SEE THE UNSEEN (DENTAL STUDENTS' PERCEPTION ON CLINICAL PAIRING)

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Abstract
In a study done by George (2000) cooperative learning is defined as the obtaining of knowledge in a setting involving more than one student. On the other hand, Jacobs and Ward (2000) identified it as a combination of styles used by learners and their peers in order to improve the learning process. Dentistry is a branch of medical field that incorporates cooperative learning as part of its clinical course. Since cooperative learning can be used with other instructional strategies and altered to cater to different subject areas, clinical pairing can be viewed as its implementation. Studies are being conducted to show the scholar’s concerns about the consequences that assists/hinders the clinical teaching in health care program. Therefore, it is indicated that clinical teaching is equally important as the theory part taught in a class by lecturers. Most dental students are usually subjected to experience clinical pairing since clinics are an inseparable part of the health related/medical major’s curriculum. Current study aimed to assess the student’s perception on clinical pairing in dental settings. The sampling method for this study is convenience sampling. Participants were year II and III dental students. Findings indicated that majority of the students have the knowledge on why the clinical pairing was introduced but interestingly they still prefer to work alone which indicate that students’ acceptance level of Clinical pairing implementation is low.

Key words: clinical pairing, cooperative learning, clinic environment, cooperation
INTRODUCTION

Concept of Cooperative Learning

In a study done by George (2000) cooperative learning is defined as the obtaining of knowledge in a setting involving more than one student. On the other hand, Jacobs and Ward (2000) identified it as a combination of styles used by learners and their peers in order to improve the learning process. Although it is referred as the settings or the styles in obtaining knowledge, Hall (2006) stated cooperative learning as the situation in which learners with a common target work together to achieve their goal or in other words, sharing the experiences with the peers who have similar learning goals.

Cooperative learning is one strategy which has a strong foundation in research. (For reviews, see Cohen, 1994; Johnson & Johnson, 1987, 1999; Slavin, 1995). The cooperative learning potential is also apparent to researchers; its advantages and disadvantage are globally well known (Ding, Xiaobao, & Kulm, 2007). Berkowitz and Bier (2003) stressed that cooperative learning "whether assessed in isolation or as part of character education initiative will result in better conflict resolution skills, greater cooperation, and higher academic achievement, among other outcomes" (Berkowitz, 2003, p. 13). These findings suggest that cooperative learning promotes learning regardless of the subject area making it easy to adopt or modify to fit in with other modes of instruction. Furthermore, Johnson (1997) claims that CL is one, if not, the best – researched approaches in education. For example, one study on CL reported that content based language instruction was amenable to CL (Chamot & O'Malley, 1994).

Cooperative learning in dentistry

Dentistry is a branch of the medical field that incorporates cooperative learning as part of its clinical course. Since cooperative learning can be used with other instructional strategies and altered to cater to different subject areas, clinical pairing can be viewed as its implementation. Studies are being conducted to show the scholar's concerns about the consequences that assist/hinder the clinical teaching in health care programs. Therefore, it is indicated that clinical teaching is equally important as the theory part taught in a class by lecturers. The prospective of proper cooperation between these 2 categories (curriculum) can produce proper graduates in any dentistry school. Most dental students are usually subjected to experience clinical pairing since clinics are an inseparable part of the health related/medical major's curriculum. This cooperation between the theory and clinical teachings and activities can be considered as cooperative learning in dentistry.

One of the advantages in cooperative learning is the concept of its critical thinking and skills improvement which happens by learning from one another (Jbeili, 2003). This concept of cooperative learning is practiced as a clinical pairing in dentistry. Clinical pairing can be considered as a kind of cooperative learning, because in clinical pairing, interdependency, learning from each other and working in small group for common goals are the basic pillars. George (2000) indicated that these three concepts are among the important concepts of cooperative learning. Cooperative learning also enhanced student performance when used in teaching dentistry, chemistry, sociology, race relations and computer skills (Kogut, 1997; Maier & Keenan, 1994). Literature indicated that cooperative learning will increase students' tolerance of others in terms of different races/cultures in the learning environment.

Qualtrough (2001) indicated that the clinical pairing is not a new concept in dentistry. Clinical pairing refers to a situation in which two students are involved in the clinic; one treats the patient while the other assists him or her. The exchange of knowledge between the operator and assistant will improve the treatment procedures. An earlier study by Hodgson (1975) cited in Qualtrough (2001) stated that the clinical pairing was practiced due to the insufficient number of dental nurses to assist the students but later it turned out to be useful in several ways. This clinical pairing can be the source for early practices of "assistant
procedures”, “shorter” appointment will be assigned for the patient visit and finally there will be sufficient use of the space. There are many other benefits which can be gained from this cooperation between the operator and assistant. Students believed that one of the positive products of this cooperation is the dentist-patient relationship from the "objective” point of view.

Objective of the study

1. To assess students’ perception on clinical pairing in dental setting.

METHODOLOGY

This research is part of an ongoing educational research conducted by the Department of Conservative Dentistry, University of Malaya. It is aimed at evaluating students’ perception on the four handed dentistry concept.

The sampling method for this study is convenience sampling. The study population was 148, year II and III dental students, University of Malaya. These students have experienced both the double and four handed dentistry.

In order to achieve the study objectives, quantitative approaches were employed to achieve optimal results. A questionnaire was designed by lecturers in the Faculty of Dentistry and validated. The instructional review board at the Faculty of Dentistry, University of Malaya reviewed and approved the survey as well as other related documents. All lecturers in the department were briefed on the procedures and the questionnaires were then distributed to the students.

The questionnaire comprised 4 questions designed to extract the relevant information on students’ perception on clinical pairing. This survey is the combination of open ended question and questions with 7-point Likert scale (from 1 = not satisfactory to 7 = very satisfactory).

The survey starts with investigating students’ knowledge and their reasons for agreeing or disagreeing with clinical pairing. The researchers decided to categorize the data into 6 main themes namely: work related (Q), patient related (PT), partner related (P) Lecturer related (L) Infection control (IC) and learning environment (L). Table 1 displays the themes in detail. All the data were entered into the SPSS program; all the aforementioned themes were defined by the researchers. The following are the definition by the researchers:

Table 1. Coding System for data analysis

<table>
<thead>
<tr>
<th>Themes</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning environment(L)</td>
<td>The use and organization of the clinical setting in four-handed dentistry during daily practice, its practicality and the social atmosphere. It includes following dimensions: Practicality, Real life situation, Four-handed dentistry, Teamwork, Assimilate real life clinical situation, Practicality of four-handed dentistry</td>
</tr>
<tr>
<td>Patient related</td>
<td>Patient related refers to student-patient relationship and all associated issues. It comprises: Patient, Satisfaction, Patient issues, Relationship between student-patient</td>
</tr>
<tr>
<td>Infection control</td>
<td>Infection control refers to all issues related to procedures, practices and techniques in preventing spread of infections, including all issues</td>
</tr>
<tr>
<td>Lecturer related</td>
<td>Lecturer related refers to student-lecturer relationship and all associated issues including Student perception toward the lecturers in practicing four-handed dentistry. Including Student—lecturer relationship, Student perception toward the lecturers</td>
</tr>
</tbody>
</table>
RESULTS

Students’ knowledge on pairing and reason(s) for its introduction

The following analysis in Table 2 indicated that 93.9% of the students have knowledge on why the clinical pairing was introduced and only 6.1% have no idea about the concept of clinical pairing. When asked to specify the reasons for the introduction of clinical pairing, responses indicated that among the themes defined by the researchers (learning environment, quality related, patient related, infection control related, lecturer related and partner related), the quality related factors (48.1%) ranked the highest followed by infection control (22.4%), learning environment (15.4%), remaining factors were reported less significant (Refer to Table 1).

Table 2 Students’ Perceived Reason(s) for Introduction of Pairing

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality</td>
<td>48.1%</td>
</tr>
<tr>
<td>Infection control</td>
<td>22.4%</td>
</tr>
<tr>
<td>Learning Environment</td>
<td>15.4%</td>
</tr>
<tr>
<td>Patient related</td>
<td>10.7%</td>
</tr>
<tr>
<td>Partner related</td>
<td>2.2%</td>
</tr>
<tr>
<td>Lecturer related</td>
<td>1.1%</td>
</tr>
<tr>
<td>Total</td>
<td>99.9%</td>
</tr>
</tbody>
</table>

Acceptance of clinical pairing

The following Table 3 indicated the students’ acceptance level on clinical pairing. Based on Table 3, students’ responses to question 3 aimed to rectify students’ acceptance level toward the clinical pairing concept. The majority (85.5%) of the students indicated that they are willing to have Friday afternoon session free, that means their preference is to work alone. However only (13.8%) of the class were not willing to work independently and 0.7% did not answer the question.

Table 3 Acceptance of clinical pairing concept among the dentistry students.

<table>
<thead>
<tr>
<th>3. Will you like to have the Friday afternoon session free for you to treat patients without a partner, i.e. all student call patient to treat their own patients?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
<tr>
<td>No Answer</td>
</tr>
<tr>
<td>Missing</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>
Rationale for student preference to work alone

The following Table 4 indicated the students' acceptance level on clinical pairing. Based on Table 4, students' responses to question 4 aimed at identifying their acceptance level toward the clinical pairing concept. Learners believed that the first and most important factor to convince them to accept the clinical pairing is its impact on quality related (55.8%) issues as the highest, followed by learning environment (40.1%), partner related (3.3%) and lecture related (1.4%) as the lowest among other factors. Reasons for preferring to work alone were highly dependent on quality issues (55.8%) and learning environment (40.1%) compared to partner or lecturer issues.

Table 4 The Rationale for Clinical Pairing Concept Acceptance Among the Students

<table>
<thead>
<tr>
<th>Reason</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality</td>
<td></td>
<td>55.8%</td>
</tr>
<tr>
<td>Learning environment</td>
<td></td>
<td>40.1%</td>
</tr>
<tr>
<td>Partner related</td>
<td></td>
<td>3.3%</td>
</tr>
<tr>
<td>Lecturer related</td>
<td></td>
<td>1.4%</td>
</tr>
</tbody>
</table>

DISCUSSION

In this study the students' perception toward the clinical pairing was examined among the year II and III dental students. The results revealed that 93.5% percent of the dental students are aware about the reasons why clinical pairing was introduced. Students highlighted the quality related (48.1%) and infection control (22.4%) issues followed by learning environment (15.4%).

Choosing quality related issues as the highest among the other factors indicated that the students are concerned about the increasing efficiency and knowledge sharing, some of the students express their concern about the quality with statement such as "to achieve better quality of work", "operator can pay full attention to the patient to complete treatment faster" and "better clinical management" and many more and statements such as "we have more opportunities for learning", "to create a better working environment", "to decrease the lecturer student ratio, so the lecturer can attend to the students faster" and "it prepares students to real situations for patient treatment when they go out". Student's rationales for disliking the clinical pairing weigh heavily on partner related issues 45.3%. Students have no interference in their partner selection, the partner can be any one of the student who is assigned by the faculty. Clinical pairing is not a new concept but within the study scope is considered new due to logistics constraints. This study assesses the perception of the students toward the clinical pairing to gauge students' acceptance of clinical pairing if it is being implemented. It also tried to find out what are the shortcomings of the clinical pairing in order to enhance its application.

Majority of the students perceive that they have the knowledge and most of them believed that it improve the quality but interestingly with high knowledge on clinical pairing by students, still nearly 70% of them prefer to work alone which indicate the students acceptance level of clinical pairing implementation is low. It can be hypothesized that students didn't answer the question honestly or the knowledge of the clinical pairing is still lacking. However, this study recommends further probing into factors that may affect the knowledge and acceptance of clinical pairing among the dental students.

Considering the nature of the clinical pairing, communication is the key factor among the pairs in clinics. If they are unable to understand and cope with each other then the main concept of pairing is not successful which is due to lack of proper communication. The reluctance to take part in clinical pairing can thus be explained by the fact that the students are not allowed to be involved in partner selection.
REFERENCES


