

**PERCEPTION OF SECOND YEAR MEDICAL STUDENTS ON USING  
STANDARDIZED PATIENTS FOR LEARNING COMMUNICATION  
SKILLS AT THE SCHOOL OF MEDICAL SCIENCES,  
UNIVERSITI SAINS MALAYSIA: A DEVELOPMENTAL PROJECT**

By

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*Lovingly dedicated to*

*My mother, Rahimeh Goldasteh Sanei,*

*and*

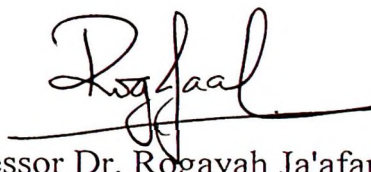
*My father, Ali Asghar Sepehr*

# Declaration

This is to certify to the best of my knowledge, this dissertation is entirely the work of the candidate,

SHIMA SEPEHR

PUM 0226/09

A handwritten signature in black ink, appearing to read 'Rogayah Ja'afar', with a long horizontal stroke extending to the right.

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## **LIST OF ABBREVIATIONS**

SPs	Standardized Patients
MD	Medical School
CSC	Clinical Skills Centre
SMS	School of Medical Sciences
USM	Universiti Sains Malaysia
USC	University of Southern California
MOH	Ministry of Health
CFCS	Community and Family case Study
SBME	Simulated-Based Medical Education
INFORMM	Institute of Molecular Medicine
PBL	Problem Based Learning

# ABSTRACT

## PERCEPTION OF SECOND YEAR MEDICAL STUDENTS ON USING STANDARDIZED PATIENTS FOR LEARNING COMMUNICATION SKILLS AT THE SCHOOL OF MEDICAL SCIENCES, UNIVERSITI SAINS ALAYSIA: A DEVELOPMENTAL PROJECT

**Introduction:** Standardized Patients (SPs) has been used as an educational tool for clinical teaching and learning skills among medical students in developed countries. It refers to individuals who have been carefully trained and skilled to take on the characteristics of real patients. Using SPs is one way to minimize if not prevent, unnecessary risks in dealing with real patients in the process of learning and competency development. Since the establishment of the School of Medical Sciences, Universiti Sains Malaysia in 1979, SPs has not been introduced to the medical students. The objective of the study was to look at the second year medical students' perception toward SPs for learning to communicate with patients during history taking.

**Methodology:** The study comprised of two components: a developmental project and a descriptive research component. The purpose of the first part of the study was to develop a script and then used it to train Standardized Patients (SPs). We trained 6 SPs but used 4 SPs with the remaining as 2 SPs substitutes and used the for teaching learning session. Second part of the study was a descriptive research study that utilised a five-point Likert scale questionnaire to obtain the second year medical students' perception regarding the use of SPs. It was conducted at the School of Medical Sciences, Universiti Sains Malaysia during the teaching of the Respiratory Block involving 203 medical students. Six SPs were recruited from the hospital non-clinical

staff based on convenient sampling. They were trained for a total of 8 hours using a validated training script. A pilot study was conducted with 48 students followed by the actual study that involved 155 medical students from the same pool of study students. Demographic and perception scale inventory data were analysed by SPSS version 18.

**Results:** A total of 155 students were involved as respondents. It was a predominance of female over male (almost 2:1) and majority of the students were Malay (60%), followed by Chinese (30.3%) and Indian (7.7%). From 155 students that were involved in this study, 115 (74.2%) of them were observers and 40 (25.8%) of them had dual roles of being an observer and interviewer. Most of the students were satisfied with the elements of venue, duration of the session, facilities, instruction for reviewers and patient scenario sheet that were utilised during the history taking session. Majority of observers and interviewers were satisfied with the different elements of SPs performance, ranging from 70% to 93.6%. There was no statistically significant difference between interviewers and observers. 83.1% of the respondents had satisfactory overall perception toward the SPs.

**Conclusion:** This study revealed that most of the year 2 medical students were satisfied with the SPs performance and had positive perception toward using SPs for learning to communicate with patients. The results provide strong evidence for this medical school to consider using SPs for learning and teaching in the future.

# ABSTRAK

## PERSEPSI PELAJAR PERUBATAN TAHUN DUA TERHADAP PENGGUNAAN PESAKIT SERAGAM UNTUK PEMBELAJARAN KEMAHIRAN BERKOMUNIKASI DI PUSAT PENGAJIAN SAINS PERUBATAN, UNIVERSITI SAINS MALAYSIA: SUATU PROJECT PEMBANGUNAN

**Pengenalan:** Pesakit Seragam (PS) telah digunakan sebagai kaedah pendidikan untuk pengajaran klinikal dan pembelajaran kemahiran di kalangan pelajar perubatan di negara-negara maju. Ia merujuk kepada individu yang telah mengikuti latihan dan mempunyai kemahiran untuk menunjukkan ciri-ciri pesakit sebenar. Penggunaan PS juga merupakan satu faktor untuk mengurangkan dan mengelak perkara-perkara yang tidak diingini ketika berhadapan dengan pesakit sebenar sewaktu proses pembelajaran dan peningkatan kompeten. Semenjak penubuhan Pusat Pengajian Sains Perubatan (PPSP) pada tahun 1979, PS belum diperkenalkan kepada pelajar perubatan. Objektif kajian ini adalah untuk menilai persepsi pelajar perubatan tahun 2 terhadap penggunaan PS dalam pembelajaran kemahiran komunikasi dengan pesakit.

**Metodologi:** Kajian ini merupakan kajian secara deskriptif dengan menggunakan borang kaji selidik lima aras berdasarkan skala Likert untuk menentukan persepsi pelajar perubatan tahun dua berkenaan penggunaan PS untuk proses pembelajaran mengambil riwayat pesakit. Kajian ini telah dijalankan di PPSP, Universiti Sains Malaysia ketika Blok Pernafasan dan melibatkan 203 pelajar perubatan dan 4 orang PS. PS telah dilatih selama 8 jam dengan menggunakan skrip yang telah divalidasi.

Pemilihan pelajar adalah berdasarkan kesesuaian sampel. Kajian secara pilot telah dijalankan melibatkan 48 orang pelajar, diikuti dengan kajian sebenarnya melibatkan 155 orang pelajar perubatan. Data demografik dan inventori skala persepsi di analisa.

**Keputusan:** Sejumlah 155 orang pelajar perubatan terlibat dengan kajian ini sebagai responden. Pelajar perempuan mendominasi senarai responden dengan nisbah 2:1 dan majoriti pelajar adalah Melayu (60%), diikuti oleh Cina (30.3%) dan India (7.7%). Daripada 155 orang pelajar, 115 (74.2%) menjadi pemerhati dan 40 orang (25.8%) daripada mereka menjadi pemerhati dan juga terlibat dengan proses temuduga pesakit. Kebanyakan pelajar berpuas hati dengan unsur-unsur seperti tempat, tempoh masa sesi menemuduga, kemudahan, arahan kepada pemerhati dan scenario kes ketika sesi pengambilan riwayat. Majoriti pemerhati dan juru penemuduga berpuas hati dengan unsur-unsur yang terlibat dengan persembahan PS dalam julat 70% hingga 93.6%. Tiada sebarang perbezaan signifikan antara pemerhati dan juru penemuduga. Sejumlah 83.1% responden mempunyai persepsi yang baik terhadap PS.

**Kesimpulan:** Kajian ini menunjukkan pelajar perubatan tahun 2 berpuas hati dengan persembahan PS dan mempunyai persepsi yang positif terhadap penggunaan KP untuk pembelajaran komunikasi dengan pesakit. Hasil kajian ini boleh dijadikan bukti untuk PPSP menggunakan PS bagi tujuan pembelajaran dan pengajaran di masa hadapan.

# CHAPTER 1

## INTRODUCTION

### 1.1 Background of the study

Learning is a very complex process. The purpose of teaching and learning is to help the student to develop a deep approach to learning. There are many factors that influence the students' learning process like teaching methods and design, measurement of students' learning and excess of curriculum. There are some suitable interventions that can facilitate the approach of deep learning among students and promote their learning experience as well as their improved critical thinking. Clearly, intervention during the learning process is the key factor which affects the quality of student learning as well as helps the teacher to facilitate learning and develop a plan to achieve the learning outcomes (Pimparyon *et al.*, 2000).

Effective teaching and learning activities among medical students are required to promote delivery of holistic and high quality patient-centred care. This quality is also influenced by the teaching-learning methods in which students undertake for their learning. In higher education, teaching and learning is a continuous, nurturing process, thus, a lot of aspects need to be considered to provide the students with significant and meaningful experience in their learning process. It is crucial for higher education to require a higher quality of teaching as well as learning (Rickles *et al.*, 2009).

Medical training must at some point use real patients to ensure perfect and faultless skills for medical students. But there is also a responsibility and commitment to provide the best

possible treatment and to ensure patients' safety and comfort. Balancing these two requirements represents an essential ethical tension in medical education. Simulation-based learning can help alleviate this concern by developing health professionals' knowledge, skills and attitudes in a safe and secure environment. Patients are protected from unnecessary risk whilst training safety is maximized and at the same time, decreasing the risk of fatal mistakes on real patients through the use of medical simulators like Standardized Patients (Amitai *et al.*, 2003).

Medical simulators are educational tools that fall into the broad framework of simulated-based medical education (SBME). SBME, in its widest sense, refers to any educational activity that uses simulative assistance in order to allow medical educators to increase the educational point by simulating the clinical scenario (Dent and Harden, 2009). Therefore, simulated patients or Standardized Patients (SPs) are commonly used in the process of teaching and learning in medical education. The progression of SPs has gone through many metamorphoses since its initiation in 1963. There have been other earlier names given to express this phenomenon like professional patients, patient instructors, patient educators, surrogate patients, programmed patients, teaching associates. The more common term utilised being simulated patients. Whatever term used, it refers to persons who have been carefully trained and prepared to take on the characteristics of real patients. SPs provide a good opportunity for the student to learn and be evaluated based on his or her own skills. The use of SPs was introduced by Geoffrey Norman, a Canadian psychometrician, who was looking for a technique where the simulated patient's challenge to each of the students remains the same (Wallace, 1997). However, the original inventor of simulated patients in learning and teaching in medical education and the most

convincing teacher in the history of the use of SPs was a neurologist and medical educator. His name was Howard S. Barrows, who gave existence to the first simulated patient in 1963 when he was teaching third-year neurology clerks at the University of Southern California (USC), (Wallace, 1997).

## **1.2 Background of the School of Medical Sciences (SMS)**

The School of Medical Sciences was established in 1979 and took in its first batch of medical students into its MD program in 1981. In the beginning, the school was established in the Penang USM campus. In 1984, the clinical years were moved to the health campus. The school was fully moved to Kubang Kerian, Kelantan by June 1990. The Kubang Kerian, Health Campus in Kelantan was established on 220 acres of land and it started with the School of Medical Sciences and the USM Teaching Hospital which was constructed in October 1983. The shift to the Kelantan campus stabilized further the academic, service and research activities of the School. The main Universiti Sains Malaysia campus is located in Minden, Penang. More recently, two new schools and one institute have been established. The Schools of Dental Sciences and Health Sciences and the Institute of Molecular Medicine (INFORM) are now also fully equipped.

## **1.3 Vision of the School of Medical Sciences**

The general philosophy and vision of the USM Medical School are as follows:

“To create an environment which is conducive for achieving academic, service and research excellence.

To consolidate and improve training and development of quality human resource in the field of medical sciences especially to meet the requirement of the nation.

To provide exemplary services in medical care.

To acquire exemplary services in medical care.

To be the reference center for service and consultancy, health and manpower training.

To promote internationalization of academic, research and service activities relating to medical sciences.”

#### **1.4 School of Medical Sciences' MD program**

The School of Medical Sciences (SMS), Universiti Sains Malaysia is now 30 years old. It was the first medical school in Malaysia that adopted an innovative curriculum which featured a problem-based learning, community-oriented and integrated medical education program. This five year program is divided into three phases. Phase I (year1) is the fundamental and preparatory phase that focuses on organ based systems; Phase II (years 2 and 3) continues the system-based approach and introduces problem-based learning to prepare the students for further clinical clerkships. Phase III (years 4 and 5) is the clinical phase where the students are rotated through all the clinical disciplines. The school curriculum is based on the SPICES model. SPICES stands for student oriented, problem based, integrated, community oriented, elective and systematic. Ethical issues, communication and soft skills were recognized as strong basics in the curriculum since the setting up of the school. Relevant inputs are imparted to students at different spaces in the time table. These skills also help undergraduate students to adapt to challenges in the learning process(Malaysia, 2010).

The aim of this study was to examine how second year medical students perceive the use of Standardized Patients as real patients and to explore their understanding regarding this method of learning and their perception and their academic achievement.

### **1.5 Phase II (years 2 and 3) of MD program**

This study was carried out in the respiratory block of Year 2 MD program. In phase 2, the students apply their basic knowledge of normal structures and functions of the human body acquired in phase I to advance knowledge of pathogenesis and pathophysiology, systemic diseases and clinical application. This phase has 13 blocks in which 8 blocks are taught in year 2 and 5 blocks are taught in year 3. The 8 blocks in year 2 are Foundation, Respiratory, Cardiovascular, Gastro Intestinal, Genitourinary, Hematology, Endocrine and Reproductive blocks as well as part of Community and Family Case Study (CFCS). During the blocks, students are exposed to clinical bedside teaching. The teaching methods in this phase include lectures, fixed learning modules, problem based learning, clinical skills training in the Clinical Skills Centre and hospital wards as well as a community-orientated program (CFCS) in the field. There is also an elective attachment for 2 weeks. Phase II is totally integrated and community oriented. It has horizontal as well as vertical integration. Basic science lecturers deliver a minimal number of lectures of the basic knowledge and provide some new input on pathophysiology of diseases in each block based on the requirements of the block. Phase II is otherwise student-centred, problem-based and community oriented in its approach. Clinical skills centre training and exposure to real life patients in the hospital wards and clinics are also included in the Phase II curriculum teaching-learning content.

While there is a significant amount of lecture sessions, the main strategy of this phase is Problem Based Learning (PBL), (Malaysia, 2010).

### **1.6 Respiratory Block, Year 2 MD Program**

Respiratory block is one of the 13 blocks that is undertaken by Phase II medical students in School of Medical Sciences. In this block, the altered structures and functions of the respiratory system are taught. Special emphasis is given to relate normal to the altered structures and functions of the respiratory system. Appropriate history taking, physical examination and investigations pertaining to the altered structures and functions are a major teaching component in the block. Learning sessions involve lectures, clinical teaching the wards and clinical skill center, fixed learning modules in the multidisciplinary laboratory and problem based learning in tutorial rooms.

Problem based learning (PBL) is conducted in each block. Each week has 5 to 6 hours of PBL sessions and has a different PBL trigger. The PBL themes for week one(1) until week 4 are fever and cough, blood in the sputum, difficulty in breathing and progressive difficulty in breathing respectively. During the PBL, students will discuss about the triggers that are given to them at the beginning of the session. Lecturers act as moderators during the sessions.

### **1.7 The Running of the Respiratory Block**

Respiratory block was selected for this study because the student in this block were already introduced to the knowledge component of history taking and communication skills development during the foundation block just prior to the respiratory block.

A briefing is given by the Block coordinator about the block on the first day of the block posting. Much focus is given on particular weeks by the week coordinator. At the beginning of each week, the problem coordinator will brief the students regarding the week's topic and objectives and any changes to the week's timetable and any group distribution. The students are also reminded of their roles and responsibilities during the first PBL session and clinical skills sessions.

### **1.8 Justification for the study**

SPs are used as one of the educational tools for learning clinical skills for medical students (Barrows, 1993). Health care has moved slowly behind in Standardized Patients' utilization for a number of reasons, including cost, resistance to change, and the lack of inflexible proof of effect. An SP is like a mirror, a reflection of a real patient for a medical student to learn history taking, communication, interviewing skills as well as physical examination in certain instances (Amitai *et al.*, 2003; Ryan *et al.*, 2010).

Before medical students go to clerk real patients, it is imperative for them to get some training with SPs. To date, there is no local data available regarding using SPs in the teaching process, especially for clinical teaching in a skills lab. Using SPs is one of the factors for decreasing and preventing unwanted harm to the real patient during the process of learning before aiming for real competency on patients in the hospital settings. In addition, we should consider the value and importance of time and culture. If students learn better in clinical training session with SPs, they will be able to work with real patients more confidently and more skilfully. Prior knowledge and skills learnt with SPs would help students to make standard and safe diagnosis by communicating