |

**Administrative and regulatory matters**

|   | Student support services (i.e., academic, social, psychological …) were adequate |   |   |   |   |
|---|---------------------------------------------------------------------------------|---|---|---|---|
| 15 |                                                                                   | 235 | 37.1 | 215 | 34  | 183 | 28.9 |
|   | Assessment tasks (e.g., tests, projects, assignments …) were appropriate         | 217 | 34.3 | 127 | 20.1 | 289 | 45.7 |
|   | Introductory (awareness) sessions were planned with the newcomer students        | 200 | 31.6 | 144 | 22.7 | 289 | 45.7 |
| 17 | Student’s guidebook was informative and adequate                                | 149 | 23.5 | 131 | 20.7 | 353 | 55.8 |
| 18 | Teaching timetables were set out appropriately                                  | 197 | 31.1 | 122 | 19.3 | 314 | 49.7 |
| 19 | Academic affairs services (e.g., withdrawal, course additions and deletions, postponing, excuses …) were easily accessible | 185 | 29.2 | 186 | 29.4 | 262 | 41.4 |

**Facilities and services**

|   | Facilities (e.g., library, computers, data-shows, smart boards …) were appropriate |   |   |   |   |
|---|-----------------------------------------------------------------------------------|---|---|---|---|
| 21 |                                                                                   | 119 | 18.8 | 112 | 17.7 | 402 | 63.5 |
| 22 | Places designated for student rest and sitting were appropriate                    | 219 | 34.6 | 125 | 19.7 | 289 | 45.6 |
| 23 | Food purchasing areas were suitable for all students                               | 357 | 56.4 | 100 | 15.8 | 176 | 27.8 |

**After completing the preparatory year**

|   | I have confidence in my ability to research information                           |   |   |   |   |
|---|-----------------------------------------------------------------------------------|---|---|---|---|
| 24 |                                                                                   | 149 | 23.5 | 156 | 24.6 | 328 | 51.9 |
| 25 | My thinking skills (e.g., interpretation, analysis, inference, explanation …) have improved | 193 | 30.5 | 145 | 22.9 | 295 | 46.6 |
| 26 | My computer skills became more sophisticated                                       | 208 | 32.8 | 133 | 21  | 292 | 46.1 |
| 27 | My research skills became more sophisticated                                       | 241 | 38   | 178 | 28.1 | 214 | 33.8 |
| 28 | My scientific writing skills became more sophisticated                              | 254 | 40.2 | 157 | 24.8 | 222 | 35.1 |
| 29 | I can access and use learning resources (e.g., library)                             | 172 | 27.2 | 122 | 19.3 | 339 | 53.5 |
and internet resources)

30 My skills in applying knowledge have improved  200 31.6 178 28.1 255 40.3

**Table 3:** ANOVA of the mean scores of the male students according to their colleges

| Factors                                | Sum of Squares | df | Mean Square | F     | Sig. (P value) |
|----------------------------------------|----------------|----|-------------|-------|----------------|
| University conduct                     | 621.94         | 3  | 207.31      | 3.92  | 0.009*         |
| Perception of faculty, teaching and assessment | 706.27       | 3  | 235.42      | 4.54  | 0.004*         |
| Administrative and regulatory matters  | 608.12         | 3  | 202.71      | 5.30  | 0.001*         |
| Facilities and services                | 641.24         | 3  | 213.75      | 7.09  | 0.000*         |
| Generally, after completing the preparatory year | 100.70       | 3  | 33.57       | 3.14  | 0.026*         |
| Sum of the whole questionnaire         | 3777.07        | 3  | 1259.02     | 2.05  | 0.108          |

* Statistically Significant.

**Table 4:** Tukey’s range test for the difference in male students’ responses according to college

| Factors (Dependent Variable) | (A) College | Mean (A) | (B) College | Mean (B) | Mean Difference (A – B) | Sig. (P value) |
|------------------------------|-------------|----------|-------------|----------|-------------------------|---------------|
| University conduct          | Dentistry   | 18.16    | Pharmacy    | 22.57    | - 4.41                  | 0.005*        |
| Perception of faculty, teaching, and assessment | Applied Medical Sciences | 17.66 | Dentistry | 21.97 | - 4.31 | 0.003* |
|                             | Dentistry   | 21.97    | Medicine    | 18.52    | 3.45                    | 0.041*        |
| Administrative and regulatory matters | Dentistry | 14.24 | Pharmacy | 18.61 | - 4.37 | 0.001* |
| Facilities and services     | Applied Medical Sciences | 16.25 | Dentistry | 20.33 | - 4.08 | 0.000* |
Generally, after completing the preparatory year

Table 5: ANOVA of the mean scores of the female students according to their colleges

| Factors                                      | Sum of Squares | df | Mean Square | F     | Sig. (P value) |
|----------------------------------------------|----------------|----|-------------|-------|---------------|
| University conduct                           | 406.43         | 4  | 101.61      | 2.59  | 0.037*        |
| Perception of faculty, teaching and assessment| 546.09         | 4  | 136.52      | 3.59  | 0.007*        |
| Administrative and regulatory matters         | 416.50         | 4  | 104.13      | 3.37  | 0.010*        |
| Facilities and services                      | 101.64         | 4  | 25.41       | 1.16  | 0.340         |
| Generally, after completing the preparatory year| 163.89         | 4  | 40.97       | 4.86  | 0.001*        |
| Sum of the whole questionnaire               | 5237.22        | 4  | 1309.31     | 3.24  | 0.012*        |

* Statistically Significant.

Table 6: Tukey’s range test for the difference in female student responses according to their college

| Factor (Dependent Variable) | (A) College         | Mean (A) | (B) College | Mean (B) | Mean Difference (A – B) | Sig. (P value) |
|-----------------------------|---------------------|----------|-------------|----------|-------------------------|----------------|
| University conduct          | Dentistry           | 25.34    | Medicine    | 21.98    | 3.36                    | 0.022*         |
| Perception of faculty, teaching, and assessment | Dentistry           | 23.40    | Medicine    | 19.71    | 3.69                    | 0.007*         |
|                             | Dentistry           | 23.40    | Nursing     | 20.43    | 2.97                    | 0.053*         |
| Administrative and regulatory matters | Applied Medical Sciences | 21.05    | Nursing     | 18.16    | 2.89                    | 0.007*         |
| Factor (Dependent Variable) | (A) College | Mean (A) | (B) College | Mean (B) | Mean Difference (A – B) | Sig. (P value) |
|-----------------------------|-------------|----------|-------------|----------|-------------------------|---------------|
| Generally, after completing the preparatory year | Dentistry | 10.23 | Pharmacy | 7.82 | 2.41 | 0.000* |
|  | Dentistry | 10.23 | Nursing | 8.39 | 1.84 | 0.004* |
| Sum of the whole questionnaire | Dentistry | 99.23 | Medicine | 89.30 | 9.93 | 0.043* |
|  | Dentistry | 99.23 | Pharmacy | 87.41 | 11.82 | 0.031 |
|  | Dentistry | 99.23 | Nursing | 89.41 | 9.82 | 0.048* |

* Statistically Significant.