

## ORIGINAL ARTICLE

### Does reflective writing affect the knowledge, attitude and skills of house officers?

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#### ABSTRACT

**Background:** There is an emerging trend of reflective writing in medical education that fosters the growth of an individual cognitively, emotionally and morally. In literature there is no evidence that reflection enhanced the competence or skills of medical and dental students.

**Aim:** The purpose of this study was to bridge this research gap and to evaluate if reflective writing changes the knowledge, attitude and skills of the doctors.

**Methods:** This study was conducted in University college of Medicine and Dentistry, University of Lahore in June, 2018. Twenty house officers were included in this study. A questionnaire was filled by them as a pretest. They were asked to write reflection by Gibbs cycle in a word file and send it daily in WhatsApp group. Feedback was given to them. After 10 days of daily reflection they were asked to fill the same questionnaire as posttest and the results were compared.

**Results:** There was a significant difference ( $p < 0.05$ ) for each question. Deepening the learning and understanding, reducing the errors, using the time effectively, purposeful communication with colleagues, refining the surgical skills and enhancement of the problem solving ability were the benefits of reflection.

**Conclusion:** Reflective writing is a powerful tool for metacognition. Critical reflection of the tasks enhances the knowledge of the doctors as they reflect.

**Key words:** *Reflection writing, Reflection in dentistry, skills enhancement*

**Introduction:** “Let us emancipate the student and give him time and opportunity for the cultivation of his mind, so that in his pupilage he shall not be a puppet in the hands of others, but rather a self-relying and reflective being.” Sir William Osler. The word reflection is from the Latin origin which means “to turn back” or “to bend”. So reflection is a process in which our thoughts are turned back to the event or situation. We think about the events in details, analyze the situation and make an action plan for the next encounter to be dealt wisely (Sandars, 2009). There are many definitions of reflection in literature. According to Osler, ‘Reflection is a metacognitive process that occur before, during or after an event with the purpose of developing better understanding of the self and the situation so the next encounters are informed from the previous ones’ (Osler, n.d.). Repetition and practice may help in our learning but it cannot replace the active thinking

process about what we have done well or bad. How differently we did and what better could be done? It is only possible when we reflect on the events (Halpern, 2014). Reflective learning can improve professionalism and clinical reasoning. For the complex clinical challenges, reflection is the most effective clinical learning strategy (Osler, n.d.). Teachers should define the learning goals for which a particular reflective writing is being practiced to have maximum utilization from it. There are different modes of practicing the reflective exercise; oral, written notes, blogs and storytelling (Cooper, 1998; Korthagen, 1993).

Most of the work in reflective writing has been done in nursing (Kandeel & Ibrahim, 2010; Moattari & Abedi, 2008). Currently, there is little practice of reflective writing in most of undergraduate or postgraduate medical colleges of Pakistan. The purpose of this research is to evaluate the utilization of reflective writing practice in changing the knowledge, attitude and skills of the house officers.

**Methods:** This one shot experimental study was conducted in Oral & Maxillofacial surgery department of University college of Medicine and Dentistry, University of Lahore from 11th June to 21st June 2018. Twenty four dental surgeons, who were on their clinical rotation of house job in Oral & Maxillofacial surgery department were included in this study after a verbal consent. A pre validated questionnaire was modified according to the local context and validated by medical educationists. A pretest questionnaire was filled by

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all the house officers. All the participants were then taught the reflective writing skills using Gibbs cycle (Oxford Brookes University, 2013). The areas of reflection were decided and clearly informed to all house officers, which included taking the history in outpatient department, making diagnosis, , doing extractions of different teeth and post op care of patients. They were asked to write reflections in a Ms word and post it daily in a WhatsApp group. Feedback was given to them daily on their reflections. Four house officers left the study due to their personal reasons. After 10 days of daily reflective writing practice, the remaining twenty house officers were asked to fill the same questionnaire as posttest. Data was analyzed by using Statistical Package for Social Sciences (SPSS) version 21.

**Results:** There was a significant difference in pre and posttest of all questions as shown in Table 1. The participants acknowledged that reflection has deepened their learning and helped them in reorganizing their previous knowledge. It enhanced their confidence and made their communication purposeful. All the participants agreed that reflection helped in reducing the medical errors and helped them take better care of their patients. There was a statistically significant difference ( $p < 0.002$ ) that reflective writing has enhanced their clinical skills. There was improvement in performing the tasks in time and collaboration with colleagues in a

professional manner. There was statistically significant  $p$  value for every question which is shown in table 2.

**Discussion:** The basic aim of this study was to evaluate the reflective writing in changing the knowledge skills and attitude of the house officer with dental background. Most of the work has been done in nursing school (Bulman & Schutz, 2004; Moattari & Abedi, 2008) and limited data is available for the reflective writing in medical and dental schools. The main goal of reflective writing is to implement theory into practice (Mann, Gordon, & MacLeod, 2009). It increases interest in self regulated learning. Self regulated learner use more metacognitive process to evaluate their performance (Sandars, 2009). Depth of knowledge and patient care can be improved if the doctors have reflective powers. Good clinicians needs to develop a good relationship with the patients and their care takers and this therapeutic relationship is important in maintaining a good rapport of clinician. Studies have shown that reflective writing can be used for development of this therapeutic relationship (Stewart et al., 2000). Studies have been done to include the reflective writing in curriculum, so the students can merge theory and practice (Aronson, 2011). This study showed that reflection promotes the students to perform the tasks in time and their problem solving abilities are improved. The results of this study are aligned with the study by Atkins (Atkins & Murphy, 1994). Two other studies

**Table 1:** Pre-test post-test proforma

		I agree	I have no idea	I disagree
Q1	Reflection activity deepens my learning			
Q2	Reflection reorganizes my previous knowledge			
Q3	Reflection increases my self confidence			
Q4	Reflection makes my communications purposeful			
Q5	Reflection helps in reducing medical errors			
Q6	Reflection makes my procedural skills improved day by day			
Q7	Reflection increases my problem solving ability			
Q8	Reflection helps in better care of patients			
Q9	Reflection helps me to plan and execute the tasks in time			
Q10	Reflection helps me to work with colleagues in a professional manner			

**Table 2:** Results

	Pre test			Post test		
	Agree	I have no idea	Disagree	Agree	I have no idea	P value
Q1	11(55%)	9(45%)	-	19(95%)	1(5%)	0.008
Q2	6(30%)	14(70%)	-	18(90%)	2(10%)	0.000
Q3	14(70%)	6(30%)	-	19(95%)	1(5%)	0.056
Q4	13(65%)	7(35%)	-	19(95%)	1(5%)	0.030
Q5	10(50%)	10(50%)	-	20(100%)	-	0.000
Q6	5(25%)	14(70%)	1(5%)	16(80%)	4(20%)	0.002
Q7	9(45%)	11(55%)	-	19(95%)	1(5%)	0.016
Q8	11(55%)	8(40%)	1(5%)	20(100%)	-	0.002
Q9	9(45%)	10(50%)	1(5%)	15(75%)	5(25%)	0.031
Q10	14(70%)	5(25%)	1(5%)	19(95%)	1(5%)	0.055

also showed that reflective writing increased the diagnostic skills (Sobral, 2000) and helped the students to behave as better professionals (Niemi, 1997). In our study, reflective writing increased the understanding of the subject and made the communication of students purposeful. These results are consistent with the previous studies (Mann et al., 2009; Pee, Woodman, Fry, & Davenport, 2000; Wald, Davis, Reis, Monroe, & Borkan, 2009). Limitation of most of the studies in literature was not evaluating the reflective writing in enhancing the procedural skills of the student. This was done in our study

**Conclusion:** Reflective writing is a tool that if used regularly enhances knowledge and skills. This practice should be included in the undergraduate curriculum and students should be encouraged to reflect from the initial days of medical school.

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