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CLERKSHIP;

CLERKSHIP EXPERIENCES AND SELF-PERCEIVED COMPETENCE OF UNDERGRADUATE MEDICAL STUDENTS IN CLINICAL AND PROCEDURAL SKILLS.

Brekhna Jamil[1], Bilal Masood[2]

1. BDS, MPH, MHPE
Assistant Professor
Institute of Health Professions Education & Research
Khyber Medical University, Peshawar.
2. MBBS, MPH, MHPE
Assistant Professor
Bolan Medical College, Balochistan.

Correspondence Address:
Dr. Brekhna Jamil
Assistant Professor
Institute of Health Professions Education & Research
Khyber Medical University, Peshawar.
drbrekhna.iph@kmu.edu.pk

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ABSTRACT… Objectives: To assess the clerkship experiences and self-perceived competence of Undergraduate medical students in clinical and procedural skills at Bolan Medical College, Quetta, Balochistan. **Study Design:** Cross-sectional study. **Setting:** Bolan Medical College, Quetta, Balochistan. **Period:** February 2016 to August 2016. **Methodology:** Undergraduate medical Students of 2nd, 3rd and final profession MBBS at Bolan Medical College, Quetta. Multistage stratified random sampling method was used; making a total sample size of 166. A self-administered questionnaire was used with item responses based on 4-point Likert Scale for the number of times a clinical skill was performed and 3-point Likert scale for the number of times a clinical skill competence was perceived by the performer respectively. The questionnaire contains mainly three parts. The first part mainly contained information on socio demographic data like age, gender, monthly income, marital status; student's year of study and completed clinical clerkship. The second part contained information regarding clinical and procedural skills that is physical skills examination and the third part includes information about the number of times a clinical skill is performed and the competence achieved or not by the participant. SPSS version 16 was used to carry out the statistical analysis. **Results:** Among nine listed basic physical examination skills, both 2nd and 3rdproff students were having low exposure or experience i.e< 50% have performed the skills at least two times and among 12 listed procedural skills only 4thproff (final year) students were having high level of experience i.e ≥ 70% have performed the skills. Among 9 listed basic physical examination skills, only 4thproff (final year) students were having high level of competence i.e ≥ 70% reported to be very confident. Similarly among 12 listed procedural skills the 4thproff (final year) students were having high level of competence i.e ≥ 70% reported to be very confident. There was a strong positive linear correlation between level of exposure and self-perceived competence (r=0.92). **Conclusion:** The level of performing the basic physical skills and clinical procedures was low for majority of the variables. However, on several occasions an important clear connection was appeared performing physical skills and practical course of action and confidence level of students.

Key words: Clerkship Experience, Physical Skills, Clinical Procedures, Medical Education, Undergraduate Students.

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INTRODUCTION

Clinical competence can be defined in many ways; few of them are simple while others are bit intricate: a clinical competent doctor as defined by Southgate a doctor as being ''a person who possesses knowledge, who has interpersonal skills, bears moral and personality attributes.[1] Clinical competence has also been defined as 'habitual and judicious use of communication, knowledge, technical skills, clinical reasoning, emotions, values and reflection in daily practice for the benefit of individuals and community being served.[2]

The medical students have to go through clinical clerkship because it has been made mandatory and are included in the majority of the accreditation bodies in their curriculum. Clinical clerkship has a special position in the curriculum of the different medical council of the world and

a compulsion for the medical undergraduate and even postgraduate.

Researches in the past have revealed that clerkship learning experiences vary not only amid hospitals and their departments but also, and even more so, amid individual undergraduate.[3,4] A systematic review found that positive clerkship experiences are directly proportional to the choice of future career of specialties of medical students and vice versa.[5] Another systematic review showed that early clerkship experience improved students' ability to relate to patients and communicate empathy and helped them understand the doctor-patient relationship and the importance of listening to patients, careers, and other professionals.[6]

The thing which is arguable in the literature is that whether or not students have attained the required proficiencies semblance to the actual learned contens.[7] According to Colberly and Goldenhar[7;] at Cincinnati University, USA there are following six suggested measures: 1) Arterial puncture, 2) Insertion of nasogastric tube, 3) Phlebotomy, 4) Intravenous (IV) catheter insertion, 5) Lumbar puncture and 6) Insertion of Foleys catheter. Ironically, the students of fourth term were deficit in carrying out 3 to 6 procedures during their internship sessions. Therefore, it is necessary to assess the competence of learners towards end of the curriculum.[8] Likewise, to disinter correlation among the medical students to get the idea about curriculum efficacy and efficiency, Confidence measurement of the learners in purview of practical skills could bring out the pros and cons pertinent to medical skills and attributes went along the stretch of crurriculum.[9,10]

In our setup the clinical skills of the undergraduates are assessed on the day of examination. The students are still weak in terms of the variables defined in the study when they come to clinical practice in their internship. The feedback from the students has never been taken from them in terms of any study. A study[11] carried out in Pakistan revealed that ten percent of the students reported high levels of satisfaction, 60% satisfied, while 10% were unsatisfied even under consultant supervision; only 30% students were satisfied under middle-grade supervision while the satisfactory percentage decreased to 10% under registrar / senior house officer supervision, remaining were unsatisfied. During examination, student felt embarrassed, frightened and under pressure who were supervised by senior faculty members, and only few were confident and motivated.

The problems discussed above in clinical clerkship have been observed in the undergraduate medical students of Bolan Medical College. This is the only public sector medical college situated in Balochistan, one of the provinces of Pakistan. Majority of the undergraduates after their completion of degree when are placed in internship at different teaching hospitals of Bolan Medical College are weak in clinical skills for instance a simple history taking or even detecting normal heart sound and same is the case with the skills.

Generally there is shortage of published evidence regarding effectives of medical curricula in this setting. As per my literature search I haven't found any study that has been conducted in Balochistan. Therefore, a study was conducted to provide the baseline assessment of clerkship know-how blend with exploring elements of capabilities in medical flairs, of undergraduate medical students at Bolan Medical College. This study may also provide evidence to health profession educationists for reviewing the current curriculum and teaching practices in our setting for increasing the clinical skills and competencies of undergraduate students.

METHODOLOGY

A cross-sectional study on students of 2nd, 3rd and final professional MBBS of Bolan Medical College, Quetta, Balochistan. The ethical approval for this study was taken from Khyber Medical University, Peshawar. It took 6 months (from February to August 2016) to complete the study. Multistage stratified random sampling method was used. In first stage 2nd, 3rd and final profession classes were treated as stratum of the stratified random sampling method. In second stage students

were randomly selected from each 3 classes proportional to their population size and data of all selected students were taken fulfilling inclusion criteria; making a total sample size of 167. The data were collected using self-administered questionnaire adapted from a previous study.[12] The questionnaire comprised of three parts. The first part mainly contained information on socio demographic data like age, gender, student's year of study and completed clinical clerkship. The second part contained information regarding clinical and procedural skills that is physical skills examination and clinical practical procedure. The third part includes information about the number of times a clinical skill is performed and the competence achieved or not by the participant. The purpose of the study was explained to the participants; both verbal and written consent was taken before data collection. The questionnaire was administered to the student of 2nd professional, 3rd professional and 4th professional students who had successfully completed their clinical clerkship rotations. Clerkship experience included clinical and procedural skills and was rated by the participant on a scale of 1-4 as follows: (i) never taught and never performed; (ii) taught but never performed; (iii) performed once; (iv) performed two or more times. Exposure to a skill was high if ≥70% of participants reported having practiced it two or more times, moderate and low for 50-69% and <50% respectively.[13] Self-perceived competence included clinical and procedural skills and was rated by the participant by using the Likert Scale, where 1 = not confident, 2 = fairly confident, and 3 = very confident. Self-reported competence was high if ≥70% of the participants reported being very competent in that skill, moderate if 50-69% and low if <50%. Data were analyzed using SPSS 16. Percentages, frequencies and proportions were calculated for categorical data. Mean and standard deviation were calculated for continuous data. Chi square ($\mathbf{X}^2$) test was used for categorical data. Statistical significance was defined as $p<0.05$.

RESULTS

The demographic details of study participants are given in Table-I.

Variables	n= 167	
Student's Proff of Education	**Frequency**	**Percentage (%)**
2nd proff	45	26.95
3rd proff	35	20.96
4th proff	87	52.10
Gender		
Male	56	33.53
Female	111	66.47
Age (years)		
19-24	91	54.49
25-28	76	45.51

Table-I. Demographics of study participants

The percentages and self perceived competences of physical skills examination and clinical procedures performed by the students are given in Table-II and Table-III.

Among 21 listed basic physical skills examination and clinical procedures, the spearman correlation (Rho) ranged from 0.282 to 0.925. (Table-IV). There was a strong positive linear correlation between level of exposure and self-perceived competence (r=0.92). When the level of exposure increases the level of self-perceived competence also increases (output from pearson correlation). On linear regression (independent variable i.e experience and dependent variable self-perceived competence; both treated as continuous variable); the variation of the self-perceived competence 86 % explained by the level of clerkship experience (r2=0.86). To further explain, when there is one unit increase in the clerkship experience on average the level of self-perceived competence increases by our best estimate of 0.86.

DISCUSSION

In current study in 10 out of 21 basic physical examination skills and clinical procedures only 4thproff (final year) students reported to be having high clerkship experience. Similarly in 9 out of 21 basic physical examination skills and clinical procedures, 4thproff (final year) students reported to be having high self-perceived competence. While 2ndproff students reported only in 2 out of 21 variables to be having high self-perceived competence.

Variables	Never Performed or Performed Once (%)			Performed ≥2 (%)			P-value
	2nd proff n=45	3rd proff n=35	4th proff n=87	2nd proff n=45	3rd proff n=35	4th proff n=87	
(A) Physical skills examination							
CVS examination and identifying/detecting							
S1, S2							
	42 (40.38)	21 (20.19)	41 (39.42)	3 (4.76)	14 (22.22)	46 (73.02)	□0.001
S3, S4							
	45 (33.33)	30 (22.22)	60 (44.44)	0 (0)	5 (15.63)	27 (84.38)	□0.001 (F)
Diastolic murmur							
	45 (30.82)	26 (17.81)	75 (51.37)	0 (0)	9 (42.86)	12 (57.14)	0.002
Systolic murmur							
	44 (30.14)	26 (17.81)	76 (52.05)	1 (4.76)	9 (42.86)	11 (52.38)	0.007
Pericardial rub							
	45 (30.20)	34 (22.82)	70 (46.98)	0 (0)	1 (5.56)	17 (94.44)	□0.001 (F)
Respiratory examination and performing							
Tactile fremitus							
	42 (39.25)	26 (24.30)	39 (36.45)	3 (5.00)	9 (15.00)	48 (80.00)	□0.001 (F)
Auscultation to detect crackles, ronchi, consolidation							
2nd proff	37 (42.05)	17 (19.32)	34 (38.64)	8 (10.13)	18 (22.78)	53 (67.09)	□0.001
General abdominal examination							
2nd proff	18 (46.15)	2 (5.13)	19 (48.72)	27 (21.09)	33 (25.78)	68 (53.13)	0.001
Breast examination to detect nodule							
2nd proff	35 (32.11)	20 (18.35)	54 (49.54)	10 (17.24)	15 (25.86)	33 (56.90)	0.104
(B) Clinical practical procedure							
Vaginal delivery							
2nd proff	44 (28.03)	35 (22.29)	78 (49.68)	1 (10)	0 (0)	9 (90)	□0.046 (F)
Venipuncture and cannulation							
	30 (23.08)	23 (17.69)	77 (59.23)	15 (40.54)	12 (32.43)	10 (27.03)	0.003
Bladder catheterization							
	43 (27.39)	33 (21.02)	81 (51.59)	2 (20.00)	2 (20.00)	6 (60.00)	0.851
Examining the newborn							
	42 (28.00)	29 (19.33)	79 (52.67)	3 (17.65)	6 (35.29)	8 (47.06)	0.279
Abdominal paracentesis							
	45 (27.78)	34 (20.99)	83 (51.23)	0 (0)	1 (20.00)	4 (80.00)	0.339
Nasogastric tube insertion							
	45 (27.78)	35 (21.60)	82 (50.62)	0 (0)	0 (0)	5 (100.00)	0.126 (F)
Lunber puncture							
	44 (26.83)	35 (21.34)	85 (51.83)	1 (33.33)	0 (0)	2 (66.67)	0.667
Suturing							
	39 (25.49)	31 (20.26)	83 (54.25)	6 (42.86)	4 (28.57)	4 (28.57)	0.175
CPR							
	44 (27.16)	35 (21.60)	83 (51.23)	1 (20.00)	0 (0)	4 (80.00)	0.379
Endotracheal intubation							
	44 (26.67)	35 (21.21)	86 (52.12)	1 (50.00)	0 (0)	1 (50.00)	0.662
ACLS							
	45 (27.11)	35 (21.08)	86 (51.81)	0 (0)	0 (0)	1 (100.00)	1 (F)
Use of a defibrillator							
	45 (27.11)	35 (21.08)	86 (51.81)	0 (0)	0 (0)	1 (100.00)	1 (F)

Table-II. Percentages of medical students physical skills examination and clinical practical procedures performed

Variables	Not or Fairly Confident			Very Confident			P-value
	2nd Proff n=45	3rd Proff n=35	4th Proff n=87	2nd Proff n=45	3rd Proff n=35	4th Proff n=87	
(A) Physical skills examination							
CVS examination and identifying/detecting							
S1, S2							
	40 (33.33)	22 (18.33)	58 (48.33)	5 (10.64)	13 (27.66)	29 (61.70)	0.011
S3, S4							
	44 (31.65)	29 (20.86)	66 (47.48)	1 (3.57)	6 (21.43)	21 (75.00)	0.006
Diastolic Murmur							
	43 (29.25)	27 (18.37)	77 (52.38)	2 (10.00)	8 (40.00)	10 (50.00)	0.041
Systolic Murmur							
	43 (29.45)	26 (17.81)	77 (52.74)	2 (9.52)	9 (42.86)	10 (47.62)	0.016
Respiratory Examination and Performing							
Tactile Fremitus							
	42 (36.21)	27 (23.28)	47 (40.52)	3 (5.88)	8 (15.69)	40 (78.43)	0.001
Auscultation to detect crackles, ronchi, consolidation							
	39 (35.45)	26 (23.64)	45 (40.91)	6 (10.53)	9 (15.79)	42 (73.68)	0.001
General abdominal examination							
	22 (31.88)	9 (13.04)	38 (55.07)	23 (23.47)	26 (26.53)	49 (50.00)	0.092
Breast examination to detect nodule							
	38 (31.67)	20 (16.67)	62 (51.67)	7 (14.89)	15 (31.91)	25 (53.19)	0.025
(B) Clinical practical procedure							
Vaginal delivery							
	44 (28.03)	35 (22.29)	78 (49.68)	1 (10.00)	0 (0)	9 (90.00)	0.046
Venipuncture and cannulation							
2nd proff	32 (23.70)	25 (18.52)	78 (57.78)	13 (40.63)	10 (31.25)	9 (28.13)	0.010
Bladder catheterization							
	44 (26.83)	34 (20.73)	86 (52.44)	1 (33.33)	1 (33.33)	1 (33.33)	0.788
Examining the newborn							
	41 (26.80)	31 (20.26)	81 (52.94)	4 (28.57)	4 (28.57)	6 (42.86)	0.709
Abdominal paracentesis							
	45 (27.78)	34 (20.99)	83 (51.23)	0 (0)	1 (20.00)	4 (80.00)	0.339
Nasogastric Tube Insertion							
	44 (27.16)	35 (21.60)	83 (51.23)	1 (20.00)	0 (0)	4 (80.00)	0.379
Lunber Puncture							
	42 (25.77)	34 (20.86)	87 (53.37)	3 (75.00)	1 (25.00)	0 (0)	0.058
Suturing							
	37 (24.34)	32 (21.05)	83 (54.61)	8 (53.33)	3 (20.00)	4 (26.67)	0.043
CPR							
	44 (26.51)	35 (21.08)	87 (52.41)	1 (100.00)	0 (0)	0 (0)	0.479
Endotracheal intubation							
	44 (26.51)	35 (21.08)	87 (52.41)	1 (100.00)	0 (0)	0 (0)	0.479
ACLS							
	45 (27.11)	35 (21.08)	86 (51.81)	0 (0)	0 (0)	1 (100.00)	1
Use of a Defibrillator							
	45 (27.11)	35 (21.08)	86 (51.81)	0 (0)	0 (0)	1 (100.00)	1

Table III: Medical students self-perceived competence of physical skills examination and clinical practical procedures

Variables	n (167)	Not Confident (%)	Fairly Confident (%)	Very Confident (%)	Correlation (Rho)	P-value
(A) Physical skills examination						
CVS examination and identifying/detecting						
S1, S2						
	Never performed	63 (92.65)	6 (11.54)	0 (0)	0.851	<0.001*
	Performed once	5 (7.35)	23 (44.23)	7 (14.89)		
	Performed ≥ 2	0 (0)	23 (44.23)	40 (85.11)		
S3, S4						
	Never performed	81 (96.43)	12 (21.82)	1 (3.57)	0.848	<0.001*
	Performed once	3 (3.57)	35 (63.64)	3 (10.71)		
	Performed ≥ 2	0 (0)	8 (14.55)	24 (85.71)		
Diastolic Murmur						
	Never performed	91 (91.92)	16 (33.33)	0 (0)	0.761	<0.001*
	Performed once	7 (7.07)	29 (60.42)	3 (15.00)		
	Performed ≥ 2	1 (1.01)	3 (6.25)	17 (85.00)		
Systolic Murmur						
	Never performed	88 (92.63)	11 (21.57)	0 (0)	0.834	<0.001*
	Performed once	7 (7.37)	38 (74.51)	2 (9.52)		
	Performed ≥ 2	0 (0)	2 (3.92)	19 (90.48)		
Pericardial Rub						
	Never performed	126 (98.44)	8 (29.63)	0 (0)	0.853	<0.001*
	Performed once	2 (1.56)	13 (48.15)	0 (0)		
	Performed ≥ 2	0 (0)	6 (22.22)	12 (100.00)		
Respiratory Examination and Performing						
Tactile Fremitus						
	Never performed	70 (90.91)	12 (30.77)	0 (0)	0.878	<0.001*
	Performed once	6 (7.79)	19 (48.72)	0 (0)		
	Performed ≥ 2	1 (1.30)	8 (20.51)	51 (100.00)		
Auscultation to Detect Crackles, Ronchi, Consolidation						
	Never performed	57 (85.07)	9 (20.93)	0 (0)	0.835	<0.001*
	Performed once	8 (11.94)	12 (27.91)	2 (3.51)		
	Performed ≥ 2	2 (2.99)	22 (51.16)	55 (96.49)		
General Abdominal Examination						
	Never performed	11 (55.00)	5 (10.20)	0 (0)	0.621	<0.001*
	Performed once	6 (30.00)	13 (26.53)	4 (4.08)		
	Performed ≥ 2	3 (15.00)	31 (63.27)	94 (95.92)		
Breast Examination to Detect Nodule						
	Never performed	71 (93.42)	3 (6.82)	0 (0)	0.925	<0.001*
	Performed once	5 (6.58)	29 (65.91)	1 (2.13)		
	Performed ≥ 2	0 (0)	12 (27.27)	46 (97.87)		
(B) Clinical Practical Procedure						
Vaginal Delivery						
	Never performed	130 (96.30)	11 (50.00)	0 (0)	0.711	<0.001*
	Performed once	5 (3.70)	9 (40.91)	2 (20.00)		
	Performed ≥ 2	0 (0)	2 (9.09)	8 (80.00)		

Venipuncture and Cannulation						
	Never performed	78 (80.41)	5 (13.16)	0 (0)	0.828	<0.001*
	Performed once	19 (19.59)	26 (68.42)	2 (6.25)		
	Performed ≥ 2	0 (0)	7 (18.42)	30 (93.75)		
Bladder Catheterization						
	Never performed	139 (94.56)	3 (17.65)	0 (0)	0.742	<0.001*
	Performed once	7 (4.76)	8 (47.06)	0 (0)		
	Performed ≥ 2	1 (0.68)	6 (35.29)	3 (100.00)		
Examining the Newborn						
	Never performed	128 (96.24)	4 (20.00)	0 (0)	0.863	<0.001*
	Performed once	5 (3.76)	12 (60.00)	1 (7.14)		
	Performed ≥ 2	0 (0)	4 (20.00)	13 (92.86)		
Abdominal Paracentesis						
	Never performed	148 (96.10)	3 (37.50)	0 (0)	0.685	<0.001*
	Performed once	6 (3.90)	5 (62.50)	0 (0)		
	Performed ≥ 2	0 (0)	0 (0)	5 (100.00)		
Nasogastric Tube Insertion						
	Never performed	151 (99.34)	4 (40.00)	0 (0)	0.816	<0.001*
	Performed once	1 (0.66)	5 (50.00)	1 (20.00)		
	Performed ≥ 2	0 (0)	1 (10.00)	4 (80.00)		
Lumber Puncture						
	Never performed	148 (93.67)	3 (60.00)	1 (25.00)	0.401	<0.001*
	Performed once	9 (5.70)	1 (20.00)	2 (50.00)		
	Performed ≥ 2	1 (0.63)	1 (20.00)	1 (25.00)		
Suturing						
	Never performed	111 (88.10)	3 (11.54)	0 (0)	0.787	<0.001*
	Performed once	15 (11.90)	20 (76.92)	4 (26.67)		
	Performed ≥ 2	0 (0)	3 (11.54)	11 (73.33)		
CPR						
	Never performed	149 (97.39)	5 (38.46)	0 (0)	0.650	<0.001*
	Performed once	4 (2.61)	4 (30.77)	0 (0)		
	Performed ≥ 2	0 (0)	4 (30.77)	1 (100.00)		
Endotracheal Intubation						
	Never performed	152 (98.06)	5 (45.45)	0 (0)	0.620	<0.001*
	Performed once	3 (1.94)	5 (45.45)	0 (0)		
	Performed ≥ 2	0 (0)	1 (9.09)	1 (100.00)		
ACLS						
	Never performed	161 (98.17)	2 (100.00)	0 (0)	0.282	0.002*
	Performed once	3 (1.83)	0 (0)	0 (0)		
	Performed ≥ 2	0 (0)	0 (0)	1 (100.00)		
Use of a Defibrillator						
	Never performed	160 (99.38)	1 (20.00)	0 (0)	0.829	<0.001*
	Performed once	1 (0.62)	4 (80.00)	0 (0)		
	Performed ≥ 2	0 (0)	0 (0)	1 (100.00)		

Table-IV. Correlation of number of times performing physical skills and procedures and level of confidence among medical students

My findings are consistent with findings of previous studies. In a previous study which was conducted on students of final year the results showed that not all skills had been mastered to the same degree. Students who had ever prepared or administered four or more intravenous antibiotics were contributing about only 10 %.[14] A study of 2ndproff (3rd year) students reported infrequent performance of clinical procedures on patients. Although all reported drawing blood more than four times, half reported starting only two to four IV lines and a third drawing only two to four arterial blood samples.[15]

According to a study in UK,[16] after completing the schooling in the University of Port Harcourt medical school, an ample figure of students did not know a lot of chores that would turn out to be component of their everyday activities as preregistration house officers. Medical college schooling is anticipated to set the base for a lifetime profession in medicine and to outfit potential doctors for the 1st phase in their working lives.[17] In a study of fundamental practical skills in an additional UK medical college,[18] it was reported that all skills had not been learned to the similar extent as venous blood sampling and intravenous cannula insertion. In a study by Jolly and MacDonald,[19] only twenty four percent of participants had carried out placement of 2 or greater naso-gastric tubes, while ninety six percent had sited 2 or greater intravenous cannula. Board and Mercer[18] revealed alike result in their study and recommended that the 1st thing the student ought to do was to observe the nurse have one further endeavor so that an individual who had by no means observed it done would have a little bit scheme of where to initiate.

A number of writers in industrialized countries have quoted the growing height of medico legal cases as contributory to the deficit of skills amongst final year students.[18] The results of a study showed that 41 (48.7%) undergraduates had six or greater triumphanttries at venous blood sampling (phlebotomy) whereas just twenty four (28.6%) had fruitfully placed in greater than ten intravenous cannula. A considerable figure, 38 (45.2%) had by no means placed in a urinary catheter nor had any know-how with bag/mask skills. Most of the undergraduates (70.2% and 86.9%) had diverse familiarity with intravenous antibiotics administration and setting up intravenous fluid infusion, correspondingly, whereas seventy six (90.5%) had by no means placed in a naso-gastric tube. Just four (4.8%) undergraduates had by no means had one try with intravenous canulation.[20] According to a study carried out in USA, only fifty percent or less students of fourth year executed any agreed procedure on the patients underneath their care.[7] In another study the authors[21] found same in 1994 when they studied pupils at the finishing stage of their third year. It was showed by self-reports of students that they perform procedures on admitted occasionally throughout the 3rd year despite of provision of a pre course on the procedures at the start of the year.

Another study results showed that out of the twelve mentioned procedural dexterities, venepuncture and cannulation had the highest degree of exposure i.e. >90% performed these at least twice, subsequently vaginal delivery, which had been performed about >85% at least twice.[22] Likewise, Between the 6th and 7th years, most of the proportions of scholars had performed the forthcoming procedures frequently i.e. bladder catheterisation (52.9 - 90.6%), abdominal paracentesis (35.3 - 75.5%), nasogastric intubation (2.9 - 54.7%), and suturing (17.6 - 45.3%), with very similar increases in confidence levels. And during fifth, sixth and seventh year a gradual progression was witnessed in other skills, like vaginal delivery, lumbar puncture, and cardiopulmonary resuscitation.

In this study among 9 listed basic physical examination skills, only 4thproff (final year) students were having high level of competence for s3s4, pericardial rub, tactile fremitus and auscultation to detect crackles, ronchi and consolidation. Similarly among 12 listed procedural skills the 4thproff (final year) students were having high level of competence for vaginal delivery, abdominal paracentesis, nasogastric tube insertion, ACLS and use of a defibrillator. The 2ndproff students reported to be having high competency only for

CPR and endotracheal tube. In a study[23] carried out in house officers and they were inquired that how well the medical college had primed them for the profession, merely 4.3% strongly agreed that their schooling had primed them finely. Another study reported thoughts of competency ranged from twelve percent (LP) to eighty two percent (Foley catheter). For five out of six procedures (phlebotomy, IV insertion, ABG, NG tube insertion, and Foley catheter insertion) a greater part told that they thought competent executing them devoid of supervision (ranging amid fifty three percent for IV insertion to eighty two percent for Foley catheter insertion).[7] Another study reported that, highest degree of confidence was noticed in 7th year students in conducting vaginal deliveries i.e. about 98.1%.Notwithstanding, about less than one-third of final-year students were very confident in five of the 12 listed common procedural skills, the lowest being in the use of a defibrillator (0%), followed by advanced cardiac life support (9.4%), endotracheal intubation (15.1%), cardiopulmonary resuscitation (20.8%), and suturing (28.3%) respectively.[12]

In my study there was a convincing strong positive correlation between numbers of times performing physical skills and practical procedures and level of confidence among Medical students. Similar findings have been showed in various studies. A study conducted on medical students reported high correlations between experience and confidence among procedural skills, implying that increasing the number of times a student performs a procedure may result in improved self-confidence.[12] Convincing correlations had been noted between the experience and self-perceived competence for all common practical skills in a study conducted in International Medical University, Malaysia.[24] In another study the association between the number of times a procedure was performed and the competency the students felt to perform that procedure was significant for most of the procedures in a study conducted in USA.[21]

The reason of low level of performing the physical skills and clinical procedures especially of 2ndproff and 3rdproff medical students in current study might be explained by a student's thinking that maybe opportunities for practicing such procedures will be available during final year or residency, not in medical college. It is likely that a few students have less opportunity to perform particular procedures due to the fact that they are done by support staff or because first priority is given to the residents to perform them.

CONCLUSION

In this study the experience of performing and the level of competence was high for only few basic physical skills and clinical procedures among 4thproff (final year) medical students. It has been reported germinant to especially procedural capabilities that upon performing different skills confidence level of medical students increases with each additional clinical year. Conversely, some insufficiencies also been noted despite this general progress, to a significant number of 2nd proff and 3rd proff students had never attempted common important procedures. A clinical skill can be mastered by commitment and by live-supervision which has been labeled as the major fundamental step for making a student more competent. Continuous evaluations in student competencies should be undertaken, and new learning strategies must be implemented in anticipation of the changes in their learning environments and the opportunities for clinical skill acquisition.

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AUTHORSHIP AND CONTRIBUTION DECLARATION

Sr. #	Author-s Full Name	Contribution to the paper	Author=s Signature
1	Brekhna Jamil	Helped in generation of idea, Edit all draft papers.	
2	Bilal Masood	Collected and analyzed the data. Edit all draft papers.