



Fizyoterapi Öğrencileri Öğrenme ve Öğretme Memnuniyeti

Physiotherapy Students Learning and Teaching Satisfaction

Abdul Rhman N. Alghamdi,¹ Saad S. Alzahrani,² Amr A. Abdel-aziem^{3,4}

¹ Associate professor of family medicine, Faculty of Applied Medical Sciences, Taif University, KSA

² Professor of family medicine, Faculty of medicine, Taif University, KSA

³ Assistant professor of Biomechanics, Faculty of Physical Therapy, Cairo University, Giza, Egypt

⁴ Associate professor of physical Therapy, Faculty of Applied Medical Sciences, Taif University, KSA

ÖZ

Amaç: Bu çalışma, fizyoterapi öğrencilerinin Taif Üniversitesi (Suudi Arabistan Krallığı) Uygulamalı Tıp Bilimleri Fakültesi öğrenim ve öğretim sürecinden memnuniyetini değerlendirmek amacıyla yürütülmüştür.

Yöntemler: Kesitsel bir çalışma yapılmıştır. Toplam 132 fizyoterapi lisans öğrencisi, 5 nokta Likert ölçeğiyle beş farklı kategoriye bölünmüş 36 sorudan oluşan bir anketi doldurdu. Öğrenme ve öğretme memnuniyeti kategorileri şunlardı: değerlendirme yöntemleri, akademik danışmanlık, öğretim ve öğrenme stratejileri, öğretmenin ve derslerin değerlendirilmesi, klinik eğitim. Öğrencilerin anlaşma derecesinin anlamlılık seviyesini belirlemek için ki-kare testi kullanılmıştır.

Bulgular: Öğrenci ödevlerinde ve testlerinde usulsüzlük kontrol mekanizması ile ilgili sorular hariç, anketin diğer tüm maddelerinde 'Bazen doğru' seçeneği için ki-kare testi istatistiksel olarak anlamlı ($p < 0.05$) olduğunu gösterdi. Öğretim elemanlarının çalışma saatleri, öğretim elemanlarının bilimsel yardımı sayesinde öğrencilerini elde ettiği faydaların boyutu 'Katılıyorum' seçimi için istatistiksel olarak anlamlı ($p < 0.05$) bulundu. Anketin beş kategorisindeki anlaşma derecesi orta olmuştur. Bulgular, her 10 katılımcının yaklaşık 6'sının beş öğrenme ve öğretme süreci kategorisinden memnun olduğunu ortaya koymuştur.

Sonuç: Fizyoterapi öğrencilerinin öğrenme ve öğretme süreçlerinin geliştirilmesi için çok sayıda strateji gerektiren fizyoterapi departmanında öğrenme ve öğretme süreçlerinde 'orta' düzeyde öğrenci tatmin seviyesi uyumu vardı.

Anahtar Kelimeler: Öğrenci memnuniyeti, öğrenme, öğretim, fizyoterapi

ABSTRACT

Objective: This study was conducted to evaluate the physiotherapy students' satisfaction with learning and teaching process of faculty of applied medical sciences, Taif University, KSA.

Methods: A cross-sectional study was conducted. A total of 132 undergraduate physiotherapy students completed a questionnaire consisted of 36 questions divided into five different categories through a 5-point Likert's scale. These categories of learning and teaching satisfaction are evaluation methods, academic advising, teaching and learning strategies, evaluation of teacher and courses, clinical training. Chi-square test was used to determine the significant level of the student degree of agreement.

Results: Chi-square analysis revealed that all the items of the questionnaire were statistically significant ($p < 0.05$) for the choice "True sometimes" except questions related the mechanism of fraud control in the students' duties and tests, the office hours provided by the teaching staff, and the extent of benefits gained by students through scientific help of teaching staff were statistically significant ($p < 0.05$) for the choice "Agree". The degree of agreement of the five categories of questionnaire was fair. The results revealed that about 6 out of every 10 respondents were found satisfied with the five categories of learning and teaching process.

Conclusion: The students' satisfaction level was "fair" degree of agreement with learning and teaching process in the physiotherapy department that requires several strategies to improve the learning and teaching process of the physiotherapy students.

Keywords: Student satisfaction, learning, teaching, physiotherapy

Corresponding Author: Dr. Amr Almaz Abdel-aziem

Address: Assistant professor of Biomechanics, Faculty of Physical Therapy,

Cairo University, Giza, Egypt

E-mail: amralmaz@yahoo.com; amralmaz74@gmail.com

Phone: +201006229996

Başvuru Tarihi/Received: 17-03-2016

Kabul Tarihi/Accepted: 22-05-2016





Introduction

Evaluation of the student satisfaction level has been found to be one of the factors that affect the quality, effectiveness of the universities program, student recruitment, retention, outcomes and graduate rate [1]. The higher the level of student satisfaction in the educational environment, the higher the likelihood the student will stay at the educational institution and recommend it to the others. So, student satisfaction has been considered as indicator of institutional effectiveness and student outcomes [2, 3].

Understanding the factors that contribute to student satisfaction may lead to improvement of education level [4, 5]. Previous studies have shown that student satisfaction have a positive effect on student motivation, retention, recruiting effects and increase the amount of fund [6]. The student's positive feeling and satisfaction are associated with the student's academic and social experiences that acquired at the learning institution [7-9].

As the students considered as consumers of higher education services, the academic institutions work to secure the students satisfaction that to enroll new students [10]. Higher learning/education institutions aim to satisfy their customers to conserve and increase profits. Likewise the institutions existence depend on satisfying admitted students, trying to meet the needs of the increasing number of students and the required quality they at this level of education [1]. The success of the academic institutions is dependent on the student satisfaction that helps the institutions to detect their strength and the areas that need improvement [11]. In today's international educational market, the institutions can gain student satisfaction by providing high level of education service that

is considered as an integral part in securing a sustainable competitive advantage [12].

How teaching become effectiveness is point of discussion in the higher education community [13]. The effective teaching can be defined as that which produces beneficial and purposeful learning by the using of appropriate procedures [14]. Moreover, the effective teaching is defined as the creation of situations in which proper learning occurs those situations help the teachers to do more effectively [13].

The profession of physiotherapy has shown profound development at the last few decades and most of universities worldwide had started physiotherapy program and professionals had been recognized as independent practitioners as far as movement disorders are concerned [15, 16]. Many researches have focused on whether or not students are legal judges of the degree of teaching effectiveness. The students' opinions and feedback are both rational and reliable sources of evidence [13, 17, 18].

Researches in the level of students' satisfaction with regard to learning and teaching process in saudi universities still few. Therefore, this study was conducted to examine the learning and teaching satisfaction among physiotherapy department students of taif university, KSA.

Materials and Methods

A cross-sectional design was used to understand the factors which influence the students learning and teaching satisfaction. Data were collected as part of routine teaching evaluations conducted at the physical therapy department, faculty of applied medical sciences, taif university through the academic year 2015-2016. The

total of 185 questionnaires were sent to the students and out of them 132 were received. Undergraduate students of physical therapy department have been enrolled in the study. The participant’s distribution and characteristics are shown in [table 1](#).

This study was approved by the Research Ethics Committees of the Faculty of Applied Medical Sciences, Taif University. The names of students answered the questionnaire were also kept anonymous. All data were kept confidential.

Table 1. The participants’ distribution and characteristics

Year	Total number of students	Percentage	Number of male student	Percentage	Number of female student	Percentage
2 nd year	76	57.58%	41	31.06%	35	26.52%
3 rd year	23	17.42%	9	6.82%	14	10.61%
4 th year	33	25%	16	12.12%	17	12.88%

The data had been collected using the learning and teaching satisfactions questionnaires (N=36 items) which include items in five different categories; Satisfaction with the teaching and learning strategies, evaluation methods of the students’ performance, academic advising, evaluation of teacher and courses, clinical training. All items in the learning and teaching satisfactions questionnaire that consists of five points are typically “Likert type item” [19]. The score of the five points reflect the degree of agreement with a statement in ascending array: 1 means strongly disagree; 2 means disagree; 3 means true sometimes; 4 means agree; and 5 means strongly agree. A Likert scale made up of many Likert type items

measured by the same agreement grades number [20]. The summation of agreement scores on all such Likert type items in the questionnaire results in data on a Likert scale, also sometime it is termed summative scale [21]. The arrangement of categories according to Likert scale is shown in [table 2](#).

Statistical analysis

Analyses were done by using SPSS.16 version (SPSS Inc., Chicago, IL) to determine the frequencies and significance of each question of the questionnaire by using Chi-square test to determine the student learning and teaching satisfaction in the physical therapy program. A p value of less than 0.05 was considered as significant.

Table 2. The maximum and minimum values of Likert scale.

No.	Degree of agreement	Range
1.	Very high	From 4.2 to 5
2.	High	From 3.4 to less than 4.2
3.	Fair	From 2.6 to less than 3.4
4.	Weak	From 1.8 to less than 2.6
5.	Very weak	From 1 to less than 1.8



Results

All the completed questionnaires (N=132) collected during the academic year 2015-2016 were subjected to statistical analysis. The questionnaire included in the sample had an average enrollment of 132 students and an average response rate was 71.4%. All the course evaluation items utilized a 5- point response scale, ranging from 5= strongly agree to 1=strongly disagree.

Chi-square analysis revealed that all the items of the questionnaire were statistically significant for the choice “True sometimes” (p < 0.05) except questions related the mechanism of fraud control in the students’ duties and tests, the office hours provided by the teaching staff, and the extent of benefits gained by students through scientific help of

teaching staff were statistically significant for the choice “Agree” (p < 0.05). The degree of agreement of the five categories of questionnaire was “Fair”.

Satisfaction with the teaching and learning strategies

As shown in table 3, the cumulative satisfaction evaluated for the category “Teaching and learning strategies” was found to be 60.10%. The remaining 39.90 % of these students were unsatisfied. Within this domain, the highest rate (68.6%) of satisfaction was for the time provided by the member of the teaching staff of the office hours and the lowest satisfaction rate (52.60%) was for the item of the what available from the program, the coordination and balance of burden-school students.

Table 3. Teaching and learning strategies

No.	Item	Satisfied (%)	Dissatisfied (%)
1.	Satisfaction with the office hours provided by the teaching staff.	68.60	31.40
2.	Satisfaction with the methods used to help the students scientifically.	54.80	45.20
3.	Satisfaction with the extent of benefits gained by students through scientific help of teaching staff.	58.60	41.40
4.	Satisfaction with the coordination and balance of teaching loads of the students.	52.60	47.40
5.	Satisfaction with the quality of the education tools available to students in the program.	58.60	41.40
6.	Satisfaction with the methods and strategies used in the education program.	58.20	41.80
7.	Satisfaction with the mechanism of coordination of the various courses to ensure equality among students.	60.80	39.20
8.	Satisfaction with the keenness of a faculty member at the completion of the course curriculum.	67.20	32.80
9.	Satisfaction with what is being offered to the students from the new research in the area of specialization.	61.40	38.60
Total		60.10	39.90

Satisfaction with the evaluation methods of the students’ performance

The cumulative satisfaction evaluated for the category “Evaluation methods” was found to be 62.45% . The remaining 37.55 % of these students were unsatisfied, is illustrated in [table 4](#). Within this domain, the highest rate (75.20%) of satisfaction was for the mechanism of fraud in the students’ duties and tests and the lowest satisfaction rate (54.00%) was for the item of the satisfaction with the tests materials, review, and repair process.

Satisfaction with the academic advising

The cumulative satisfaction evaluated for the category “Academic advising” was found to be 57.83%. The remaining 42.17 % of these students were unsatisfied, as illustrated in [table 5](#). Within this domain, the highest rate (63.40%) of satisfaction was for explaining the requirements of courses at the beginning of the semester was helpful for the students and the lowest satisfaction rate (53.00%) was for the item of the satisfaction with the benefits of the orientation program for the new students.

Table 4. Evaluation methods of the students’ performance

No.	Item	Satisfie (%)	Dissatisfied (%)
1.	Satisfaction with the mechanism and methods of student assessment.	60.20	39.80
2.	Satisfaction with the results of the student assessment to the program.	60.40	39.60
3.	Satisfaction with the mechanism of fraud control in the students’ duties and tests.	75.20	24.80
4.	Satisfaction with the tests materials, methods of results review, and correction of answer sheet.	54.00	47.00
Total		62.45	37.55

Table 5. Evaluation of academic advising

No.	Item	Satisfied (%)	Dissatisfied (%)
1.	Satisfaction with the communication with students, alumni and recruiters.	59.00	41.00
2.	Satisfaction with the academic advising program.	61.60	38.40
3.	Satisfaction with the benefits of the orientation program for the new students.	53.00	47.00
4.	Explaining the requirements of courses at the beginning of the semester was helpful for the students.	63.40	36.60
5.	Satisfaction with the contribution of the university guide to facilitate the work and functions of students.	57.40	42.60
6.	Satisfaction with the contribution of the college guide to facilitate the work and functions of students.	57.40	42.60
7.	Satisfaction with the contribution of section guide to facilitate the work and functioning of students.	55.80	44.20
8.	Satisfaction with the contribution of the student guide directing students to deal with the university environment.	55.00	45.00
Total		57.83	42.17

Satisfaction with the evaluation of teachers and courses

As shown in [table 6](#), the cumulative satisfaction evaluated for the category “Evaluation of teachers and courses” was found to be 60.10%. The remaining 39.90 % of these students were unsatisfied. Within this domain, the highest rate (67.60%) of satisfaction was for the extent of excellence faculty members of the academic and practical and professional experiences and the lowest satisfaction rate (50.70%) was for the item of the satisfaction with the methods of courses evaluation by the students.

Satisfaction with the clinical training

The cumulative satisfaction evaluated for the category “Clinical training” was found to be 58.27%. The remaining 41.73 % of these students were unsatisfied, as shown in [table 7](#).

Within this domain, the highest rate (60.60%) of satisfaction was for the participation of hospital expertise in clinical training and the lowest satisfaction rate (54.80%) was for the item of the mechanisms of preparation of the students for hospital clinical training.

Overall satisfaction with all categories

The overall satisfaction with all five categories was shown in [table 8](#). The mean percentage of overall satisfaction for these categories was 59.75%, denoting a moderate level of satisfaction (Fair). Around 40 % of students were overall unsatisfied with all categories of learning and teaching process. The highest rate (62.45%) of satisfaction of the students was with the category of methods of the students’ performance, while the lowest rate (57.83%) of satisfaction of these students was with the category of academic advising.

Table 6. Evaluation of teachers and courses

No.	Item	Satisfied (%)	Dissatisfied (%)
1.	Satisfaction with the eligibility of teaching assistants and lecturers to teach.	62.80	37.20
2.	Satisfaction with the methods of courses evaluation by the students.	50.70	49.30
3.	Satisfaction with the methods of teachers, teaching assistants and lecturers evaluation by the students.	62.20	38.80
4.	Satisfaction with the contribution in the evaluation of scientific and practical training courses.	61.40	38.60
5.	Satisfaction with the extent of improving the quality of theoretical and practical courses.	59.20	40.80
6.	Satisfaction with the ability of the faculty member in the educational process.	67.00	33.00
7.	Satisfaction with the tools available to students to express the difficulties they face with a faculty member	56.80	43.20
8.	Satisfaction with the extent of the positive spirit of the faculty members toward students.	61.20	38.80
9.	Satisfaction with the excellence of faculty members in academic, practical and professional experiences	67.60	32.40
Total		60.10	39.90



Table 7. Evaluation of clinical training

No.	Item	Satisfied (%)	Dissatisfied (%)
1.	Satisfaction with the participation of hospital expertise in clinical training.	60.60	39.40
2.	Satisfaction with the experience of the students in hospital clinical training.	59.00	41.00
3.	Satisfaction with the benefits gained by the students during hospital clinical training.	57.80	42.20
4.	Satisfaction with the mechanisms of preparation of the students for hospital clinical training.	54.80	45.20
5.	Satisfaction with the suitability of clinical training situations for training goals.	57.80	42.20
6.	Satisfaction with the benefits gained by the students from the supervisors in the clinical training sites	59.60	40.40
Total		58.27	41.73

Table 8. Overall satisfaction with the five main categories

No.	Categories	Satisfied (%)	Dissatisfied (%)
1.	Teaching and learning strategies	60.10	39.90
2.	Evaluation methods of the students' performance	62.45	37.55
3.	Academic advising	57.83	42.17
4.	Teachers and courses.	60.10	39.90
5.	Clinical training	58.27	41.73
Total		59.75	40.25

Discussion

This study was conducted to evaluate the level of satisfaction with the learning and teaching quality among physiotherapy department students of Taif University. In the last years the concept of quality has been recognized in service sector and new concept in the education sector and now the universities are also concentrating and making efforts to gain student satisfaction by delivering quality of teaching services [22]. However, the measurement of the student satisfaction level based on their perception is not an easy task because of complexity and many factors involved in this process. However, to some extent we can a little

understanding about the quality of teaching methods and strategies provided by their institution [16].

The overall satisfaction level of all categories (teaching and learning strategies, evaluation methods of the students' performance, academic advising, evaluation of teachers and courses, and clinical training) of the current study was around 60% that is slightly less than the international universities as 70% of the students have positive relations with the teaching quality at their institutions [23].

The National Commission for Academic Accreditation and Assessment (NCAAA) has



adopted the student questionnaire as one of the effective approach to manage the quality of courses offered at the Quality of Higher Education Institutions (HEIs). The university and faculty administrators used the results of this evaluation surveys to enhance the course quality in each program of study. Moreover, the results of this evaluation used by the educational policy planners to understand the students view that help in decisions making about the continuous improvements of the quality of higher education [24, 25].

Regarding the teaching and learning strategies, and evaluation of teachers and courses the statistical analysis revealed fair degree of students satisfaction level with the methods of teaching, teacher performance and quality of courses, so it is still in need for further improvement. The teaching approach can be categorized into two group namely; teacher-centered approach and a responsive, cooperative learner-centered approach.

Huba and Freed [26], reported that in teacher-centered approach, the knowledge transmitted from teacher to students, the students are passive receivers. Emphasis is more on acquisition of knowledge. Giving and evaluation of information is the main role of the teacher. The students learning level is assessed by achieved scores of examination. The aim of teaching process is to cover all topics of the curriculum. The information delivery happens mainly through lecture, assignments and examinations.

Learner-centered approach is centered on creating a learning environment that facilitates and promotes learning level of students [27]. The teacher acts as a coach and students' knowledge enhancement is through collecting information, synthesizing and integrating to promoting skill, decisive thinking and problem solving. This process learns students and teachers together. The

teacher plays two roles the first one as a coach and the second as facilitator of using and communication of knowledge that make the students able to solve emerging issues and problems in real life situations [26]. It may be suggested that in-service trainings are organized especially for the lecturers not having had any pedagogic formation.

Higher education faculties strive to have more effective teaching so that the students can learn better, and may discover methods to improve their teaching career. Sahana and Vijila [28] stated that there are different methods that teachers can use them in the classroom that depend on students' numbers and nature in addition to available facilities. The various methods and techniques that used to improve the teaching process have been explained in the following paragraph.

The lecture is an oral presentation given by a lecturer, teacher or speaker to the students. The higher education institutions consider the lecture as a backbone in teaching and training. This method is economic, that can be introduced to a large group of students, the teaching material can be arranged and the teacher controls the time. Benson et al. [29] provides evidence that the students may care the lecture material than textbooks. Introducing lecture is not a simple process to stand in front of the students and deliver what you know. The lecture presentation is a form of communication by the voice, gesture, movement, facial expression, and eye contact. The teacher can either complete or reduce the lecture content [30]. McCarthy [31] stated that the lecture method that presents factual material in direct, logical manner, and contains experience which inspires, stimulates thinking to open discussion is useful for large groups. Moreover, Sullivan and McIntosh [32] reported that by planning and effective presentation techniques, the lecture will be a



highly effective and interactive for the students.

The lecture is a situation in which there is a difference of opinion, it is suitable for discussing method of teaching. Brainstorming is a slackly form of discussion for generating opinions without participants engaged in non-productive analysis. It is a very helpful technique for problem solving, decision making, creative thinking, team building, and develops the listening skills. The written assignments help in organization of knowledge, assimilation of facts and better examinations preparation. It emphasizes on learner work and the method that helps both teaching and learning processes. Moreover, written assignments help in organization of knowledge, assimilation of facts and better preparation of examinations. It emphasizes on individual work and the method that helps both teaching and learning processes [33].

The satisfaction of the evaluation methods revealed fair degree of agreement that needs to be improved by reassessing the use of oral presentation, group tasks, online tasks, and multiple choice exams. These methods must be considered in different ways according to the program or curriculum types. Written exams that depend on students' knowledge could be replaced by practical exams, to which the students respond more positively. The undergraduate physiotherapy students responded positively to practical exams involving standardized patients [34]. This result support the findings that higher proportions of coursework assignment rather than final exams are associated with higher student grades, and higher quality learning [35]. An immediate concern regarding any increase in practical exams and written assignment would be associated with increasing in teacher workload. This need not to be the case for written assignment, however, there was a greater increase in the

final marks of the students when teacher assessment for assignment (graded) was reported with periodic peer-assessment of assignment (non-graded) [36].

For the satisfaction level of academic advising, the result of the current study was slightly low than the findings of Eduljee and Michaud [37] who showed that the overall level of satisfaction with academic advising was over 60%. Moreover, they observed that students who spent long time in the advising sessions and frequent meet their advisor tended to have greater level of satisfaction with advising. While 57.83% of students were satisfied with the level of advising of academic advising they received, there is still room for improvement. Soria [38] reported that if students are dissatisfied with academic advising, they are unlikely to deal with their academic advisors with warm regard, which affect the integration of the students with the campus life negatively, developing mentoring relationships, or develop a sense of belonging with the institution. Gudep [39] indicates that advisors should be honest with their students about academic schedule and strategies, job opportunities, and scholarship tracks, which would go a long way in creating a good advising environment. The academic advisors must meet with their students on a regular way to assist and answer all academic, programmatic, personal questions.

Clinical education is experiential learning that involves learning clinical skills in the workplace. It is the best way to develop clinical reasoning expertise of the beginners [40]. It helps in the socialization of health professions in a practice community. Moreover, it provides opportunities for students to make the integration between the theoretical knowledge and practical training [41-43].



The satisfaction level of clinical training shows that about 6 out of every 10 students were satisfied with the quality of clinical training in the hospital. This fair level of satisfaction can be explained by the findings of Delany and Bragge [44] who reported that there is some lack of harmony between the students and their clinical educators in understanding the concept of learning and teaching. Students defined their role to establish the knowledge gaps and gain the relevant skills and knowledge. The educators' role is to impart the information and incrementally build the student knowledge. This concept of knowledge transmission model of teaching is not always compatible with the dynamic and adaptive concept of learning of the students. Clinical training satisfaction was (58.27%) is in line with other studies [45, 46].

Delany and Bragge [44] described a key of recommendations can be used to improve the quality of clinical education introduced to our students, these recommendations firstly seeking harmony between students' and educators' description and understanding of their role in clinical education setting. The practical strategies are: 1) condense the preparation of students prior to the beginning of the clinical experience in the communication, 2) ensure the clinical education is dynamic and linked to the progressive learning needs of students, 3) increase the interdisciplinary sources of learning for students on the situations of clinical training, for example, encouraging students to attend team meetings of other professions within the clinical environment, 4) provide clear framework of clinical training so that students will be able to independently identify their progress in the training situation. Secondly, for educators, must focus on the structure and content of information that is important to students. To facilitate a more

student-centered conception of teaching there are three key practical strategies; 1) encourage student to participation in continuing education forums that discuss principles of learning and clinical education in clinical situations, 2) review the goals and processes of clinical education in relation to students expectations, 3) evaluate the teaching practices on the basis of their effect on student sufficiency.

The usage of education technologies can provide solution of the identified problems of the current study. Technology can take on several roles in education, such as role of resources, delivery system, or productivity. Computer programs were found to be most effective in supporting student centered learning if the programs can provide scaffolds for students with special needs, support factual knowledge acquisition, and emphasize the capacity of technology in creating new learning experiences for students [47]. Studies showed that teachers' role as facilitator for student learning had a higher effect than as disseminator of knowledge or modeling processes [48, 49]. In this context our college started to apply elearning system to improve the students' satisfaction level of learning and teaching process and achieves the learning outcomes of the program.

There are some limitations of this study. Firstly, the reliability of students' satisfaction questionnaire was not tested for reliability. Secondly, this study was limited to only one college offering the physiotherapy program. Thirdly, the infrastructure is very important constitute in learning and teaching process. However, it is not evaluated in this study. Fourthly, the data was collected only by quantitative methods and it may be valuable to reveal different findings if it can be enriched with qualitative methods. Lastly, the expansion of the sample and the application of five points in 36-point Likert scale in 180



individuals is weak point. So, collecting data from more and diverse settings may further increase the generalizability of such results. The strength points of this study were the used questionnaire included a large number of questions that covered most issues of teaching and learning process in addition to the relatively high response rate.

Recommendations

For teachers, they need to promote their teaching capabilities by attending training courses about effective presentation and communications with the students. The teachers must move toward students-centered approach and encourage the students to participate in the learning process that is called active learning. So, the teachers act as a facilitator not the prime mover of the course. Moreover, usage of different evaluation methods will ensure the equality between students. Finally, the simulation education will be helpful to improve the satisfaction level of clinical training. It enhances the clinical experience and decreases the clinical education burden by removing initial therapeutic practice from the clinical setting.

For students, they must visit their academic advisors at regular time to overcome any academic or programmatic problems. They must attend the discussion forums to develop harmony between students and teachers. Moreover, the students must visit their teachers at the office hours to answer any questions related to the teaching courses.

For researchers, it is needed to conduct further study include others colleges as a part

of the development process of physiotherapy profession. Further researches are needed to revise the curriculum to keep it with the latest developments in the physiotherapy field.

Conclusion

The students' opinions and satisfaction level may have a great role in identifying positive and negative areas and implementation of the required corrections of the curriculum education. The findings of the present study demonstrated that the satisfaction level of physiotherapy student with the teaching and learning process was fair that needs procedures of improvement and solve the most critical problems. This approach ensures that the students' voice is fully incorporated in improving the quality of learning and the institution understands the students' requirements.

Acknowledgement

We would like to thank Dr. Waleed Mohamed Aboelmeaty, Assistant Professor, Faculty of Education, Mansura University, Egypt, for helping in statistical analysis. We also thank the students for participation and teaching staff of physiotherapy department who shared in data collection.

Conflicts of interest

The authors declare that they have no conflict of interest.

Funding/support

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

References

1. DeShields OW, Kara A, Kaynak E. Determinants of business student satisfaction and retention in higher education: applying Herzberg's two-factor theory. *Inter J Edu Manage* 2005;19(2): 128-139.
2. Aitken N. College student performance, satisfaction, and retention: Specification and estimation of a structural model. *J Higher Edu* 1982;53(1):32-50.
3. Astin A, Korn W, Green K. Retaining and satisfying students. *Edu Record* 1987;68(1):36-42.



4. Baykal U, Sokmen S, Korkmaz S, Akgun E. Determining student satisfaction in a nursing college. *Nurse Edu Today* 2005;25(5):255-262.
5. Velsch HP, LaVan H. Inter-relationships between organizational commitment and job characteristics, job satisfaction, professional behavior, and organizational climate. *Hum Relations* 1981;34(12):1079-1089.
6. Borden VM. Segmenting student markets with a student satisfaction and priorities survey. *Res Higher Edu* 1995;36(1):73-136.
7. Betz EL, Menne JW, Starr AM, Klingensmith, John E. A dimensional analysis of college student satisfaction. *Measure Evaluat Guid* 1971;4(2):99-106.
8. Elliot KM, Shin D. Student satisfaction; An alternative approach to assessing this important concept. *J Higher Edu Policy Manage* 2002;24(2): 2002.
9. Aldridge S, Rowley J. Measuring customer satisfaction. *Qual Assur Edu* 1998;6(4):197-204.
10. Thomas EH, Galambos N. What satisfies students? Mining student-opinion data with regression and decision tree analysis", *Res Higher Edu* 2004;45(3):251-269.
11. Hameed Amina, AmjadShehla. Students' satisfaction in higher learning institutions: a case study of COMSATS Abbottabad, Pakistan. *Ir J Manage Studies* 2011;4:63-77.
12. Hsun H, Wayne B, Anne-Marie H. Strategic marketing of educational institutions. Paper presented at the ANZMAC 2010: Doing more with less: Proceedings of the 2010 Australian and New Zealand Marketing Academy Conference. 2012.
13. Braskamp LA, Ory JC. Assessing faculty work: Enhancing individual and instructional performance. San Francisco, CA: Jossey- Bass, 1994.
14. Centra JA. Reflective faculty evaluation. San Francisco, CA: Jossey-Bass, 1993.
15. Butt BZ, Rehman K. A study examining the student satisfaction in higher education, Pakistan: *Procedia Social and Behavioral sciences* 2010;2:2446-5450.
16. College BC. Understanding student satisfaction. Issue paper, 2003;3(1), ISSN 1492-3718.
17. Arreola RA. Developing a comprehensive faculty evaluation system. Bolton, MA: Anker Publishing, 1995.
18. Pratt D. Reconceptualizing the evaluation of teaching in higher education. *Higher Edu* 1997;34:23-44.
19. Gravestock. P, Gregor-Greenleaf E. Student Course Evaluations: Research, Models and Trend. Higher Education Quality Council of Ontario, Toronto, 2008.
20. Grace-Martin K. Can Likert Scale Data ever be Continuous?" http://www.articlealley.com/print_670606_22.htm, 2010.
21. Wikipedia, Likert Scale. http://en.wikipedia.org/wiki/Likert_scale.
22. Cheng YC, Tam MM. Multi-models of quality in education. *Qual Assurance Edu* 1997;5:22-31.
23. Bhatti ZM, Javed A. Evaluation of overall satisfaction level among the students of physiotherapy (under graduate and post graduate) enrolled in different physiotherapy institute of the Pakistan. 2012;1(2):36-42.
24. Arun Vijay S. Appraisal of students ratings as a measure to manage the quality of higher education in india: an Institutional study using Six Sigma model approach. *Inter J Qual Research* 2013;7(3):3-14.
25. Rubaish A, Wosornu L, Dwivedi SN. Appraisal of using global student rating items in quality management of higher education in saudi arabian university. *iBusiness* 2012; 4(1):1-9.
26. Huba ME, Freed JE. Learner-centered assessment on campuses: shifting focus from teaching to learning. Needham Heights, MA: Allyn & Bacon pp.108, 2000.
27. McCombs BL, Whisler JS. The Learner-centered classroom and school strategies for increased student motivation and achievement. San Francisco: Jossey Bass Publishers, 1997.
28. Sahana A, Vijila. An analysis of competency of management teachers in using different teaching methods in affiliated colleges in Bengaluru. *J Res Method Edu* 2015;5(3):08-16.
29. Benson L, Schroeder P, Lantz C, Bird M. Student Perceptions of Effective Professors. Retrieved 2009, from www.usfca.edu/ess/sym2001/PDFbooks.
30. Davis BG. Tools for Teaching. Jossey-Bass Publishers: San Francisco, 1993.
31. McCarthy P. Common Teaching Methods. 1992; Retrieved July 24, 2009, from <http://honolulu.hawaii.edu/intranet/committees/FacDevCom/guidebk/teachtip/comteach.htm>
32. Sullivan, McIntosh. Delivering Effective Lectures. 1996; Retrieved 2009 July from [hpp://cte.umdj.edu/traditional_teaching/traditional_Lecture.cfm](http://cte.umdj.edu/traditional_teaching/traditional_Lecture.cfm).
33. Kochkar SK. Methods and techniques of Teaching. New Delhi: Sterling, 2000.
34. Wilson WJ, Bennison A, Arnott W, Hughes C, Isles R, Strong J. Perception of assessment among undergraduate and postgraduate students of four health science disciplines. *Inter J Allied Health Sci Practice*, 2014;12(2):1-8.
35. Gibbs G, Simpson C. Conditions under which assessment supports students' learning. *Learn Teach Higher Edu* 2004;5(1):5-31.
36. Forbes D, Spence J. An experiment in assessment for a large class. In: Smith R, ed. Innovations in engineering education. London: Ellis Horwood; 1991.
37. Eduljee NB, Michaud RG. Student perception and levels of satisfaction about academic advising. *International Journal of Psychosocial Research*, 2014;3(1):1-12.
38. Soria KM. Advising satisfaction: Implications for first year students' sense of belonging and student retention. 2012; *The Mentor: An academic Advising Journal*, Retrieved March 26, 2014 from <http://dus.psu.edu/mentor/2012/10/advising-satisfaction/>
39. Gudep VK. Issues and challenges in academic advising: A multivariate study of students' attitudes toward academic advising in United Arab Emirates (UAE). *Contemp Manage Res* 2007;3(2):151-172.
40. Ryan S, Higgs J. Teaching and learning clinical reasoning. In: Higgs J, Jones M, Loftus S, Christensen N, editors. *Clinical reasoning in the health professions*. 3rd ed. Amsterdam: Elsevier. pp 379-387, 2008.
41. Kilminster S, Jolly B. Effective supervision in clinical practice settings: A literature review. *Med Edu* 2000;34:827-840.
42. Bryant P, Hartley S, Coppola W, Berlin A, Modell M, Murray E. Clinical exposure during clinical method attachments in general practice. *Med Edu* 2003;37:790-793.
43. Spencer J. ABC of learning and teaching in medicine. *Br Med J* 2003;326:591-594.
44. Delany C, Bragge P. A study of physiotherapy students' and clinical educators' perceptions of learning and teaching. *Medical Teacher*. 2009;31:e402-e411.
45. Hauer RK, Wachter RM, McCulloch CE, Garmen A, Woo GA, Auerbach AD. Effects of hospitalist attending physicians on trainee satisfaction with teaching and with internal medicine rotations. *Arch Intern Med* 2004; 164(17):1866-1871.
46. Xu G, Wolfson P, Robeson M, Rodgers J, Veloski JJ, Brigham TP. Students' satisfaction and perception of attending physicians' and residents' teaching role. *Am J Surgery*. 1995;176:46-48.



47. Pedersen S, Liu M. Teachers' beliefs about issues in the implementation of a student-centered learning environment. *Edu Technology Res Develop.* 2003;51(2):57-76.
48. Dekker R, Elshout-Mohr M. Teacher interventions aimed at mathematical level raising during collaborative learning, *Edu Studies in Math.* 2004;56:39-65.
49. Stonewater JK. Inquiry teaching and learning: The best math class study, *School Sci Math.* 2005;105(1):36-47.