

ORIGINAL ARTICLE

Plastic surgery residents' perception about concept, process and application of reflective practice in their training

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ABSTRACT

Background: Reflective practice is essential for professional development of residents. Though earlier research has tried to explore the interventions to build and improve the reflective aptitude and skills of undergraduate students, there appears to be dearth of research pertaining to the understanding of reflection in the post graduate training programs.

Methods: A qualitative study based on phenomenological approach and epistemological stance was used to generate views of residents on the research questions. A semi-structured interview pattern was used to get a detailed perspective of the 10 plastic surgery residents about the research questions. The interviews were written down accurately word for word. Data was analyzed using an analytical process which involved a number of interconnected stages to classify and organize data according to key themes and subthemes.

Results: Five main themes emerged following data analysis: reflective practice-difficult to perceive, personal development, reflective practice for learning and patient care and reflective conversation. Participants had diversity of thoughts on the concept of reflective practice, but they had similar understanding of applications of reflective practice including role in self-development, patient care and individual and collaborative learning; and improvement in practice and surgical skills. The participants did not limit the reflective conversation to self but considered 'conversation with others' as important component of reflection. Participants narrated that when they had to reflect upon situations related to patient care, interpersonal relations and learning sessions, the conversations held with their colleagues formed an important part of their decision for future course of events

Conclusions: The concept of reflective practice, though, difficult to perceive is essential for professional development of residents. In order to serve the complex needs of today's communities of practice, ingenious and practical ways of thinking are required for productivity of reflective practice.

Keywords: Reflective practice, Professional development, Self-reflection, Collective reflection, Communities of practice

Introduction: Reflective practice is defined as "ability of an individual to learn from experiences by consciously thinking about own reasoning and decisions with the objective of building better insight of self and the experience to help to tackle the similar future encounters in an informed and better way (Sandars, 2009). Reflective practice is pivotal to professional growth of an individual. The establishment of reflective abilities in residents makes them insightful and lifelong learners. This helps them to accomplish clinical competence for better patient care and professional excellence (Stark, Roberts, Newble, & Bax, 2006). Current body of literature supports the perception that, on

completion of their course, residents are accomplished to reflect critically on their experiences and the ability to reflect enhances their own personal and professional development. Although, residents are exposed to variety of experiences related to their cognitive, psychomotor and affective development but going through an experience without the potential to reflect upon it may not be sufficient for training par excellence (Muir, 2010). It is imperative to consider that reflection is not necessarily instinctual. Realizing the non-intuitive nature of reflection, it is important to contemplate that residents find it difficult to understand the concept, process and application of reflective practice in their profession. (Wald et al., 2015) Thus students must be provided with opportunities to enable themselves to understand about reflection and develop it during the residency. Though earlier research has tried to explore the interventions to build and improve the reflective aptitude and skills of undergraduate students, there appears to be dearth of research pertaining to the understanding of reflection in the post graduate training programs (Muir, 2010). In this study, we therefore

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addressed the following three interrelated research questions: What is residents' perception of the term 'reflective practice'? (What are residents' understanding of process of 'reflective practice'? What are residents' thoughts about the importance of application of reflective practice in their learning and patient care? The aim of the present study was to understand the current perceptions of plastic surgery residents about reflective practice so that appropriate interventions can be instituted to inculcate the ability of reflective practice.

Methods: This study was conducted at Mayo Burn center/Plastic surgery wards. The participants in this study were post graduate residents with at least one-year experience of working in the setting and coming from different public sector medical colleges with no formal knowledge about reflective practice. There were six females and four male interviewees Phenomenological approach and epistemological stance was used to generate views of residents on the research questions (Putri, Malini, & Basmanelly, 2019) Participants were briefed about the intention of the study and informed consent was taken. The format of the interview was explained to them. The concerns of the participants and any misunderstandings about the interview process were explained. A semi-structured interview pattern was used to get a detailed perspective of the participants about the research questions. The interview was conducted in a quiet room located in the Burn center. The same semi-structured interview guide was used for all participants. The response of the participants was recorded. In case the answer to first or any subsequent questions did not align with the very concept of reflective practice, the interviewer explained the concept before proceeding to the next question. This step was essential as the answer to next question was depended upon understanding and clarification of the answer to first question. There was an opportunity to change the words but not the meaning of questions to help the participant understand them. Clarification and probing for further responses improved the participants' comprehension of the questions and in this way the validity of the study was enhanced (Muir, 2010). Audio recording of the Interviews was done. After listening carefully, interviews were written down accurately word for word. The interviews were listened again along with the transcriptions for accuracy. As a first step each transcript was read to have an overall understanding of the data. In order to extract meaning of what participants said about the concept, process and application of reflection in their daily practice, the author searched for key words and phrases. The data were then analyzed using an analytical process which involved a number of interconnected stages to classify and organize data according to key themes and subthemes (Saldaña, 2015). **Results:** The main themes and subthemes identified in the analysis are as follows:

Reflective practice-difficult to perceive: Participants' answers

to term "reflective practice" generated following concepts:

"Practice modification in response to results of previous practices"

"Retrospective assessment and analysis for betterment"

"Gathering clinical acumen"

"Practice of thinking on happenings around you"

"Result of efforts put on patient care"

"Thinking about something that has already happened"

"What others take from you...patients, colleagues"

Even though above extracts generated clear ideas, participants felt difficulty in describing the term reflective practice as one of the Interviewee observed:

"I think its cross-image reflection of light. most of us do appreciate what is meant by it, but this concept includes a lot of things in practice. What you have learnt from your teachers, your department, your hospital, your supervisor? The knowledge you are going to apply to your patients. I think this is reflective practice."

Personal development: Participants considered reflective practice as an important element for their personal development. Following subthemes were identified.

1(a): Normal way of living: learning from mistakes is important to live a normal life as one of the participants narrated "It is important for living of normal human beings.....how to handle difficult social situations...I think for spending a normal life, it is a normal practice. If a person does not learn with passage of time, I think it is abnormal and people will say that you are insane ...the habit of reflective practice is important for one's mental growth and development".

1(b): Instinctual quality: Participants were of the opinion that reflective practice, instead of being learnt as formal and overt technique with a defined step wise approach, should be considered as subconscious process meant to take care of multiple issue simultaneously as one of the respondents recounted " *Reflective practice should be engraved at a basic spinal level because only then it will be in one's reflexes to take care or comprehend lot of things simultaneously there are patient issues, learning issues, interaction with colleagues everything is going on simultaneously so if this could be inscribed in our reflexes then it would be easier for us to actually comprehend different things that are going on around us*"

1(c): Awareness about self: Most of the participants narrated that looking through self and concentrating on persona adds to self-refinement. This happens by a process of analysis of self-standing in relation to particular learning experience as one of

the respondents described *“First of all identifying with myself that how much do I actually know about a particular topic, journal club article or a surgical procedure like what to start, where do I stand at a basic level and then how can I add upon it, how can I improve myself, for instance I would have a different level as compared to a senior resident so I can identify where do I start and then how to add upon, I consult my seniors, I consult the books”*

Reflective practice for learning:

Participants' responses to the process and application of reflective practice highlighted the concept of transformative learning. The participants recognized that desire to learn is not just natural but is influenced by the interaction with the surroundings and other people. Following subthemes were generated.

3(a): Construction of knowledge: Almost all participants' views on reflective practice pointed to the fact that it contributes to the construction of knowledge as one of the participants narrated *“I approach a particular topic with some background knowledge of mine, so I build upon it. I analyze discussion and explanation by my colleagues, and I start building upon that in mind. I have a kind of pyramid building in my mind”*.

3(b): Systematic approach to learning: Participants considered learning as a systematic process and reflective practice greatly contributes to the orderly process of learning as one of the participant narrated *“If Learning can be systematic, it would be easier for me to climb ladder of knowledge to a particular level because there is lot of influx of knowledge from everywhere when you are in working environment or in a training situation if I start learning those things erratically or in random pattern, it would be difficult for my mind to comprehend and learn but if I can reflect upon the learning experiences.....I can identify my learning needs and alter my overall action plan”*

3(b): Deep learning of surgical skills/ adaptive expertise: Most participants narrated reflective experience with reference to surgical procedures they assisted or performed under supervision or independently. Participants were of the opinion that retrospective analysis of surgical procedure they were part of, helped in understanding the tips and tricks of the procedure as one of the participant expressed *“the last case I assisted, I studied for it, watched a video on that and after assisting the procedure and recapitulating the experience of assisting the procedure. I think I started understanding that procedure more effectively because initially when I read and watched the video there was some confusion for the steps of the procedure.”*

4. Patient care: Mostly, reflective experiences that were talked about directly linked to patient care and following sub themes were identified;

4(a) Analysis/avoidance of surgical complications: Participants considered reflective practice crucial to avoid surgical complications as retrospective analysis of the complications can help in eluding them in future. One of the participants unfolded this by saying *“If we are getting negative outcome of an intervention or having a complication in a specific surgical procedure we learn from that by detailed analysis of steps of the procedure, any confounding factors, the management which was done for that complication and outcome of that how that outcome can be improved thus we go retrospectively from that point to avoid the complication at the outset.”*

4(b) Patient communication: Rapport between doctor and patient was considered as an essential element for reducing medical errors and improving patient care and importance of co-reflection with patients is highlighted by following transcript *“Reflective practice is whatever care you want to provide to the patient, you should communicate with the patient that includes surgical procedure you choose for the patient and details of post-operative care knowing social, cultural and personal beliefs and thoughtful consideration of these beliefs in future patient encounters.”*

Reflective conversation: Narrations of reflective experiences clearly highlighted two components of reflective conversation, conversation with self and conversation with colleagues and patients. Participants also considered the information gained from literature search while reflecting upon a learning session as an important component of reflective conversation. Following subthemes were generated.

5(a): Self conversation: Most of the participants were of the opinion that whenever they were reflecting upon an experience, they always thought about the experience and made a mind map of the experience as if they were talking to themselves. One of the participant narrated this *“there was an issue and I lost temper and the situation got out of control I was emotionally disturbed and the whole incident flashed through my mind I had a kind of self-talk and reminded myself that I should have taken a step back and should not have expressed my feelings of irritation I assured myself that in future I would deal with such a situation in a more positive way so that results are not the same”*.

5(b) Conversation with others: Participants narrated that when they had to reflect upon situations related to patient care, interpersonal relations and learning sessions, the conversations held with their colleagues formed an important part of their decision for future course of events. One of the participants unfolded this by saying *“When I have a dissatisfied patient, I will go back and search the literature, I will discuss it with my seniors, I will ask for seniors' experience and what improvement can I do in future and next time I will apply this all to a similar*

situation. Similarly, if I have a problem in the department or at administrative level, I will go back and ask the concerned senior person and ask about their experience and will try to solve the problem accordingly."

Discussion: The findings of current study indicate that although the participants had diversity of thoughts on the concept of reflective practice, they had similar understanding of applications of reflective practice including its role in self-development, patient care and individual and collaborative learning and improvement in practice and surgical skills. Traditionally reflective practice has been considered as a systematic activity of critically analyzing and evaluating practice experiences with an aim to increase insight and refine practice. The manner in which reflection has been portrayed as comprising of distinct components or steps might appear satisfactory for students in their early years (Ng, Kinsella, Friesen, & Hodges, 2015). However, in the context of professional development, the center of attention is self-development by broadening one's knowledge and thinking skills, and expanding comprehension of problems faced in practice (Bradbury, Frost, Kilminster, & Zukas, 2012). Thus, there is a need to re-consider the quality and depth of reflective practice. Findings suggest that participants were of the opinion that inward looking leads to self-insight and self-improvement through retrospectively reviewing specific learning experiences. However, the participants did not limit the reflective conversation to self but considered 'conversation with others' as important component of reflection. Interestingly the information gained through literature search and discussion with colleagues was considered significant in building the pyramid of knowledge. This concept of 'reflective conversation with others' is essential for deep learning of complex elements of surgical practice. Moreover this notion of 'reflective conversation with others' has generated a concept where reflection is viewed as something that commutes between the individual and his/her social environment (Lingard, 2016). Bindels has described this concept as 'individualist discourse' and 'collectivist discourse' and signified the fact that concept of reflection necessitates expansion from 'self-reflection' to 'collective reflection' (Bindels, Verberg, Scherpbier, Heeneman, & Lombarts, 2018). Participants considered reflective practice as an essential contributor to their learning. In the context of professional practice, participants have put more stress on reflective practice as collective activity rather than an individual act. This realization favors the social constructivist perspective where knowledge is constructed by joint efforts of individuals (Darnis & Lafont, 2015). In the context of residents, the knowledge is co-produced by residents, their colleagues, supervisors, patients and individuals from other disciplines. Thus, different groups may develop for collaborative and peer assisted learning. The development of confidence and

readiness to share experiences and wisdom in groups will need innovative ideas to put the concept of 'collective reflection' into practice. Reflective practice is generally considered as an individual act and is evaluated on that basis. Such contemplation tends to leave out reflections that consider workplace practices, workplace cultures and situated learning (Bradbury et al. 2010). This left out broad concept of reflective practice is the lifeline of social constructionists and an essential element of social learning theories. Thus, collective reflective skills are desirable for situational analysis in the setting of communities of practice. When residents communicate and learn together as members of inter-professional teams, the collective reflective skills modify and shape up their professional identity (Hargreaves, 2016). This whole process of 'collective reflection' has the capacity to form successful communities of practice (Ghaye & Lillyman, 2014). Collective reflection in the communities of practice can be an effective way to ensure that individuals are ready to take responsibility independently and as a community. This enables teams to solve work-related problems collectively. Collective reflection can be valuable tool for conflict resolution among team members and it can help in the formulation of collective rules, procedures, norms and values that determine the behavior of the group of team members. This ensures feeling of being part of decision making (Valckx, Devos, & Vanderlinde, 2018). Participants' narrations of reflective practice relating to patient care appears to be a significant finding and points to the fact that capacity-building for deep learning and reflective practice in medicine is necessary to ensure identification of the complex elements of patient safety and safe practice. Though the reflective experiences recounted by participants were closely related to patient care and communication, but conventional concept of reflection does not consider this aspect. This raises the need to promote collaborative reflections between medics and patients, in a hope to empower patients and to accomplish the best outcome for patient safety and health (Hargreaves, 2016). Validity of data and method of coding remains a limitation of any qualitative study. One way of increasing the validity of data is to ask participants to read the transcript. However, this method of respondent validation was not used in the current study as most of participants refused to read their transcribed interviews. Lack of peer validation of data is another limitation of the study (Muir, 2010). Deductive coding was used to generate themes thus introducing researcher bias in determining the direction of analysis (Saldaña, 2015). In addition to methodological contemplation, it is pertinent to note that participants were residents working in surgical department of a public sector hospital. Therefore, the findings are not applicable to physicians working in other specialties and outside hospital setting. Way forward is to look at reflective practice as a combination of individual and collective activity in the setting of situational

learning environment of communities of practice. The ways and means of providing the opportunities for collective reflection in group meetings should be explored. The influence of collective reflection on the process and outcome of reflective practice should also be investigated. Potential areas to explore are the impact and perceived usefulness of different strategies to facilitate reflection in a group of trainees. Impact of collective reflection between physician and patient in improving patient care and safety can be another avenue for future research.

Conclusion: The concept of reflective practice, though, is difficult to perceive but it is essential for professional development of residents. The findings also suggest that in communities of practice, reflecting together and sharing experiences with others is the new face of reflection. In order to serve the complex needs of today's communities of practice, ingenious and practical ways of thinking are required for productivity of reflective practice.

Declaration of interest:

The authors report no conflict of interest.

Author's contribution:

- Dr. Muhammad Mustehsan Bashir : Conception and design of the work; & the acquisition, analysis, & interpretation of data for the work
- Dr. Rehan Ahmed Khan : Critical Review and final approval of the version to be published

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