

Jig saw Method as a Teaching Methodology in Orthopaedic Clinical examination: a study conducted on 8th semester MBBS Students in kamsrc.

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Abstract

Introduction: Traditional clinical teaching involves one student asked to present the case and other students being observing and learning depending on their motivation/opportunity to learn. JIG SAW method was implemented with an expectation to provide equal opportunity to all the students to learn the concepts.

Objective: To test whether JIG SAW method is better than traditional way of teaching the clinical examination to the students and find out its acceptability by the students.

Methodology: 30 students of 8th semester MBBS students were selected randomly and divided in to two groups A and B. A preliminary demonstration was given to all the students together about clinical examination of hip pathology. Two patients C and D, with different hip pathology were included in the study. Group A was allotted patient C initially to examine and present in traditional way and Group B was given patient D for JIG SAW method. Later, Students groups were inter changed with method of examination, Group A examining patient D with JIG SAW and group B going in traditional method with patient C. Students experience was taken with feedback forms.

Results: 90 percent of the students felt that JIG SAW method of clinical examination was very useful and gives every student an equal opportunity to learn. 3 percent of the students felt they are not comfortable with the study. 7 percent felt both the methods are equally useful.

Conclusion: JIG SAW method is a very useful method of teaching the clinical examination of the patients. It gives equal opportunity to all the students to examine the patient and learn.

Key words: JIG SAW method, clinical examination, equal opportunity to learn

Introduction:

A proper Clinical examination of a patient needs good theoretical knowledge and skills to elicit signs to arrive at correct diagnosis. Under graduate students who are in their early stages of getting exposed to the patient during their training, need to be taught the systematic approach in examining the patient with right attitude. One must concentrate on not only imparting the clinical knowledge but also lay emphasis on developing right attitude towards the patient and patient care. To enable the student to understand and remember the lengthy clinical examination procedure along with teaching the skills to elicit the clinical signs properly, JIG SAW method of teaching was tried with special emphasis on moulding their attitude in right direction and results

were evaluated for efficacy and acceptability by the students.

Materials and Methods:

30 students of 9th semester of MBBS students were selected and divided in to two groups A and B. All the 30 students were given a demonstration on how to examine a patient with hip pathology on a standardized patient^{3, 4}. Two patients C and D with different hip pathology, one is tuberculosis of hip joint and another is non-union of femoral neck fracture were chosen for the study. Group A was allowed to examine the patient C initially and asked to present the case in a traditional method. Time allotted was 60 minutes for examination, 30 minutes for presentation and 30 minutes for discussion. Group B students were again divided in to 5 sub groups of 3 each. Each sub

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group was given the set of booklets containing, 1.History 2.Inspection3.palpation4.Movements and special tests 5.Measurements. Each sub group containing three students has to prepare themselves thoroughly about one topic for ex: History. After 10 min of preparation students made to sit in a circle and each sub group will teach their topic to other group members for 10 min each. Once the discussion is over, students will move to examine the patient D. This time topics are jumbled such that for ex:one who prepared for inspection will now may get palpation ,and when they perform the specific task the sub group which primarily prepared for it will help them where necessary. The examiner will observe¹ the proceedings and guide them where necessary. Time allotted for the second half procedure is 1 hr. Total time period is 2hrs. After the completion of the examination one student will be randomly chosen for presenting the entire case at once. Now the test repeated with group A examining the patient D in JIG SAW method and group B examining the patient C in traditional way. The Students are given feedback back forms to express their views anonymously comparing the two methods.

Results:

The usefulness of the JIG SAW method is assessed based on the feedback form filled by the students.90 percent of the students marked that they are comfortable with Jig saw method and find it very useful when compared with traditional method.3 percent of the students felt they are not comfortable with the format but find it useful and 7 percent marked equivocal. The results are comparable to earlier studies which have attained very good results with Jigsaw model of teaching^{6,7,8,9}.

Discussion:

The changing trends and advancements in medical field demands changes in the teaching methodology. With day to day advancements in this field, a vast amount of knowledge being added to the curriculum of students. There should be innovative methods to teach students to understand the topic and at the same time make them memorise and recollect it when needed. Proper execution of task based on the theoretical knowledge is also imperative necessity. The tender minds of the young medical graduates have to be properly moulded for sympathy and compassion which leads to the development of right attitude. With all these things keeping in mind a study was conducted using Jig saw methodology.

The Jigsaw learning style is one of the most popular and commonly adopted models of cooperative learning⁵. The Jigsaw cooperative learning makes learning interesting, highly cooperating, students

actively learn, and encourages student's accountability in learning.¹⁰.

The first part of the method involves "COGNITIVE" domain where in students will learn the theoretical aspects of clinical examination. The history part emphasises the communication skills, empathy. Greeting the patient, introducing themselves to the patient², asking whether patient is comfortable or not, patient privacy taken care or not are some of the parameters which assess the students AFFECT domain. Palpation, Movements, Measurements and performing the special tests are parts of psychomotor domain. So the Cognitive, Psycho motor and Affect domains are taught and assessed systematically with this jigsaw method. In traditional method a single student examines the patient with help of other students, notes down the case sheet and presents to the examiner. Examiner will ask questions or ask him to demonstrate some physical signs. The draw backs to traditional method are:

1. At the time of history taking and clinical examination, not all the students are involved actively. Some students do not participate in the examination at all, some are dominated/suppressed.
2. Examination may go haphazardly.
3. Only presenter will be at advantage as he will be examining and asked to demonstrate the signs.
4. While one student presents the case, other students are relaxed and become passive, which may sometimes lead to students losing the interest in learning.

Jig saw method, unlike the traditional method, is the student centered model where each and every student will get an opportunity to examine the patient, they will be actively participated which will boost their confidence to perform better. Examination will run systematically. As the knowledge is shared /discussed among the peer groups, it will be understood better and memorised in a better way.

Drawbacks:

➤ Every topic must be carefully selected and divided in to parts and allotted to the students. Selection, division and allotment needs expert supervision, else topic may be divided unequally which may burden some sub groups.

This will be a problem only in the beginning, over a period of time, even students can learn to divide the topic and distribute among themselves.

➤ There is chance that student may end up learning only part of the examination which is allotted. This can be a theoretical expectation only, as we can see in our study, the student who was randomly picked to present the case at the end of the examination

performed well. Another way to overcome this problem is, during the clinical posting period of say 1 month, one should see that every student in the batch gets an opportunity to summarise or present the entire case at the end.

Conclusion:

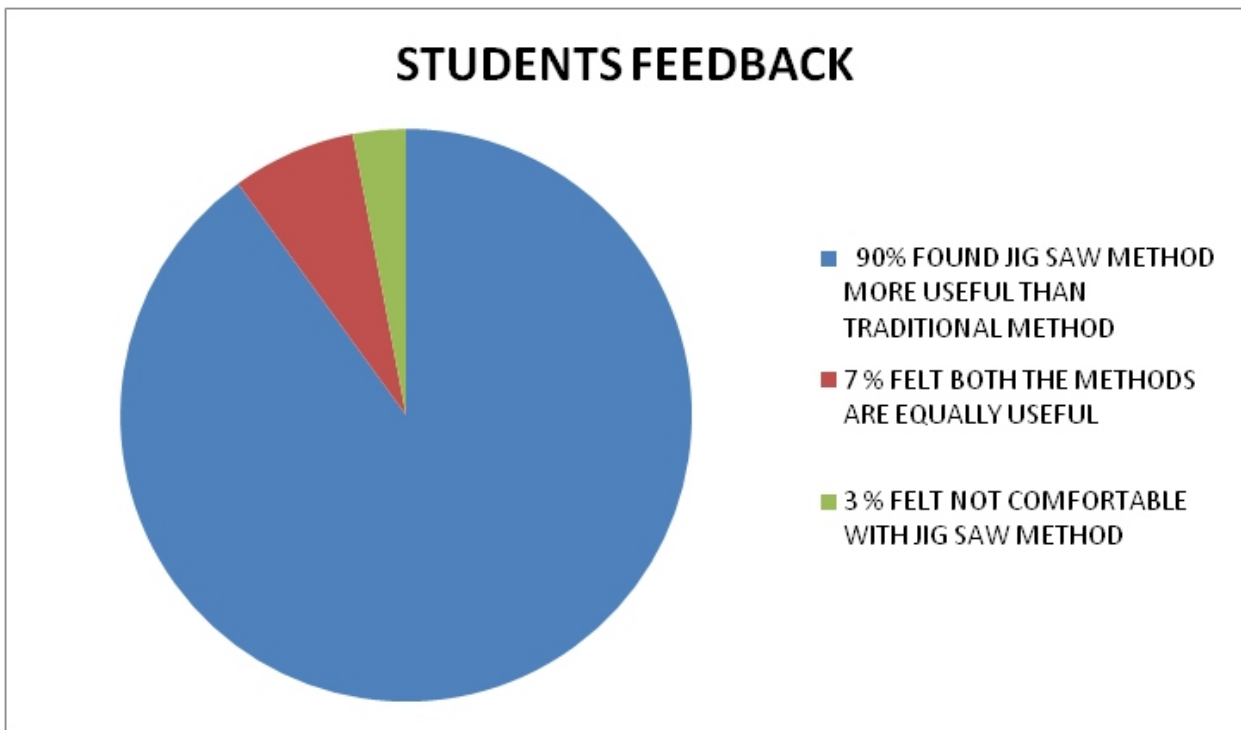
Jig saw method of teaching can be implemented in clinical examination of patients with promising results and advantages. The method has advantages of imparting and assessing cognitive, psychomotor and affects domains in a systematic manner. The most important advantage is that every student gets an opportunity to examine and learn and encourages reluctant students to participate in the examination. The drawbacks are relative, and can be overcome with time.

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FEEDBACK FORM

S.NO.	QUESTIONS	TRADITIONAL METHOD	JIG SAW METHOD
1.	Are you comfortable with the examination		
2.	Was the Jig saw method sufficient to complete the examination(yes/no)		
3.	Which method do you think will be better in enhancing your knowledge		
4.	Which method is more systematic		
5.	Do you think that presenter has advantage over other students in traditional method(yes/no)		
6.	Do you think Jig saw method gives more opportunity for the student to learn than traditional method(yes/no)		
7.	At the end of the exercise how much you can recollect (%)		
8.	Do you think all the students will get equal opportunity as the presenter in physical examination of the patient.(yes/no)		
9.	Which method do you think you can clarify your doubts better		
10.	Would you prefer Jig saw method for your next clinical teaching.(yes/no)		



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